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Preface

This volume contains papers presented at The 2020 6th International Conference on E-Business and Application (ICEBA 2020), which was held in Kuala Lumpur, Malaysia during February 25-27, 2020.

ICEBA 2020 is hosted by Universiti Teknologi MARA, Malaysia. ICEBA provides a valuable platform for scientists, engineers and technologists worldwide who work in all aspects of E-business and Mobile Commerce. This volume includes 28 selected papers contributed from universities, research institutions, and industries. These papers cover the topics ranging from E-Commerce, Business Economics, Computer Application, etc. Each contributed paper has gone through a rigorous blind peer-review process. The proceedings present to the readers the latest research findings and results in the related fields.

This conference had four keynote speeches and one invited speaker. Each of them has shared their research outcomes from different prospective: from Malaysia to Japan and Republic of Korea, from practical strategies to modern analysis skills.

We sincerely thank the contributions made by session chairs and reviewers. The chairperson of each session played an important role in conducting the sessions in a timely and efficient manner. Furthermore, the success of this conference cannot be done without the reviewers, who volunteered their time in helping select high quality papers and provided invaluable constructive criticism to improve these papers.

We truly believe that the participants have found the discussions fruitful and the opportunity to establish future collaborations.

Best Regards,

Prof. Firdaus bin Abdullah
Universiti Teknologi MARA, Malaysia
Conference Chair of ICEBA 2020

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An Empirical Study of E-Marketplace Acceptance in MSMEs under the Constructs of Effort Expectancy, Social Influence and Facilitating Condition Factors

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ABSTRACT

MSME is one of the important parts of a country's economy, because MSME has a very important role in improving the speed of community economic development. The development of ICT has brought about revolutionary changes in human lifestyles and the workplace. The spread of ICTs will bridge the gap by reducing economic distances and providing instant and economic access to information. Thus, this study used online questionnaire survey to gather the primary data to determine the acceptance in MSMEs under the constructs of effort expectancy, social influence and facilitating condition. This study is conducted in Bali, Indonesia focuses at Badung Regency, Gianyar Regency, and Denpasar Regency. The population of this study is chosen through non-probability sampling, and about 100 participants had successfully completed the provided questionnaire questions. This study used IBM SPSS Statistic 25 and SmartPLS 3.0 program to analyses the collected data for descriptive analysis as well as hypotheses testing. The obtained result indicated that the effort expectancy has a positive relationship with behavioral intention to use e-marketplace, while other constructs such as social influence and facilitating condition do not have a positive relationship with behavioral intention to use e-marketplace.

CCS Concepts

•General and reference → Document types → Surveys and overviews •Mathematics of computing → Mathematical analysis → Numerical analysis

Keywords

MSMEs; E-Marketplace; Effort expectancy; Social influence; Facilitating condition

1. INTRODUCTION

Advances in information and internet technologies have helped create innovations that bring many positive benefits to the

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community by making it easier for people to access all available information such as job vacancies, the latest news, entertainment, leisure, shopping or online sales. The development of information and communication technology has been felt in almost every sector, such as health, agriculture, education, tourism, especially the economic sector. The information technology is very important towards the country's economy because it has a very important impact on economic growth and facilitates business operations for businessmen.

Indonesia is one of the largest e-commerce markets in Southeast Asia, where the total Gross Merchandise Value e-commerce transactions in Southeast Asia reaching US \$ 23.3 billion, or around Rp 328.4 trillion in 2018 [1]. There are also 52% of transactions originated from Indonesia valued at Rp 172 trillion (US \$ 12.2 billion) [2]. By 2025, it is estimated that the e-commerce market in Southeast Asia will reach Rp 1.455 trillion (US \$ 103 billion) [2]. Meanwhile, Indonesia leads the ranks of countries such as Mexico, the Philippines, Colombia, United Arab Emirates, Vietnam, Saudi Arabia, Israel, India and China with 78% growth in 2018 with the number of internet users in Indonesia exceeding 100 million users become one of the forces driving e-commerce growth [2]. This rapid development of e-commerce in Indonesia has encouraged the Government of Indonesia to develop a vision to make Indonesia a Digital Energy of Asia in 2020. The government has designed a plan and partnered with third parties to achieve this vision, especially through the UMKM Go Online Movement to improve community economic growth by promoting online-based marketing. The UMKM Go Online Movement program aims to develop 8 million SMEs to prepare to enter digital transformation, so that they can provide new market opportunities for Indonesian SMEs regionally and globally [3].

The MSMEs with traditional markets have limitation for expansion due to the factors of limited capital and human resources. The benefits that MSME's Internet-based market can bring include direct savings, such as product promotions, new sales, channels, fast product delivery, customer satisfaction, cheap advertising media, enhanced company image, new business opportunities, efficiency in information gathering and better support from suppliers. The Internet and e-marketplace are seen as a way for MSMEs to compete with large peers into global markets by overcoming distance and scale. The e-marketplace is vital for both developed and developing countries to strengthen their economic strength and support national economic development also enhance their competitiveness and productivity [4]. In addition, by using the e-marketplace, companies with limited capital can expand the market at affordable and very low cost.

Therefore, the e-marketplace can be an effective medium for companies or business with limited capital to penetrate the market.

In addition, the company uses information technology to solve all problems encountered and provide revenue for internal and external business processes and transactions. According to Scheers [5], if organizations cannot adapt and keep up with the pace of technological change, they will be at a competitive disadvantage. It is therefore important for business organizations, especially small and medium-sized enterprises, to adopt Internet technologies to survive in the growing local and global competitive markets. Technology is indeed critical for SMEs as it will help create value and positively impact company performance [6], promote SME innovation, which will attract potential research and development programs [7], and enhance the business processes [8]. In addition, the rapid development of today's ICT has brought benefits to SMEs such as helping to reduce transaction and communication costs, increasing information availability, expanding opportunities to enter global markets, reducing barriers to company entry and providing new sources of revenue [9]. Therefore, this study considered the constructs of effort expectancy, social influence and facilitating condition to determine the acceptance of e-marketplace in MSMEs, at Bali, Indonesia.

2. RESEARCH HYPOTHESIS

2.1 The Influence of EE on BI to Adopt E-Marketplace

Effort expectancy can be defined as the level of ease in using information system and technology that can reduce the effort of both the energy and time that individuals have in carrying out their work. So, the use of a system or technology will simplify individual work compared to doing manual methods. In Venkatesh et al. [10] it is stated that in the variable effort expectancy there are two constructs that construct this concept, namely ease of use and complexity. Effort expectancy also has been a vital factor in previous studies on the technology acceptance, where effort expectancy affected significantly the behavioral intention of various technologies such as mobile payment [11], mobile banking [12], and mobile commerce [13]. According to Venkatesh et al. [10], when users feel that a system is easy to use and doesn't require much effort, they have higher expectations toward acquiring the desired performance.

2.2 The Influence of SI on BI to Adopt E-Marketplace

Social influence is defined as the extent to which consumers of technology perceive that people who are important to them think that they should use the technology [14]. According to Venkatesh et al. [10], social influence is equivalent to subjective norm in the Theory of Reason Action and Theory of Planned Behavior, where it is an important factor that affects the adoption of a system. Based on several studies that have been conducted, social influence has proven to have an important role and is a significant factor in influencing the intention to use technology. Researchers conducted by Morosan and Defranco [15] in examining the consumers' intention to use NFC mobile payments in hotels, Tak and Panwar [16] in predicting mobile app based shopping adoption in India, Megadewandanu et al. [17] in exploring mobile wallet adoption in Indonesia, and Tam and Oliveira [18] in understanding the adoption of mobile payment shows that social influence has a direct influence on the behavior intention of an individual.

2.3 The Influence of FC on BI to Adopt E-Marketplace

Facilitating condition is an individual's level of confidence that an organizational and technical structure exists to support the use of the system. When an individual feels confident that they are supported in various events, they will be more inclined to use the system. According to Venkatesh et al. [14], behavioral intention and the actual usage were significantly influenced by facilitating condition. This statement is supported by several findings that show a significant effect of financial condition on behavioral intention, namely research conducted by Alalwan et al. [12] in mobile banking adoption, Tak and Panwar [16] in mobile app based shopping adoption and Raza et al. [19] in mobile banking of Islamic banks adoption. Figure 1 illustrates the conceptual framework of this study and the developed hypotheses are:

H1: Effort expectancy has a positive relationship with behavioral intention to use E-Marketplace.

H2: Social Influence has a positive relationship with behavioral intention to use E-Marketplace.

H3: Facilitating Condition has a positive relationship with behavioral intention to use E-Marketplace.

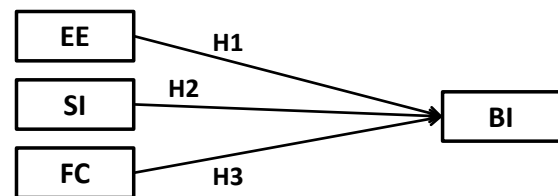


Figure 1. Conceptual framework

3. METHODOLOGY

This study used quantitative research approach to determine the acceptance of e-marketplace in MSMEs under the constructs of effort expectancy, social influence and facilitating condition. The type of data used in this study is quantitative data, which is based on Sugiyono [20], where the quantitative data is data in the form of numbers or qualitative data that is measured.

3.1 Research Location

This study was conducted in Bali province. This study focuses on three main regencies namely Badung, Denpasar, and Gianyar because of the level of economic growth and the number of MSMEs.

3.2 Research Population

The population that considered in this study are MSMEs found in the Province of Bali, specifically are regencies of Denpasar, Badung and Gianyar. The population criterion is the MSMEs who use e-marketplace. Since the population has a very large number, a sample was taken in to this study through non-probability sampling. Therefore, cluster sampling calculation is used to determine the number of participant from each of the regency. According to Ghazali [21], the size of the sample in studies using the PLS approach that has a large portion of the population is at least recommended for 30 to 100 cases or respondents.

3.3 Data Collection

The primary data of this study are obtained from the online questionnaire survey among the MSMEs in Denpasar, Badung and Gianyar in October 2019. The collected answered

questionnaires were carefully revised and the incomplete answered questionnaire will be excluded from the data analysis.

The designed questionnaire is available in two languages which is English and Indonesian Language. Also, five-point Likert scale is used by the participants to evaluate the statement or question in the questionnaire survey.

3.4 Data Analysis

This study used SmartPLS software to analyses the collected data for validity test. Also, descriptive statistical analysis and inferential analysis using Partial Least Squares-Structural Equation Model analysis techniques (PLS-SEM) were used to evaluate the gathered data and test the hypotheses.

3.5 Operational Variable Definitions

Table 1 demonstrates the definitions and the indicators for the operational variable namely effort expectancy, social influence, and facilitating condition.

Table 1. Operational variable definitions [10, 14]

Variable and Definition	Indicators
Effort Expectancy (EE) “The degree of ease associated with the use of the system [10]”	<p>Perceived Ease of Use</p> <ul style="list-style-type: none"> It would be easy for me to become skillful at using e- marketplace I would find e-marketplace is easy to use and flexible to interact with Learning to operate e- marketplace would be easy for me
Social Influence (SI) “The degree to which an individual perceives that important others believe he or she should use the new system [10]”	<p>Subjective Norms</p> <ul style="list-style-type: none"> People who are important to me think that I should use e- marketplace People who influence my behavior think that I should use e- marketplace People whose opinions that I value prefer that I use e- marketplace
Facilitating Condition (FC) “The degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system [10]”	<p>Perceived Behavioral Control</p> <ul style="list-style-type: none"> I have the resources necessary to use e-marketplace I have the knowledge necessary to use e-marketplace <p>Compatibility</p> <ul style="list-style-type: none"> E-marketplace is compatible with other technologies I use

4. RESULT AND DISCUSSION

There are 100 participants successfully completed the questionnaire survey and the collected data will be used for data analysis. This study included demographics of participants' gender, age, and work experience as MSMEs. There are about 55.00% of male and 45.00% of female participated in the questionnaire survey. Figure 2 demonstrates majority of the participants are from age between 21-30 years old about 58.00%. Besides that, there are 24.00% and 18.00% of the participants are from age group of less than 20 years old and 31-40 years old. Figure 3 illustrates that most of the participants have working experience as MEMEs for 2-3 years about 48.00%, follow by 4-6 years about 34%, less than 1 years about 17.00% and 7-9 years about 1.00%.

4.1 Descriptive Analysis

Table 2 tabulates the descriptive statistical tests results for the construct of effort expectancy, social influence, and facilitating condition on the e-marketplace adoption. The descriptive statistical tests result includes the minimum values, maximum values, average values, and standard deviations.

The data of effort expectancy construct, social influence construct, and facilitating condition construct were obtained from distributing questionnaires online with 3 questions/items for each construct with the use of a 5-point Likert Scale, having a theoretical score between the lowest score of 3 to the highest score of 15.

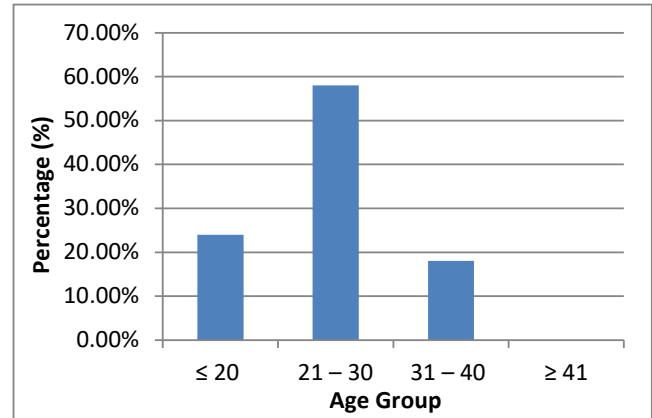


Figure 2. The participant's age group

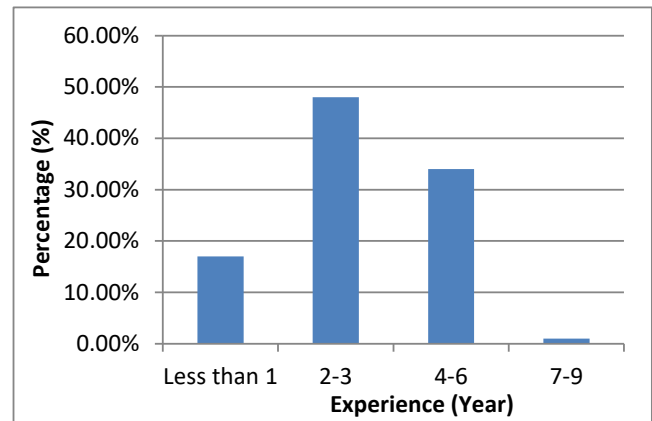


Figure 3. The participant's working experience as MSMEs

Table 2. Descriptive statistics

Variables	Min	Max	Sum	Mean	Std. Deviation
Effort Expectancy	10	15	1337	13.37	1.412
Social Influence	7	15	1129	11.29	1.833
Facilitating Condition	9	15	1242	12.42	1.465

Note: N = 100.

In effort expectancy construct, the empirical score on the e-marketplace adoption model spreads from the lowest score of 10 to the highest score of 15, with a total score of 1337, mean 13.37 and standard deviation of 1.412.

In social influence construct, the empirical score on the e-marketplace adoption model spreads from the lowest score of 7 to the highest score of 15, with a total score of 1129, mean 11.29 and standard deviation of 1.833.

In facilitating condition construct, the empirical score on the e-marketplace adoption model spreads from the lowest score of 9 to the highest score of 15, with a total score of 1242, mean 12.42 and standard deviation of 1.465.

4.2 Model Evaluation

The model analysis is conducted through SmartPLS 3.0 program to ensure that the measurements used in this study are appropriate to be made measurements (valid and reliable). Table 3 demonstrates the result of validity and reliability test for the three considered constructs.

Table 3. Result of validity and reliability test

Construct	Composite Reliability	Cronbach's Alpha	AVE
EE	0.836	0.710	0.630
SI	0.892	0.823	0.733
FC	0.839	0.722	0.635

Note: N = 100. EE: Effort Expectancy; SI: Social Influence; FC: Facilitating Condition.

The construct is said to be reliable only if the composite reliability value is greater than 0.7 for confirmatory research and the value 0.6-0.7 is acceptable for exploratory research. Table 3 illustrates that the composite reliability values for the three construct are greater than 0.7, thus the reliability of all variables is high and comparable.

The construct is said to have a consistency in answering the questionnaire tested only if the Cronbach's alpha is greater than 0.7 for confirmatory research and a value of 0.6-0.7 is acceptable for exploratory research. Table 3 shows that the Cronbach's alpha value of all variables are greater than 0.7, thus the consistency of each answer is good.

Validity of the variable can be determined based on the value of Average Variance Extracted (AVE). The suggested AVE value must be greater than 0.5. In table 3, the outputs of AVE on the adoption model of e-marketplace for all variables are greater than 0.5, thus the variables are valid.

4.3 Hypothesis Testing

Table 4 tabulates the hypothesis testing result for effect of effort expectancy, social influence, and facilitating condition on behavior intention. The obtained result signified that only effort expectancy has a positive effect on behavior intention. Therefore, H1 is accepted and the remaining hypotheses are rejected.

Table 4. Hypothesis testing

	Original Sample (O)	T Statistics (O/STDEV)	P Values	Hypothesis
H1	0.204	2.081	0.040*	Supported
H2	-0.097	1.202	0.232	Not Supported
H3	-0.038	0.341	0.734	Not Supported

Note: N = 100. *Sig: p-value (< 0.05).

H1 hypothesis states that effort expectancy has a positive effect on behavior intention. Table 4 shows that the relationship between

effort expectancy and behavioral intention on e-marketplace adoption is significant with a p-value of 0.040 (≤ 0.05). The original sample estimate value for e-marketplace adoption models showed positive results, which was 0.204. So, it showed that the direction of the relationship between effort expectancy and behavioral intention was positive. Thus, the H1 hypothesis in this study which states that effort expectancy has a positive effect on behavior intention is accepted.

H2 hypothesis states that social influence has a positive effect on behavior intention. Table 4 demonstrates that the relationship between social influence on behavior intention on e-marketplace adoption is not significant with a p-value of 0.232 (≤ 0.05). The original sample estimate value for the two adoption models showed negative results, which was -0.097. So, it showed that the direction of the relationship between social influence and behavior intention was negative. Thus, the H2 hypothesis in this study which states that social influence has a positive effect on behavior intention in e-marketplace adoption is rejected.

H3 hypothesis states that facilitating conditions have a positive effect on behavioral intention. Table 4 indicates that the relationship between facilitating conditions and behavioral intention on e-marketplace adoption is not significant with p-value of 0.734 (≤ 0.05). The original sample estimate value in the adoption models showed negative results in the amount of -0.038 which showed that the direction of the relationship between facilitating conditions and behavioral intention was positive. Thus, the hypothesis H3 in this study which states that facilitating conditions have a positive effect on behavior intention is rejected.

5. CONCLUSION

This study concludes that effort expectancy influences the behavior intention to use e-marketplace, where users who have high effort expectancy have a behavioral intention to use e-marketplaces that are higher than users who have low effort expectancy. The social influence and facilitating conditions doesn't influence the behavior intention to use e-marketplace among MSMEs.

Furthermore, the future study can add moderation variables that are consistent with the original UTAUT2 model in order to provide further explanation regarding the application of this model. Also, expand the population and multiply research samples to find out the level of acceptance and use of e-marketplaces in other MSME regions that have different cultural backgrounds.

6. ACKNOWLEDGMENTS

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