

## THE INFLUENCE OF E-COMMERCE ADOPTION USING SOCIAL MEDIA TOWARDS BUSINESS PERFORMANCE OF MICRO ENTERPRISES

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### ABSTRACT

*Social media plays an important role in e-commerce adoption. As an e-commerce medium, social media can be utilized by Small and Medium Enterprises (SMEs) to promote and sell their product. Many of SMEs especially micro enterprises are still not utilizing e-commerce adoption. The e-commerce adoption can be seen as an influencing factor towards business performance. This study aims to determine the factors that influence micro enterprises who use social media in adopting e-commerce. This study also aims to look at the effect of e-commerce adoption using social media towards business performance. The study was conducted from 104 respondents in Jakarta Region which were taken by purposive sampling method. Data were analyzed using structural equation modeling with Partial Least Square (PLS). The results revealed that e-commerce adoption using social media conducted by micro enterprises is influenced by perceived benefits and external environment. The results revealed that the owner characteristics has no significant effect on e-commerce adoption. It indicates that micro enterprises who adopt e-commerce using social media were influenced by perceived benefits and external environment but they were not influenced by their characteristics of knowledge and skill in information technologies. The e-commerce adoption also proved to have a positive effect on business performance of micro enterprises. Micro enterprises who adopt e-commerce using social media feel that profits are increasing, the sales volume of products is growing and the area of marketing is expanding.*

Keywords: social media, e-commerce adoption, micro enterprises, business performance

### INTRODUCTION

Electronic commerce (e-commerce) refers to all types of electronic transactions between firms and stakeholders whether they are financial transactions or exchanges on information or other services (Chaffey, 2009). E-commerce succeeds in shortening the distance between customers and the firm through the use of new information, which is obtained by technology-based relationship, to create products based on customers' need (Igwe, Onwumere, & Egbo, 2014). E-commerce also gives advantages in the context of communicative functions that include promotion products and services as well as interaction with customers (Abebe, 2014).

Every parties can take the advantages of e-commerce adoption. One of the parties that can take the advantages from the adoption of e-commerce are SMEs. SMEs play an important role in economic growth nationally and internationally because they are an important contributors to economic performance (Alrousan & Jones, 2016). They give contribution to national development in various sectors, such as the largest numbers of total enterprise numbers and the job creators (MacGregor & Kartiwi, 2010).

In developing countries, the roles of SMEs become more meaningful in reducing poverty and unemployment (Kotelnikov, 2007). The appropriate development of SMEs will give a significant impact on the economic development of a country. SMEs are required to develop and increase their competitiveness because their development are still far from expectations.

Since one of the main objectives of SMEs is to take advantages of development opportunities especially in globalizational markets, e-commerce adoption becomes a necessary strategy (Jahanshahi, Zhang, & Brem, 2013). SMEs are also believed that they must engage with social media (Durkin, McGowan, & McKeown, 2013) because social media plays an important role in e-commerce adoption (Lea, Yu, Maguluru, & Nichols, 2006). Social media is suitable for Small and Medium Enterprises (SMEs) because there are low barriers in the use of the technologies, such as low cost and low level of IT skill (Derham, Cragg, & Morrish, 2011)

The opportunity to develop SMEs to promote and sell their products through e-commerce using social media becomes quite large. The use of information technology can play a crucial role in improving business performance. Further, the enhancement of business performance will obviously help improve the economic conditions of the region where SMEs operates (Rekarti & Doktoralina, 2017).

Nevertheless, the adoption of e-commerce by SMEs is still far behind the adoption e-commerce by large companies (Grandon & Pearson, 2004; Chong, 2008). Various factors can determine e-commerce adoption by SMEs. The e-commerce adoption by SMEs has always been associated with owners. This is very reasonable because SMEs structurally has centralized management where owners have an important role in making decisions (MacGregor & Kartiwi, 2010). Owner characteristics become a factor that has a significant and positive effect on e-commerce adoption (Hanum & Sinarasri, 2017; Olatokun & Bankole, 2011). However, Ghobakhloo & Tang, (2013) and Huy, Rowe, Truex, & Huynh (2012) found that owner characteristics did not significantly influence e-commerce adoption.

SMEs will also see if there are perceived benefits in adopting e-commerce. The perceived benefits mean that the use of e-commerce by enterprises can increase the level of corporate benefits such as reduced costs and increased sales volume

(Gilaninia, Danesh, Amiri, Mousavian, & Eskandarpour, 2011). The perceived benefits have a significant positive effect on the adoption of e-commerce (Hanum & Sinarasri, 2017; Rahayu & Day, 2015). If owner businesses feel e-commerce is useful for their businesses, it is probable that they will adopt e-commerce. However, (Kurnia, Choudrie, Mahbubur, & Alzagouol, 2015) show that the perceived benefits have no significant effect on the adoption of e-commerce.

The adoption of e-commerce by SMEs can also be influenced by external environmental factors. The external environment refers to external influences that influence e-commerce adoption. External environment has significant positive effect on the adoption of e-commerce by SMEs (Ningtyas, Sunarko, & Jaryono, 2015). However, it is different from the results of research by (Hanum & Sinarasri, 2017) which show that external environment from the side of competitors and consumers have no influence on the adoption of e-commerce.

The adoption of e-commerce, that influenced by many factors, has a significant positive effect on business performance of SMEs (Abebe, 2014; Hanum & Sinarasri, 2017; Ikhsan, Suazhari, & Razki, 2016; Ningtyas et al., 2015). Wider use of e-commerce will have a greater positive impact on business performance.

Based on the description above, this study aims to investigate the influence of e-commerce adoption towards business performance. Besides, this study aims to look at factors that influence e-commerce adoption from the owner characteristics, perceived benefits, and external environment. This study is focused on discussing e-commerce adoption by micro enterprises who use social media. This study is expected to contribute to the development of science on providing empirical evidence the behavior of e-commerce adoption by micro enterprises.

The situation outlined above is the reason for this study to investigate those factors that influence SMEs in developing countries in adopting e-commerce and the impact of their adoption of e-commerce towards business performance. In this regard, Indonesia was chosen as the region in which the research conducted because Indonesia is one of the developing countries in Asia and the number of SMEs are over 95% of all enterprises in Indonesia. There are also a fact that SMEs in Indonesia that are actively using the internet be able to earn incomes of 80 percent higher than those who are still conventional (The Ministry of Communications and Information Technology of Republic of Indonesia, 2017).

This study is focused on discussing e-commerce adoption by micro enterprises who using social media. In Indonesia, micro enterprises dominated over 90% of total SMEs in Indonesia. Indonesia, which is an online market with growth as the fastest online market in Southeast Asia, is also supported by many Indonesian people who like to interact socially through social media. In 2017, internet services accessed by 87.13% of internet users in Indonesia are social media (Indonesia Internet Service Provider Association, 2017). Therefore, this study is expected to contribute to the development of science on providing empirical evidence the behavior of e-commerce adoption using social media by micro enterprises in developing countries.

## **LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT**

### **E-Commerce**

Electronic commerce (e-commerce) refers to all types of electronic transactions between firms and stakeholders whether they are financial transactions or exchanges on information or other services (Chaffey, 2009). E-commerce includes all business activities that use internet technologies (Schneider, 2015). There are five general e-commerce categories namely business-to-consumer (B2C), business-to-business (B2B) consumer-to-consumer (C2C) transactions consumer-to-business (C2B) transaction and business-to-government (B2G).

E-commerce succeeds in shortening the distance between customers and the firm through the use of new information, which is obtained by technology-based relationship, to create products based on customers' need (Igwe et al., 2014). The adoption of e-commerce can increase the level of firm benefits such as increased sales volumes (Gilaninia et al., 2011). E-commerce also gives benefits in the context of communicative functions that include promotion products and services as well as interaction with customers (Abebe, 2014).

The adoption of e-commerce has been investigated by many researchers using models that relevant to information system research. Several theories emerged to support the previous researches. The dominated theories are Technology Acceptance Model (Davis, 1989), Diffusion of Innovation Theory (Rogers, 1983) and Technology-Organization-Environment framework (Tornatzky & Fleischer, 1990).

The Technology acceptance model (TAM) provides an explanation about individual behaviour to technology acceptance (Davis, 1989). The actual behaviour is determined by behavioural intention and the behavioural intention is determined by attitude toward use and perceived usefulness. Attitude toward use is determined by perceived usefulness (PU) and perceived ease of use (PEOU).

The Diffusion of Innovation (DOI) theory based on psychological and sociological theory. The DOI theory was developed to investigate the new ideas and technology are perceived by individuals as well as firms. The innovation helps to determine the factors that affect the adoption rate of technological innovation by individuals as well as firms. Rogers (1983) measured innovation by five characteristics which are called as an attributes of innovation namely relative advantages, compatibility, complexity, triability and observability.

The Technology-Organization-Environment (TOE) framework was developed in order to describe the influence of contextual factors in adoption of technology innovation. There are three contexts that present drivers and inhibitors for the adoption of

technological innovation (Tornatzky & Fleischer, 1990). The contexts are technological, organizational and environmental context. The technological context includes internal and external technologies that are relevant to the firm. The organizational context describes the internal factors of firms that affect the adoption of technological innovation, such as firm size, complexity of managerial structure and financial resources. The Environmental context describes the atmosphere surrounding the firm such as competitors, suppliers, customers and government.

The TOE framework has been examined by various previous studies that investigate SMEs' technology adoption. But, the TOE framework does not identify a conceptual model of factors affecting e-commerce adoption by SMEs where managers are considered as the most important decision makers in adopting technology in SMEs (Hashim, 2007). Many researchers extending the TOE framework by adding owner/manager characteristics as the fourth context (Alrousan & Jones, 2016; Hanum & Sinarasri, 2017; Mohamad & Ismail, 2009; Olatokun & Bankole, 2011; Rahayu & Day, 2015). Therefore, from the theories above, the TOE framework plus owner/managerial context is chosen as the theoretical basis for the development of our research model.

#### **Owner Characteristics and E-Commerce Adoption**

The business owner is an individual who has a very large influence on e-commerce adoption (Hanum & Sinarasri, 2017; Rahayu & Day, 2015). This is because business owners play an important role in decision making (Nguyen & Waring, 2013). Successful enterprises that embrace IT and internet technologies are often those whose owners have knowledge and ability in information technology (Olatokun & Bankole, 2011).

Many businesses do not adopt e-commerce because of lack of knowledge and understanding of information technology. Business owners who have the knowledge and ability of information technology, they will be more likely to adopt e-commerce (Ajmal & Yasin, 2012). The owner characteristics factor has a significant positive effect on the adoption of e-commerce conducted by SMEs (Hanum & Sinarasri, 2017; Olatokun & Bankole 2011). Therefore, this study formulated the following hypothesis:

H1: Owner characteristics positively influence the e-commerce adoption.

#### **Perceived Benefits and E-Commerce Adoption**

Benefits are a strong determinant of the use of a technology, adoption, and behavior of users (Davis, 1989). Perceived benefits are one of the key reasons why businesses adopt and use information and internet technology continually. The perceived benefits have a significant positive effect on the adoption of e-commerce by SMEs (Hanum & Sinarasri, 2017; Rahayu & Day, 2015). Higher perceived benefits will lead to the adoption of information technology.

Benefits can be divided into two, namely direct benefits and indirect benefits. Direct benefits include reducing operational costs and improving business functions while indirect benefits include improving customer service (Seyal, Rahman, & Mohammad, 2007). The perceived benefits of adopting e-commerce mean that the use of e-commerce by enterprises can increase the level of corporate benefits such as reduced costs and increased sales volume (Gilaninia et al., 2011). If business owners feel e-commerce is useful for their business, it is probable that they will adopt e-commerce (Rahayu & Day, 2015). Therefore, this study formulated the following hypothesis:

H2: Perceived benefits positively influence the e-commerce adoption.

#### **External Environment and E-Commerce Adoption**

The external environment refers to external influences such as pressure from competitor and pressure from customer that influence e-commerce adoption. The competitor pressure refers to the pressure from competitors within the industry felt by the firm (Zhu & Kraemer, 2005). More companies that use internet for marketing and servicing the customers, it will affect the competition and accelerate e-commerce adoption (Ajmal & Yasin, 2012). When competitors start to adopt e-commerce, companies will be shovled into adopt e-commerce more widely to obtain competitive advantages.

The customer pressure relates to pressure from customers perceived by enterprises. In many cases, the customers have the power to press an enterprise to adopt a particular kind of technology. The differences of customer's culture that exist in different country can also influence business to utilise and adopt e-commerce (Ajmal & Yasin, 2012). External environment has a positive significant effect on e-commerce adoption (Ningtyas et al., 2015). Therefore, this study formulated the following hypothesis:

H3: External environment positively influences the e-commerce adoption.

#### **E-Commerce Adoption and Business Performance**

E-commerce adoption has a significant positive effect on business performance (Abebe, 2014; Hanum & Sinarasri, 2017; Ningtyas et al., 2015) Wider use of e-commerce will have a greater positive impact on business performance (Ningtyas et al., 2015). The adoption of e-commerce by enterprises can increase the level of corporate benefits such as increased sales volumes (Gilaninia et al., 2011).

Business performance can be seen from the expansion of the market (Ikhsan et al., 2016; Ningtyas et al., 2015) and the growth of sales volume (Abebe, 2014; Ramanathan, Ramanathan, & Hsiao, 2012; Ramli, Soelton, & Pajjan, 2018). Business performance can also be seen from decreasing transaction costs (Hanum & Sinarasri, 2017) and profits (Ramli et al., 2018). Therefore, this study formulated the following hypothesis:

H4: E-Commerce adoption positively influences the business performance

Based on the hypothesis development, the framework (research model) of this study is illustrated in Figure 1.

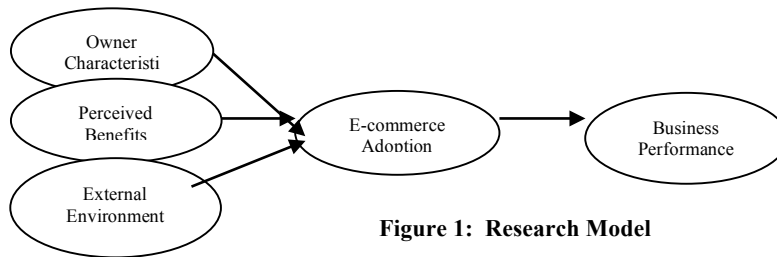


Figure 1: Research Model

**METHODOLOGY**

**Research Design**

The type of this study is causality study, which is a type of study in the form of causal relationship between several variables. The variables that used in this study are latent variable (construct) and manifest variable (indicator). The variable can be seen in Table 1.

Table 1: Construct Measurement

Construct	Indicator	Supporting Literature
Owner Characteristics	- IT Knowledge	Hanum & Sinarasri, 2017; Mohamad & Ismail, 2009; Olatokun & Bankole, 2011
	- IT Skill	
Perceived Benefits	- Operational Cost	Hanum & Sinarasri, 2017; Rahayu & Day, 2015
	- Business Function	
	- Customer Services	
External Environment	- Competitor Pressure	Hanum & Sinarasri, 2017; Ningtyas et al., 2015
	- Customer Pressure	
E-Commerce Adoption	- General Marketing Activities	Ikhsan et al., 2016
	- C2C Transaction	
Business Performance	- Profit	Abebe, 2014; Hanum & Sinarasri, 2017; Ikhsan et al., 2016; Ningtyas et al., 2015; Ramanathan et al., 2012
	- Sales	
	- Marketing area	

**Sampling Method**

The samples are taken by purposive sampling method with several criterias i.e the micro enterprises who live in DKI Jakarta, adopt e-commerce using social media and run C2C transaction. Purposive sampling method can used if the sampling frame is not found. The number of samples as many as 104 respondents (Table 2) which this number is still included in the sample size of SEM analysis which requires minimum sample of 5 times the number of indicators to be analyzed (Ferdinand, 2014).

Table 2: Profiles of Respondents

Parameters	Quantity	Percentage
<b>Gender</b>		
Male	17	16,35%
Female	87	83,65%
<b>Business Period (years)</b>		
< 1	34	32,69%
1-3	47	45,19%
> 3-6	15	14,42%
> 6-9	5	4,80%
> 9	4	2,90%
<b>Products</b>		
Fashion	49	47,11%
Cosmetics	11	10,58%
Accessories	8	7,69%
Foods	23	22,11%
Handicraft	9	8,65%
Furnitures	1	0,98%
Services	3	2,88%
<b>Total</b>	104	100,00%

Table 2 summarizes the descriptive information of the dataset. About 83.65% of the respondents were female and 16.35% were male. Majority of respondents are running businesses for 1-3 years (45.19%). Majority of respondents sell fashion products (47.11%).

**Data Collection**

The data were collected from March to April 2019. The data were collected using an online questionnaire where items were measured on a five-point Likert scale. The questionnaire was developed by the reference of previous studies and has been tested for the validity and reliability.

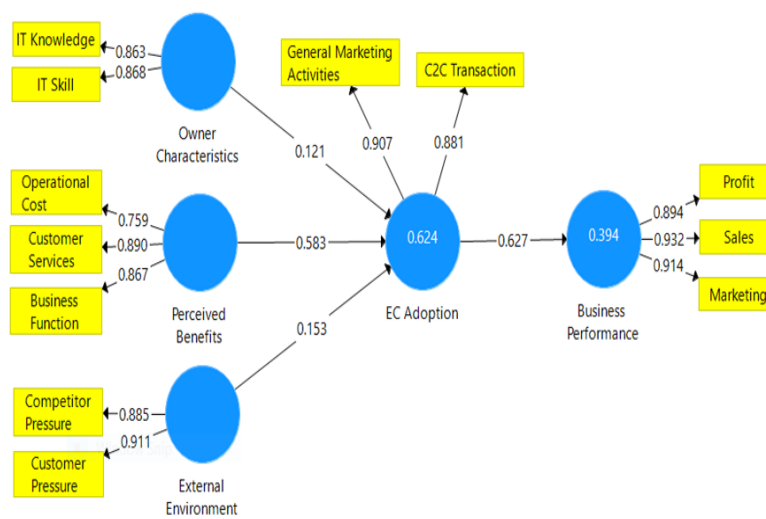
**Analysis Method**

Data were analyzed using Structural Equation Modelling (SEM) with Partial Least Square (PLS) approach. SEM-PLS can be used in the research that aims to predictive orientation (Ghozali, 2014). Partial Least Square (PLS) is used for causal predictive analysis in high complexity and low theory support (Latan & Ghozali, 2012). The software that used is SmartPLS 3.

**RESULTS AND DISCUSSION**

**Evaluation of Measurement Model (Outer Model)**

Evaluation of measurement model can be seen from the results of convergent validity. Convergent validity is seen from the value of the outer loading. The value of the outer loading of indicator which is greater than 0.7 is valid. The value of the outer loading of this study can be seen in Figure 2.



**Figure 2: The Values of Outer Loading**

Based on Figure 2, all indicator variables have outer loading value greater than 0.7. It means all indicators are valid. It can be concludes that the construct has good convergent validity. The other evaluation of the measurement model is seen in the results of reliability and construct validity. The reliability of a construct can be seen from the value of Composite Reliability and Cronbach’s Alpha.

The construct validity is seen from the value of Average Variance Extracted (AVE) and compare the square root value of AVE with the correlation between respective laten construct in the model. Constructs have good reliability if the value of Composite Reliability is greater than 0.8 and the value of Cronbach’s Alpha is greater than 0.7. The values of Composite Reliability, Cronbach’s Alpha, and Average Variance Extracted (AVE) can be seen in Table 3.

**Table 3: The Values of Composite Reliability, Cronbach’s Alpha, Average Variance Extracted (AVE)**

Constructs	Composite Reliability	Cronbach’s Alpha	AVE
Business Performance	0.938	0.901	0.835
EC Adoption	0.889	0.750	0.800
External Environment	0.893	0.761	0.807
Owner Characteristics	0.857	0.665	0.749
Perceived Benefits	0.878	0.826	0.707

Based on Table 3, all constructs (exogenous and endogenous) are reliable. This is because all constructs have Composite Reliability values which are greater than 0.7. All constructs also have Cronbach's Alpha values greater than 0.7 except owner characteristics variable. But the value of Cronbach’s Alpha which is greater than 0.6 still tolerated for exploratory study (Latan & Ghozali, 2012). Besides being reliable, all constructs are valid. This can be seen from all constructs that have the AVE values above 0.5.

The next evaluation of construct validity is evaluating discriminant validity by comparing the square root values of AVE with the correlation between the respective latent constructs. If the AVE square root value of each constructs is greater than the

correlation between constructs it is said that the model has good discriminant validity. The comparison of AVE square root values with inter-construct correlations can be seen through The Fornell-Larcker Criterion (see Table 4).

**Table 4: The Fornell-Larcker Criterion**

	Business Performance	EC Adoption	External Environment	Owner Characteristics	Perceived Benefits
Business Performance	<b>0.914</b>				
EC Adoption	0.627	<b>0.894</b>			
External Environment	0.415	0.577	<b>0.898</b>		
Owner Characteristics	0.575	0.691	0.566	<b>0.866</b>	
Perceived Benefits	0.535	0.776	0.612	0.830	<b>0.841</b>

The Fornell-Larcker Criterion shows that the diagonal value which is in bold, is the square root of AVE, while other values are the correlations between the respective latent construct. The discriminant validity is achieved when a diagonal value (in bold) is higher than the values in its row and column. Referring to Table 4, it can be concluded that discriminant validity for all constructs are achieved.

**Evaluation of Structural Model (Inner Model)**

Evaluation of the structural model looks at the relationship between construct and their significance values indicated by the value of T-statistics based on PLS output. The coefficient path that has T-statistic value  $\geq 1.645$  is significant. The path coefficient can be seen in Table 5.

**Table 5: Path Coefficient**

Relationship	Construct Coefficients	T-Statistics	Results	Hypothesis Testing
OC → EC Adoption	0.121	1.058	Not Significant	Not Supported
PB → EC Adoption	0.583	4.857	Significant	Supported
EE → EC Adoption	0.153	2.050	Significant	Supported
EC Adoption → BP	0.627	10.241	Significant	Supported

Based on Table 5, the owner characteristics has a positive effect on e-commerce adoption but it is not significant on 5% because of T-statistics value  $< 1.645$  ( $1.058 < 1.645$ ). The perceived benefits and external environment has positive and significant effect on e-commerce adoption. The e-commerce adoption has a positive and significant effect on business performance. Besides, the other evaluation of structural model is seen at the R-square values (Table 6).

**Table 6: R-Square Values**

Construct	R-Square
EC Adoption	0.624
Business Performance	0.394

According to Table 6, the model of the influence of owner characteristics, perceived benefits, and external environment on e-commerce adoption gave R-Square value of 0.624. It means that the construct variability of e-commerce adoption which can be explained by the constructs of owner characteristics, perceived benefit, and external environment equal to 62.4% while the remaining 37.6% is explained by other variables outside the model. The model of the influence of e-commerce adoption towards business performance gave R-Square value of 0.394. It means that the construct variability of business performance which can be explained by the constructs of e-commerce adoption equal to 39.4% while the remaining 60.6% is explained by other variables outside the model.

**The Influence of Owner Characteristics on E-Commerce Adoption**

The owner characteristics which are reflected through IT knowledge and IT skill, has positive effect on e-commerce adoption with construct coefficient of 0.121. But, the influence of owner characteristics on e-commerce adoption is not significant because its T-statistic value is lower than 1.645 ( $1.027 < 1.645$ ). Therefore, H1 is not supported. It indicates that micro enterprises owners who adopt e-commerce using social media were not influenced by their characteristics of knowledge and skill in information technologies.

This result is different from the results shown by (Hanum & Sinarasri, 2017; Olatokun & Bankole, 2011) that the owner characteristics become a significant positive factor in adopting of e-commerce. The owner is a decision maker related to the problem in adopting the internet and e-commerce for business operations. If business owners have greater knowledge and capabilities of information technology, owners can increase the speed of technology adoption (Ghobakhloo, Arias-Aranda, & Benitez-Amado, 2011).

Nevertheless, this result is supported by Huy et al. (2012) that the owner characteristics did not significantly influence the adoption of e-commerce. This means that the owner characteristics do not guaranteed as the factor that influences e-commerce



adoption. This finding indicates that micro enterprises owner do not consider IT knowledge and IT skill as an important thing when they adopt e-commerce. It is because SMEs has limited knowledge of internet and information technology (Slamet et al., 2016). Therefore, they can still adopt e-commerce using social media without higher IT knowledge and IT skills. Social media is suitable for Small and Medium Enterprises (SMEs) because there are low barriers in the use of social media technologies such as low cost and low level of IT skill (Derham et al., 2011).

#### **The Influence of Perceived Benefits on E-Commerce Adoption**

The perceived benefits, which are reflected through operating cost, customer services, and business function, has positive effect on e-commerce adoption with construct coefficient of 0.583. The influence of perceived benefits on e-commerce adoption is significant because its T-statistic value is higher than 1.645 ( $4.857 > 1.645$ ). Therefore, H2 is supported. It indicates that micro enterprises owners who adopt e-commerce using social media were influenced by the perceived benefits.

The perceived benefits have the greatest influence on the e-commerce adoption using social media with the highest construct coefficient among others. The perceived benefits are a key reason why micro enterprises adopt e-commerce. Consistently, the results also reveal that perceived benefits are the main reason of owner small businesses perceiving these applications as beneficial to their businesses (Ghobakhloo & Tang, 2013).

More importantly, it assumes that if owner comprehends the function and advantages of e-commerce adoption, they may be more pleased to adopt such technology (Rahayu & Day, 2015). E-commerce succeeds in shortening the distance between customers and the firm through the use of new information, which is obtained by technology-based relationship, to create products based on customers' need (Igwe et al., 2014). E-Commerce also gives benefit in the context of communicative functions that include promotion products and services as well as interaction with customers (Abebe, 2014).

This finding is consistent with previous studies that perceived benefits significantly and positively affect the e-commerce adoption (Hanum & Sinarasri, 2017; Rahayu & Day, 2015). This finding shows that micro enterprises adopt e-commerce using social media because they feel that operational cost will decreased, such as rent cost, employee salaries, and inventory. Customer services can be done optimally every where and every time. Business functions, especially related to product marketing, are also getting easier because e-commerce can reach all regions and all groups.

This finding indicates that the higher benefits perceived by mirco enterprises, it will lead to the higher adoption of e-commerce using social media. It is because social media offers enterprises a variety ways to reach consumers, communicate with them and measure their communication in browsing and purchasing activities (Hennig-Thurau et al., 2010). Social media is considered a tool that helps enterprises to reach potential consumers, create business networks, listen to consumer voices, and build consumer trust (Abed, Dwivedi, & Williams, 2015).

#### **The Influence of External Environment on E-Commerce Adoption**

The external environment, which are reflected through customer pressure and customer pressure, has positive effect on e-commerce adoption with construct coefficient of 0.153. The influence of external environment on e-commerce adoption is significant because its T-statistic value is higher than 1.645 ( $2.050 > 1.645$ ). Therefore, H3 is supported. It indicates that micro enterprises owners who adopt e-commerce using social media were influenced by the external environment.

The results of this study shows that external environment, significantly and positively affects the e-commerce adoption. Therefore, H3 is supported. This finding is consistent with previous studies by Ningtyas et al. (2015). The higher pressure from external environment perceived by mirco enterprises, it will lead to the higher adoption of e-commerce using social media.

This finding shows that micro enterprises adopt e-commerce using social media because they feel that there are pressure from competitors and customers. The competitor pressure is felt through the competition from competitors who sell their products online which are supported for various reasons. The reasons that make competitors adopt e-commerce include costs saving and wider market access. Thus, the higher the level of competition within the industry, the greater the achievement of e-commerce usage will (Zhu & Kraemer, 2005).

This finding also shows that micro enterprises adopt e-commerce using social media because they feel there are pressure from customers. In many ways, consumers have the power to encourage business to adopt a variety of technologies. This is because with the sophistication of information technology, all limitations on facilities, distance, and time of transactions can be easily resolved (Ningtyas et al., 2015).

Nowadays, customers can shop online through social media easily without the constraints of space and time. More companies that use the internet for marketing and servicing the customers, it will affects competition and accelerate SMEs for adopting e-commerce (Ajmal & Yasin, 2012). As more competitors adopt e-commerce, small firms are more inclined to follow suit in order to maintain their own competitive positions (Chong, 2008).

#### **The Influence of E-Commerce Adoption towards Business Performance**

The e-commerce adoption, which are reflected through general marketing activities and C2C transaction, has positive effect on business performance with construct coefficient of 0.627. The influence of external environment on e-commerce adoption is significant because its T-statistic value is higher than 1.645 ( $10.241 > 1.645$ ). Therefore, H4 is supported. It indicates that micro enterprises owners feel their business performance are positively influenced by their adoption of e-commerce using social media.

E-commerce succeeds in shortening the distance between customers and the firm through the use of new information, which is obtained by technology-based relationship, to create products based on customers' need (Igwe et al., 2014). E-Commerce also gives benefit in the context of communicative functions that include promotion products and services as well as interaction with customers (Abebe, 2014). The adoption of e-commerce by enterprises can increase the level of corporate benefits such as increased sales volumes (Gilaninia et al., 2011).

This result is the same as the results of previous studies that e-commerce adoption, significantly and positively affects the business performance (Abebe, 2014; Hanum & Sinarasri, 2017; Ikhsan et al., 2016; Ningtyas et al., 2015). The higher adoption of e-commerce by micro enterprises, it will lead to the higher performance of business. Wider use of e-commerce will have a greater positive impact on business performance.

This finding indicates that business performance reflected through profit, sales and marketing is positively affected by the adoption of e-commerce using social media. Micro enterprises feel increased profits as a result of adopting e-commerce using social media. Micro enterprises feel an increase in sales because the number of products sold increases after adopting e-commerce using social media. Micro enterprises also feel the marketing area is expanding because products ordered by customers from all regions.

This finding interprets that micro enterprises who adopt e-commerce using social media feel that profits are increasing, the sales volume of products is growing and the area of marketing is expanding. It is because social media offers enterprises a variety ways to reach consumers, communicate with them and measure their communication in browsing and purchasing activities (Hennig-Thurau et al., 2010). Social media is considered a tool that helps enterprises to reach potential consumers, create business networks, listen to consumer voices, and build consumer trust (Abed et al., 2015).

## CONCLUSION

Based on the explanations above, the adoption of e-commerce using social media by micro enterprises has proven to influence business performance. Micro enterprises who adopt e-commerce using social media feel that profits are increasing, the sales is growing and the area of marketing is expanding. The higher adoption of e-commerce using social media by micro enterprises, it will lead to the higher performance of business.

The adoption of e-commerce using social media by micro enterprises is not influenced by owner characteristics. The adoption of e-commerce using social media by micro enterprises is affected by several factors which are perceived benefits and external environment. Perceived benefits become the highest factor that influence e-commerce adoption. Micro enterprises feel operational costs are decreased, customer services are done optimally and business functions are getting easier so that they are adopting e-commerce using social media.

## Implication

This findings can be implicated for central or local government policy in the term of e-commerce. This findings can be an important input for government as policy maker in designing policies in order to facilitate and enhance IT knowledge and IT skill of micro enterprises for helping them in adopting e-commerce using social media. It is because characteristics of micro enterprises that reflected through IT knowledge and skill have proven to be insignificant towards e-commerce adoption.

This study contributes new empirical evidence on e-commerce adoption using social media conducted by micro enterprises. This findings can be used as a reference for academics and researchers especially for the same proposed model. This findings can represent the adoption of e-commerce using social media in developing countries because micro enterprises included in the classification of Small and Medium Enterprises (SMEs).

## Limitation

In discussing the limitations of this study, it is possible to further study to allocate more resources to target a larger sample. Comparison of the research model can be also conducted over several countries (developing vs developed countries) to test for generalisability, particularly in different geographic regions. The contrasting contexts may provide some interesting results.

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