Factors Affecting e-Commerce Adoption on Micro, Small and Medium Enterprises in Medan City

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Keywords: Organizational Readiness, Technological Readiness, External Environment, E-Commerce.

Abstract: This study aims to see whether organizational readiness, technological readiness and external environment affect the adoption of e-Commerce on micro, small, and medium enterprises in the city of Medan. This research is a quantitative research with primary data and using questionnaires sent online to the respondents. The sample is the target population analyzed by using multiple linear regression. The results of the data testing showed that the organizational readiness variables did not affect the adoption of e-commerce on MSMEs, but for the technology readiness variables the test results showed that this variable had a positive and significant effect on the adoption of e-commerce on MSMEs, but for external environmental variables the results of testing shows that there is a positive influence of this variable on the adoption of e-commerce on MSMEs, but the effect is not significant.

1 INTRODUCTION

E-Commerce is a potential digital economy that has potential growth opportunities in Indonesia. Based on data e-Marketer which states that the number of internet users in Indonesia every year continues to grow.The data of Internet user since 2013 has been recorded as 72.8 million and continues to increase in 2016 to 102.8, and in 2017, internet users in Indonesia in the preceding to 112.6 million. Bank Indonesia estimates from the data of significant internet users there are 24.7 million people who shop online with the estimated transaction value in 2018 reached 144 trillion. The importance of e-Commerce is not only seen from the ease, efficiency of time, effort and cost becomes the main value especially for Micro, Small and Medium Enterprises (MSMEs). The data of MSMEs in Indonesia shows that 8.7 million is a big potential for the economic sector. Improving e-commerce users is inseparable from behavioral changes from offline shopping to online. This change in consumer behavior is evident from the annual report released by We Are Social which shows in 2017 the percentage of Indonesian citizens buying online by 41% increased by 15% compared to 2016 which was only 26%. Survey from Indonesia's shopback recently released a recent research that provides an overview of the predicted e-commerce trends will occur throughout the year 2018 namely, 1) shopping behavior patterns shifted to online, 2) delivery services on the same day so the main choice, 3) installers move to lapak, 4) online shopping more desirable because of the many promos offered, 5) the growth of mobile wallet increasingly, 6) online ticket sales increased.

Micro Small Medium Enterprises (MSMEs) are an important economic sector in competitive economic development even in Indonesia livelihoods depend on this sector. The micro, small and medium enterprises are concentrated in several business sectors such as trade, food, processed food, textiles and garments, wood and wood products, and also the production of minerals and metals and culinary. Culinary a few years later entered into one of the sub-

sector of creative industries in Indonesia so that Indonesia embraces the 15 subsectors of creative industries (Nurrohmah and Alfanur, 2016). These SMEs move in competitive conditions and uncertainty and influenced macroeconomic (Hapsari, 2014) plus a bad business environment because the risk of loss is higher than big business. The general problems faced by MSMEs are financial and non-financial (Urata and Kawai, 2000) in addition to these problems (Urata and Kawai, 2000) mention that the implementation of laws and regulations related to SMEs, including taxation issues that have not yet adequate. There are still discrepancies in the facilities provided by the government compared to the needs of SMEs, as well as the lack of linkage between SMEs themselves or between SMEs with larger industries become the problems faced by MSMEs.

Research conducted by(Rahayu and Day, 2015) found that perceived benefits, technological readiness, owner innovation, Information and Technology (IT) owners and owners IT experience are the decisive factors that influence Indonesian SMEs in adopting e-commerce, further (Rahayu and Day, 2017) found that SMEs at higher levels of experience from e-commerce adoption experience benefited greater e-commerce than those at other adoption rates. A different focus is seen in the research (Nurrohmah and Alfanur, 2016) who found three factors in e-commerce adoption of SMEs Fashion in Bandung consisting of technological readiness factor, external factor of company and internal factor of company. Further ((Nurrohmah and Alfanur, 2016), (Magdalena, 2017), (Kabanda and Brown, 2017) found that technological readiness factors were influential, further research (Magdalena, 2017) also found a typical food business entrepreneur as an alternative factor of the highest weight. Several studies have been conducted to examine the factors that influence e-Commerce adoption such as perceived barriers, good support (management support), organizational readiness, and competitors' pressures. (Lim, Baharudin and Low, 2017), (Iqbal and Astuti, 2013) find competitive pressure affecting e-commerce adoption of MSMEs. Other studies have found that organizational readiness influences e-commerce adoption(Lim, Baharudin and Low, 2017) but ((Iqbal and Astuti, 2013), but (Hanum and Sinarasri, 2017)research found that organization readiness has no effect. Other research shows that perceived barriers factors show no effect on e-commerce(Lim, Baharudin and Low, 2017), but perceived benefits (Iqbal and Astuti, 2013) positively affect the adoption of e-commerce in MSMEs. Factor management support affects e-commerce adoption of MSMEs (Lim, Baharudin and Low, 2017), while Family business's strategic orientations have a moderate influence between external pressure, organizational readiness and perceived benefits (Iqbal and Astuti, 2013).

Based on this background, the formulation of this research problem is whether there is a positive influence on 1) organizational readiness, 2) technological readiness and 3) the external environment partially towards the adoption of e-commerce in SMEs in Medan city. The purpose of this study to determine whether the organization's readiness, technological readiness, external environment positively affect the adoption of e-commerce on MSMEs.

2 LITERATURE REVIEW

2.1 Adoption of Electronic Commerce (e-Commerce)

According to (www.depkop.go.id) e-Commerce is a business activity that uses the internet as part of the whole or part of a business transaction. Transactions with suppliers through the internet, advertising through the internet, transactions with consumers via the internet via the Internet, and others-commerce is a transaction of buying and selling goods and services by using the internet and providing a means to conduct transactions involving goods or services between two or more parties using electronic and techniques devices. (Nurrohmah and Alfanur, 2016). E-commerce is a process of buying and selling products or services through electronic data transmission using the internet and world wide web(Li and Xie, 2012). E-commerce is a dynamic set of technologies, using applications and business processes that connect companies, consumers and certain communities through electronic transactions in the trading of goods, services and information electronically (Yulimar, 2010).

Factors that drive e-Commerce (Nurrohmah and Alfanur, 2016), consist of 1) Environmental perspective, consisting of a socio-cultural environment, corporate strategy, external pressure, benefits; 2) Perspective of company, consisting of company size and company structure; 3) Technological perspective of IT Infrastructure, Internet, Company technical strength, IT capability and IT adoption, government support. Factors affecting SMEs in adopting e-commerce in developing countries are as follows (a) Perceived e-readiness, including awareness, human resources,

business resources (business resources), technology resources, commitment (commitment) and government (government). b). Perceivedexternal e-readiness includes: government readiness, market forces readiness, industry support (supporting industries). Research (Morteza, Daniel & Jose, 2011) in (Hanum and Sinarasri, 2017) states that e-commerce should be tailored to the company, where this conformity refers to the extent to which e-commerce complies with technological, cultural, pre-existing to the company.

2.2 Micro Small and Medium Enterprises (MSME)

Understanding of MSMEs according to (Law No. 20, 2008) concerning micro, small and medium enterprises (MSMEs), states that micro-enterprises are productive businesses owned by individuals or individuals and / or individual business entities, while small businesses are productive economic enterprises that stand alone. individual is not a subsidiary, not a branch of the company owned, and is not a direct or indirect part of a medium or large-scale business, and a medium-sized business is a productive economic enterprise that is independent, carried out by an individual not a subsidiary, not a branch of the company owned, and not a direct or indirect part of a small business or large business. SMEs in terms of turnover have criteria, 1) micro businesses have a maximum asset of 50 million and a maximum turnover of 300 million; 2) small businesses have assets greater than 50 million to 500 million and turnover greater than 300 million to 2.5 M; and 3) medium-sized businesses have assets greater than 500 million to 10 M and turnover of large from 2.5 M - 50 M.

Research conducted by (Urata and Kawai, 2000) states that the inhibiting factor of MSMEs consists of financial factors and non-financial factors. Urata further explained about financial factors which consist of: 1) lack of compatibility between available funds that can be accessed by SMEs, 2) the absence of a systematic approach in SME funding, 3) high transaction costs, caused by sufficient credit procedures complicated so that it takes a lot of time while the amount of credit disbursed is small, 4) lack of access to formal funding sources, both caused by the absence of remote banks and the unavailability of adequate information, 5) credit interest for investment and working capital is quite high, 6) many SMEs are not yet bankable, both due to the lack of transparent financial management and lack of managerial and financial capabilities related to non-financial factors

regarding organizational management problems, consisting of: 1) lack of knowledge of production technology and quality control caused by the lack of opportunities to keep up with technological developments, as well as lack of education and training, 2) lack of marketing knowledge due to limited information accessible to SMEs regarding the market, in addition to the limited ability of SMEs to provide products / services that are in line with market desires, 3) limited human resources due to lack of resources to develop Human Resources, 4) lack of understanding of finance and accounting.

2.3 Organizational Readiness

Organizational readiness is one of the factors that influence the adoption of e-commerce by the company (Hanum and Sinarasri, 2017). According to Hoffer (2002) in (Nelson and Shaw, 2003)mentions that organizational readiness is intended to attribute firm-level attributes from organizations that estimate overall company readiness in innovation diffusion. Further (Chwelos, Benbasat and Dexter, 2000) states that organizational readiness is a measure of the adequacy of the company's experience in IT and the financial resources to adopt. (Chwelos, 2000) explains that IT experience encompasses not only the level of technological expertise within the organization but also includes the level of management's understanding of IT usage and the use of IT support to achieve organizational goals, while for financial resources it represents the availability of organizational capital for IT investments.

Companies that will adopt e-commerce require technology readiness in addition must also consider the size of the company. Zhu et al, 2006 in (Hanum and Sinarasri, 2017) states that the technology infrastructure must be tailored to the system and technical capabilities of the business to be able to support e-commerce. Absolute technological infrastructure must be owned by companies that will implement e-commerce consists of technology infrastructure and information technology personnel (Zhu and Kraemer, 2005), while other determining factors that play a role in the implementation of e-commerce in the organization is firm size (firm size). The size of the company is related to the company's ability to prepare resources that support the adoption of e-commerce consisting of financial and human resources (Oliveira and Martins, 2010), thus it can be said that the larger the size of the company the greater the company's ability to prepare the necessary resources in the adoption of e-commerce (Hanum and Sinarasri, 2017). Further (Hanum and Sinarasri,

2017) mentioned that the better the managerial understanding of the relative advantages of e-commerce adoption will make the company allocate some resources, such as managerial, financial and technological resources.

2.4 Technology Readiness

Factor technology consists of several indicators, such as perceived benefits, conformance, and costs that affect the adoption of e-commerce technology (Hanum and Sinarasri, 2017). Research (Oliveira and Martins, 2010) finds that the perceived benefit is the level of profit earned that will be obtained for companies. They further argue that the application of technology is so expensive that it becomes an obstacle factor in the technological readiness of the organization this is in line with (Hanum and Sinarasri, 2017) also mentions that in the implementation of e-commerce in Indonesia the cost factor in the application of technology is also quite instrumental, and (Premkumar & Robert, 1999 in (Jannah and Rahayu, 2015) mentioned below usually low cost technology will accelerate the adoption and implementation of technology in the organization .

2.5 External Environment

The external environment factor is a factor consisting of several aspects such as consumer pressure / supplier, competitive pressure affecting the company in adopting e-commerce (Hanum and Sinarasri, 2017). According to Provan (1980) in (Chwelos, Benbasat and Dexter, 2000) external encouragement includes influences arising from several sources in the competitive environment around the organization consisting of competitive impetus, industry impetus and the impetus of a trading partner's influence. One of the external factors considered by companies in adopting IT is the presence of competitors (Sarosa and Zowghi, 2003). Another pressure that plays a role in e-commerce adoption is the pressure from business associates that the higher the pressure of business associates the possibility of companies adopting high e-commerce in the company's efforts to maintain their competitive position (Duan, Deng and Corbitt, 2012). The higher pressure from competitors will force the company to adopt e-commerce (Hanum and Sinarasri, 2017) but with higher competition it will show the benefits of e-commerce adoption (Zhu and Kraemer, 2005). Other external factors that play a role are government support and technology providers (Hanum and Sinarasri, 2017).

2.6 Organizational Readiness and e-Commerce Adoption

Organizational readiness on e-commerce adoption is explained using the Framework Technology Organization and environment (TOE Framework) theory adopted from Tornatzky and Fleisher (1990) in (Oliveira and Martins, 2010). This theory considers that the decision to use technological innovation is based on organizational factors, external environment and technological characteristics (Huy, et al., 2012) in (Nurhadi, 2015). The results of the study (Hanum and Sinarasri, 2017) found that organizational effects negatively to e-commerce adoption, while the results (Oliveira and Martins, 2010), (Duan, Deng and Corbitt, 2012) found that organizational readiness factors and management support were a significant facilitator for e-commerce adoption. Research (Rahayu and Day, 2017) found that e-commerce adoption is beneficial to higher SMEs. Based on the above explanation, the hypothesis for this research is as follows:

H1: There is a positive influence of organizational readiness on e-commerce adoption

2.7 Technological Readiness and e-Commerce Adoption

The adoption of an innovation is called diffusion and is tied to the theory of diffusion of innovation. Diffusion is a process whereby an innovation is adopted by an organization (Hashim, 2007)). According to (Rogers, 1995) there are four factors that influence the adoption of an innovation by the organization: (1) innovation itself, (2) the communication channel used to disseminate innovation, (3) time, and (4) where the place of innovation was introduced . Use of technology is needed in order to adopt e-commerce.

Research conducted by (Hanum and Sinarasri, 2017) found that technology has an effect on the adoption of UMKM e-commerce. The results (Oliveira and Martins, 2010) found that the technological readiness factor was a significant facilitator for e-commerce adoption, and further stated that technological readiness included professional attachments, user skills and e-business skills. Based on the above explanation then hypothesis 2 is as follows:

H2: there is a positive effect of technology readiness on e-commerce adoption

2.8 External Environment and Adoption of e-Commerce

External environmental factors are factors that consist of several aspects such as customer / supplier pressure, competitor pressure that affects the company in adopting e-commerce(Hanum and Sinarasri, 2017). In competitive environments around the organization are competitive encouragement, industry encouragement and the influence of trading partners (Provan, 1980) in (Chwelos, Benbasat and Dexter, 2000). Competitors are an important element in the external factors that companies consider in adopting IT (Sarosa and Zowghi, 2003). Based on the research (Duan, Deng and Corbitt, 2012), (Yulimar, 2008), (Yulimar, 2010)found that the external environment has a positive relationship on the adoption of e-commerce while (Hanum and Sinarasri, 2017) found environmental factors positively e-commerce adoption. Based on the above explanation, the third hypothesis can be arranged as follows:

H3: there is a positive effect of the external environment on e-commerce adoption

3 RESEARCH METHODOLOGY

This research is a quantitative research that uses primary data in the form of distributing questionnaires to e-commerce actors. Data were collected using an online questionnaire of the 200 respondents consisting of small business actors, micro and medium enterprises, the questionnaire returned only 31. This study will use multiple linear regression tests to answer the proposed hypothesis.

3.1 Conceptual Framework

The conceptual framework of this study looks as follows which consists of three independent variables (VI) and one dependent variable (VD) consisting of organizational readiness (VI 1), technological readiness (VI 2) and external environment (VI 3) and adoption e-commerce (VD). The concept framework is shown in Figure 1 below:
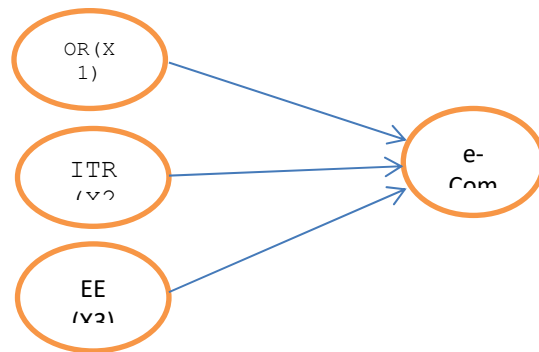

Figure 1: Concept framework

Note's:
X1 : Organizational Readiness
X2 : Information Technology readiness
X3: External environment
Y : e-Commerce Adoption

3.2 Population and Sample

The population in the research is all micro business and small business in Medan city that use e-commerce, the sample is the target population obtained from the whole questionnaire distributed online.

Data were collected using an online questionnaire Of the 200 respondents consisting of small business actors, micro and medium enterprises, the questionnaire returned only 31 respondents.

3.3 Research Variable

The variable of this research consists of one dependent variable that is performance variable of UMKM, one mediation variable that is adoption of e-Commerce and 3 independent variable that is, organizational readiness, readiness of information technology, and external motivation.

3.4 Variable Operational Definition

3.4.1 e-Commerce Adoption

E-commerce adoption is all business activity or business done on-line by using internet-based information technology. E-Commerce adoption variables are formed by nine indicators consisting of 1) Support of all organizational elements, 2) Resource adequacy, 3) Availability of facilities and infrastructure 4) Information technology, 5) External party encouragement, 6) E-Commerce facilitates access to information , 7) E-Commerce can improve

business performance, 8) E-Commerce can improve the quality and speed of service to business partners, 9) E-Commerce can improve cost efficiency, E-Commerce is superior to conventional-based trading (Nuvriasari, 2012)

3.4.2 Organizational Readiness

Organizational readiness variables use indicators from (Nuvriasari, 2012) by modifying the question instruments of 4 indicators consisting of, 1) availability of financial resources, 2) readiness to accept risks from e-commerce utilization, 3) leadership commitment, 4) awareness of acceptance of change and development of information technology.

3.4.3 Variable Technological Readiness

The technological readiness variable uses modifications of four indicators developed by (Nuvriasari, 2012) consisting of, 1) HR capabilities and skills, 2) availability of information technology tools (computers and internet networks); 3) availability of e-commerce support programs and systems software, website), 4) Compatibility between benefits and costs in the application of e-commerce.

3.4.4 External Environment

The external environment variable is an encouragement that comes from outside the company which is the reason for the company in adopting e-commerce. For this variable we use a modified indicator of (Nuvriasari, 2012)) consisting of, 1) Encouragement and demand from the consumer, 2) Suppliers' encouragement and demand, 3) Encouragement and demands of business development, 4) Government encouragement, 5) Encouragement and competitive pressure demands.

3.5 Data Analysis Method

This study will use multiple linear regression tests to answer the proposed hypothesis. The data will be processed using SPSS. From the model that has been prepared, then this research will yield good parameter value with the fulfillment of classical assumption of multiple regression test. The classical assumption test is validity test, reliability, normality, multicolinearity and heteroscedasticity.

4 DISCUSSION AND RESULT

All the question instruments proposed in this research questionnaire have been tested for validity and reliability. Testing of validity and reliability is necessary considering the type of research data is primary with a questionnaire. Test the validity of data is done by comparing the value of r arithmetic with r table for alpha 5% and df = n-2 ie 0.335. The r value of the table in this study for "n" is 31 (df: 31-2 = 29) and P = 0.05 is 0.335 so this value will be used as comparison with the calculated r value obtained from the processing using SPSS. Based on the validity test results found there are some items of the statement are not valid, thus the item is discarded. From the external environmental variables of 5 points 1 statement is not valid so it is not used in this research while from 9 items of e-commerce adoption variable 4 items statement is invalid and not included in the discussion of this research. For organizational readiness variables and technological readiness all statements are valid.

After all invalid statements are discarded then the validity test is validated so that the whole item valid statement, indicated by one-way count r is greater than r table i.e. for sample 31 with alpha 5% is 0.335. After testing the validity, the next step is to test the reliability of data that is by looking at the value of reliability coefficient greater than the value of cronbach's alpha 0.6. According to (Santoso, 2001), if the alpha count is greater than the alpha table with a positive value then the research instrument can be called reliable. The results of validity and reliability can be seen in tables 1 and 2 below:

Table 1: Validity Test

Variables	Indicators	r Count	r Table	Remarks
Organizational readiness	KO1	0.746	0.355	Valid
	KO2	0.722	0.355	Valid
	KO3	0.582	0.355	Valid
	KO4	0.413	0.355	Valid
Technological readiness	KT1	0.530	0.355	Valid
	KT2	0.650	0.355	Valid
	KT3	0.598	0.355	Valid
	KT4	0.466	0.355	Valid

	LE1	0.715	0.355	Valid
Eksternal environment	LE2	0.659	0.355	Valid
	LE4	0.670	0.355	Valid
	LE5	0.627	0.355	Valid
	AE2	0.689	0.355	Valid
	AE3	0.775	0.355	Valid
E-Commerce Adoption	AE4	0.741	0.355	Valid
	AE5	0.492	0.355	Valid
	AE9	0.640	0.355	Valid

Source: research results 2018 (data processed)

Table 2: Reliability Test

Variables	Coefficients Reliability	Reliability limits	Remarks
Organizational readiness	0.789	0,60	Reliable
Technological readiness	0.752	0,60	Reliable
Externals environment	0.827	0,60	Reliable
E-Commerce Adoption	0.844	0,60	Reliable

Source: research results 2018 (data processed)

4.1 Classical Assumption Testing

Classic assumption testing is needed to see if the data is biased if regression testing is performed. Classical assumption testing is needed to determine an econometrically acceptable regression model. These classical assumptions consist of normality testing, heterocedasticity testing and multicollinearity testing.

4.2 Normality Testing

Kolmogorof Smirnov test was used to test the normality of the data. In this test the data are said to be normally distributed if the Kolmogorov Smirnov value has a probability greater than 0.05 (Santoso, 2001). The test results showed that the data has a normal distribution where the value of Kolmogorov Smirnov is 0.882 with a significance level of 0.509. Level of significance 0.509> 0.05 then it can be concluded normal distributed data. Normally distributed data will spread on the side of the diagonal

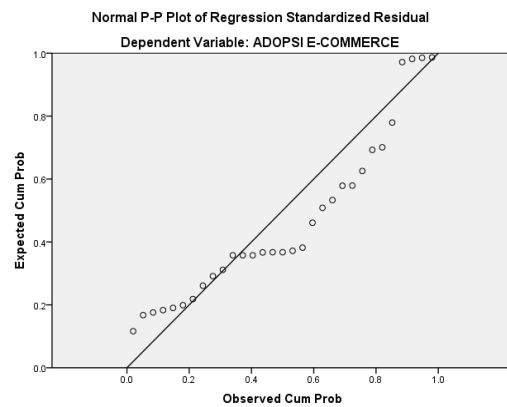line on the P.Plot graph. The normality test graph can be seen in the following figure.

Figure 2: Normality Testing

Normally distributed data can be used for conclusion because the data has spread with characteristic resembling the population represented.

4.3 Heterocedasticity Testing

Based on the test results shown in Figure 3 below, which is adapted from the SPSS output can be concluded that the data in this study is free from symptoms of heterokedastisitas because the plot diagram seen in the test does not show a certain pattern but is random. Groups of data indicated to have heterokedastisity character will form a certain pattern such as centered at a certain point or form a pattern that has certain characteristics, which in testing this research model is not found it, meaning that the variation error is not too large so that the regression is quite reliable Triton, (2006). These particular points are randomly distributed, do not form a certain clear pattern, and are spread either above or below the number 0 on the Y axis.
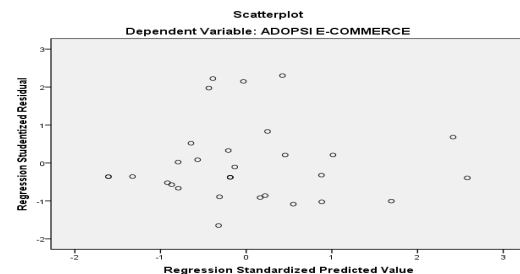

Figure 3: Heteroscedasticity testing

4.4 Multicolinearity Testing

Multicolinearity may arise if independent variables are correlated with each other, so multicolinearity can only occur in multiple regression. This resulted in a change in the sign of the regression coefficient and resulted in large fluctuations in the regression result. The change in the sign of this regression coefficient can lead to errors in interpreting the relationship between variables so that the presence of this multicolinearity should be tested (Levin and Rubin, 1998). This test is conducted to ensure that the independent variables in this study are not mutually correlated. Measurements are often used to measure whether there are correlated variables using Variance Inflation Factor (VIF) test or detection devices. Where VIF values are not more than 10 and tolerance values is not less than 0.1.

Table 3: Multicolinearity Testing

Variables	Collinearity Statistics	
	Tolerance	VIF
Organizational readiness	0.423	2.364
Technological readiness	0.456	2.194
Externals environment	0.703	1.422

Source: research results 2018 (data processed)

Table 3 shows that from the independent variable the VIF value is not more than 10 and the tolerance value is not less than 0.1. So it can be concluded in this regression model there is no multicollinearity problem.

4.5 Results of Data Analysis

4.5.1 Hypothesis Testing with t test

After testing the classical assumption and obtained the conclusion that the model can be used to perform multiple regression analysis, and then the next step is to test the hypothesis.Hypotheses to be tested are Effect of organizational readiness, technological readiness, and external environment against the adoption of e-commerce. Summary of hypothesis testing results can be seen in table 4 below.

Table 4: Summary of Hypothesis testing

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.334	.334		1.002	.325
Organizational readiness	.289	.191	.280	1.509	.143
Technological readiness	.362	.173	.373	2.087	.047
Externals environment	.221	.123	.259	1.803	.083

Source: research results 2018 (data processed)

Table 5: Anova Test

Model	R	R Square	Adjusted R Square	F	Sig.
1	0.779	0.606	0.563	13.868	.000

Source: research results 2018 (data processed)

To see the influence of each independent variable partially to the decision to vote, it can be seen t arithmetic and significance of the value of t arithmetic. If the significance value of t arithmetic is smaller than 0.05 then it can be stated that there is a significant influence of these variables on e-Commerce Adoption with 95% confidence level or alpha 5%. In this study t test is used to test whether the hypothesis used in this study is accepted or not by knowing whether the independent variables individually affect the dependent variable. The method in the determination of t table using 5% significant level provisions, with n-k (in this study df = 31-4 = 27), so that obtained t table value of 1.703 is presented in table 6 as follows:

Table 6: The value of t arithmetic

Variables	T count	T table	Significance	Hypothesis
Organizational readiness	1.509	1.703	0.143	Not Proven
Technological readiness	2.087	1.703	0.047	Proven
Externals environment	1.803	1.703	0.083	Proven

Source: research results 2018 (data processed)

Based on the above table, the results of the research can be used to answer the hypothesis as follows:

Hypothesis 1: There is positive influence of organizational readiness to e-commerce adoption, hence hypothesis of t value is positive but t arithmetic <from t table that is 1.509 <1.703 it can be concluded there is no influence of organizational readiness towards e-commerce adoption. When viewed from the table significance is indicated by a significance value of 0.143 greater than alpha 0.05, which states no significant effect. The results of this study are in line with (Iqbal and Astuti, 2013), (Hanum and Sinarasri, 2017).

Hypothesis 2: There is a positive effect of technology readiness on e-commerce adoption, hence this research show value t count> t table that is 2,087> 1,703 hence can be concluded to accept hypothesis, there is a positive influence of technology readiness to e-commerce and the effectof this significant variable seen in the column of significance of 0.047 is smaller than alpha 0.05 thus expressed significant effect. The results of this study are in line with (Nurrohmah and Alfanur, 2016), (Noerlina and Hiererra, 2013), (Magdalena, 2017), (Kabanda and Brown, 2017).

Hypothesis 3: There is a positive influence of the external environment on e-commerce, so this research shows the value of t count> t table that is 1.803> 1.703, thereby can be concluded there is positive influence of external environment to e-commerce. This positive influence is not significantly visible from the significance column of 0.083 greater than 0.05 thus not significant. The results of this study are in line with (Provan, 1980) in ((Chwelos, Benbasat and Dexter, 2000), (Yulimar, 2010), (Yulimar, 2008), (Duan, Deng and Corbitt, 2012).

Submission of one-way hypothesis can be analyzed partially from the value of significance where the value of significance is below 0.05, it can be stated that partially each independent variable has a positive effect on the level of 5% alpha. From the table above can be explained that all independent variables are positive but organizational readiness variable has a t value smaller than t table, so reject hypothesis H1 i.e. no effect of organizational readiness on e-Commerce adoption, while the variables of technology readiness and external environment variables influence against e-commerce. However, from the significance of only technology readiness variables that has a positive and significant effect.

4.6 Result of Regression Equation

To facilitate the reading of results and interpretation of regression analysis then used the form of equation. Equation or model contains the constants and regression coefficients obtained from the data processing that has been done previously. Regression equations that have been formulated then with the help of data processing program, the processing so that the final equation obtained as follows:

Y = 0.334 + 0.289 organizational readiness + 0.362 Technological readiness + 0.221 external environment + e

In this regression model, the listed constant value of 0.334 can be interpreted if the independent variables in the model are assumed to be equal to zero, the average variable outside the fixed model will increase the choice decision by 0334 times.

The value of the regression coefficient $\beta 1$, 0.289 in this study can be interpreted that the organizational readiness variable (VI 1) is positive but does not affect the adoption of e-commerce (Y). This shows that every variable of organizational readiness has increased by one time, and then the adoption of e-commerce will not increase.

The value of regression coefficient $\beta 2$ equal to 0.362 in this research can be interpreted that technological readiness variable (VI 2) have positive and significant influence to decision of adoption of e-commerce (Y). This shows that when technology readiness has increased one time, the adoption of e-commerce will also increase by 0, 362 times.

The value of the regression coefficient $\beta 3$ of 0.221 in this study can be interpreted that the external environment variable (VI 2) has a positive but not significant effect on e-commerce adoption decision (Y). This shows that when the external environment has increased one time, the adoption of e-commerce will also increase by 0.221 times.

From the above equation can be seen that the coefficient of the variable of technology readiness and positive external environment gives the meaning that the higher the readiness of the organization, the readiness of technology and the external environment will be higher Adoption E-Commerce. However, for organizational readiness variable that has t value <of t table shows there is no influence of organizational readiness towards e-commerce adoption.

4.7 Determination Coefficient Analysis (R2)

The value of R in essence to measure how big the relationship between independent variables with dependent variables. Based on the test results obtained R value of 0.779, this indicates that the variable of organizational readiness, technological readiness and external environment have a strong influence on the adoption of e-commerce. While the value of R square (R2) or coefficient value of determination in essence measure how far the ability of the model in explaining the variation of the dependent variable. R2 value is between zero and one. The small value of R2 means that the ability of independent variables to explain variations in dependent variables is very limited. A value close to one means that independent variables provide almost all the information needed to predict variations of dependent variables. Generally, R2 for cross-data (crossection) is relatively low because of the large variation between each observation, while for the series data (time series) usually have a high coefficient of determination. The underlying weakness of using R2 is the bias against the independent number of variables included in the model. Each of the additions of one independent variable, then R2 must increase, regardless of whether the variable has significant effect on dependent variable. Therefore, some researchers recommend using an adjusted R2 value at the time of evaluation (Ghozali, 2016)

The magnitude of the coefficient of determination (R2) is 0.606 (60.6%). So, it can be said (R2) that 60.6% dependent variable that is e-commerce adoption on model can be explained by independent variable that is organizational readiness (VI 1), technological readiness (VI 2) and external environment (VI3), while the rest equal to 39, 4% is influenced by other variables outside the model.

The results of the coefficient of determination analysis can be seen in table 7 below:

Table 7: Results of Determination Coefficient Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.779ᵃ	.606	.563	.60676	2.190

Source: research results 2018 (data processed)

Partially organizational readiness has no significant effect on E-commerce adoption, this means that the higher organizational readiness does not contribute significantly to the adoption of e-commerce. Technological readiness variables significantly influence the adoption of e-commerce, this means the higher the readiness of technology, the stronger the adoption of e-commerce. For external environmental variables showing a positive but not significant impact, it can be interpreted that the higher the external environmental pressure will contribute to the adoption of e-commerce adoption but this contribution is not significant.

5 CONCLUSIONS

This study examines whether organizational readiness, technological readiness, external environment has a positive effect on e-commerce adoption. Based on the testing of direction and the discussion of the results of the research on the use of e-commerce adoption, it can be concluded that partially only organizational readiness variable is positive but the positive value t count is smaller than t table so it can be said there is no effect of organizational readiness on adoption e-commerce, another finding of this variable is a significant significance greater than 5% alpha which states that there is no significant effect of organizational readiness variable on e-commerce adoption. For technological readiness variables there is a positive and significant influence on e-commerce adoption. While for external environment variable there is positive influence but not significant.

This research was conducted in a short time and the respondent was limited to Medan city area with the level of online questionnaire is quite low, therefore for the next researcher can choose the questionnaire directly so that it will improve the return of questionnaire and the obtained sample can be bigger. Although these three independent variables are able to answer and represent the factors that support e-commerce adoption, it would be better if the next researcher can see other variables such as taking into account internal factors, as well as examining the inhibiting factors of e-Commerce adoption.

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