ANALYSIS OF E-COMMERCE AND E-ENTREPRENEURSHIP CHALLENGES ON DIGITAL ECONOMIC DEVELOPMENT IN WEST SUMATRA IN SUPPORTING NATIONAL ECONOMIC GROWTH

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Abstract

Purpose of study: This study aims to present empirical evidence about the analysis of e-entrepreneurship and e-commerce of digital economic development in West Sumatra in supporting national economic growth.

Methodology: the hypothesis used in the statistical method of this study is to test the classical assumption and multiple regression tests and descriptive statistical analysis.

Result: The results indicate that an increase in the number of E-entrepreneurship in Indonesia, especially in West Sumatra, provides a significant overall effect on national economic growth, the statistical result is 0.002% but the development of business people and the digital market developments haven't been significant because it is greater than alpha 5%.

Application: In the digital era there are still many challenges faced, especially related to the absorption of skilled labor and can be supported e-entrepreneurship. Therefore, it is necessary to analyze the strength of e-entrepreneurship in the digital economy to increase income and encourage national economic growth.

Novelty/Originality of this study: This research has never been studied before in West Sumatra and raises a developing theme of the technological advancements of the industrial revolution and the digital era that can enhance the economic growth of a region.

Keywords: *E-entrepreneurship, E-commerce, Digital Economy, Economic, Growth, Policy.*

INTRODUCTION

During the millennium there were many changes and patterns of consumer behavior in buying and selling transactions and easy access to them. The development and advancement of technology make all human activities easier and more practical, especially in the economic field. The development of technology has changed the economy to become more modern with the role of information technology and communication devices towards the digital economy. The digital economy is currently a hot topic related to the world economy. The impact of the digital economy is to establish various sectors including banking, transportation, health, media, etc. Information and communication technology changes social interactions and personal relationships to become more free, active, and has no border (borderless) with the internet network. (Anonim, 2015)

The development of technology in the direction of all digital is now increasingly rapid. In the digital era like this, humans generally have a new lifestyle that cannot be separated from all electronic devices. Technology is a tool that can help most human needs. Technology can be used by humans to make it easier to do whatever tasks and jobs. This important role of technology is what brings human civilization into the digital era. (Bajer, 2017)

The digital economy continues to grow rapidly throughout the world. This is because the digital economy has an important role in developing the region, especially in West Sumatra, besides being a tourist destination city in Indonesia, the development of advanced digital-based technology and e-commerce transactions are starting to increase and develop, this can support economic stability, among others can encourage growth, innovation and economic competitiveness in stimulating entrepreneurship and micro, small and medium enterprises (MSMEs). The development of entrepreneurship related to digital economics raises new ideas in the form of E-entrepreneurship as a step towards the development of the digital economy. (Commision, 2016)

Overall, the analysis of the strength of E-entrepreneurship aims to look at entrepreneurial conditions in Indonesia related to the use of technology. The results obtained from the study are expected to provide an overview of the relationship between E-entrepreneurship and e-commerce policy in each region that supports national economic growth, especially in West Sumatra and economic growth in terms of the digital economy. This new business in the digital world is called e-commerce. As explained by Hidayat, electronic commerce or e-commerce is part of an e-lifestyle that allows buying and selling transactions to be done online from any place (Riadi, 2015). Online marketing has a continuation that will increasingly grow following consumer demand. Building an e-commerce site allows internet marketing players to grow even bigger, but internet micro-scale entrepreneurs in small and medium scale businesses have limitations to making e-commerce. Overcoming these MSME problems, the Internet Marketplace or online buying and selling sites will become a forum for marketing activities. (Mujilahwati, 2016)

LITERATURE REVIEW

e-Entrepreneurship

In dealing with these positive trends, a forum is needed to be able to encourage the public to use information technology. This step was taken to improve the digital economy in Indonesia to support economic growth nationally, among others, with E-entrepreneurship. E-entrepreneurship is described as an entrepreneur devoted to the net economy. E-entrepreneurship has an advantage in the use of technology and networks in the hope that the business being run can have resilience and sustainability in the future. Business continuity is supported by the existence of innovative business concepts based on information technology and communication networks. (Kolman, 2006)

E-entrepreneurship is expected to be in line with government policies related to the digital economy, it is realized with economic growth. E-entrepreneurship becomes a business economic solution with a greater level of business continuity. Besides, support from the government is urgently needed relating to E-entrepreneurship in the form of programs and the provision of facilities that can encourage the development of E-entrepreneurship and trigger economic growth. (Yoon, 2018)

E-entrepreneurship or technology-based entrepreneurship can have many advantages in efficiency during business activities. The role of the internet in E-entrepreneurship makes businesses more innovative and creative, especially in terms of product marketing with e-commerce. Plus the role of social media such as line, Instagram, etc. can make a stimulus for business marketing. Another advantage of the role of social media is that entrepreneurs can directly respond to criticism and suggestions related to marketed products to facilitate evaluation and get innovations to increase sales transactions. (Yarmish, 2000)

Digital Economy

Based on the journal written by (Adhikara, 2005) New Economy or also known as Digital Economy (Digital Economy), Internet Economy (Internet Economy) or Net Economy (Web Economics) is an era characterized by the use of advanced technology and the internet in all fields, trade without knowing space and time. In the new economy, digital networks and communication infrastructure provide means to enable everyone and organizations to interact, communicate, cooperate, and seek information, where speed is an important element for everything. Through the use of technology in this new economy, the needs of consumers experience changes, which are sharpened or weakened by technology, as follows: Desires for uniqueness, personification, and service according to the customer's desire (customization), Desire to interact socially, Desire for diversity and choice of channels, access anytime anywhere, the desire for competitive value, how companies face higher expectations from consumers for value and service.

Challenges in the Digital Era

The digital world does not only offer great opportunities and benefits for the public and business interests. But it also provides challenges to all areas of life to improve quality and efficiency in life. The use of various technologies greatly facilitates the life of more efficient, but even the digital lifestyle will increasingly depend on the use of cellphones and computers. This has a positive impact, which can encourage people to be productive by utilizing technology, and it is hoped that the younger generation can take advantage of and master the development of technology. can be able to compete in the economic digital era, the negative impact is the reduction of traditional market transactions that are shifted with the development of the times so that it needs to be anticipated so as not to cause social inequality in society. (Sayekti, 2018)

Economic Growth

Economic growth is a significant increase in national income (with increasing income per capita) in a given calculation period. According to Schumpeter (in Putong, 2013), economic growth is an increase in output (national income) caused by a natural increase in the level of population growth and savings rates. Meanwhile, according to some economic development experts, economic growth is a term for developed countries to call the success of its development, while for developing countries the term economic development is used. (Puthong, 2013) economic growth is seen from the aggregate total expenditure. GDP (Y) is divided into four components: consumption (c), investment (I), state expenditure (G), and net export (NX): $Y = C + I + G + NX$. GDP is divided into two, namely Real GDP and Nominal GDP. Real GDP that assesses the production of goods and services at a fixed price.

E-Commerce

Electronic commerce (e-commerce) is a concept that can be described as the process of buying and selling goods on the internet or the process of buying and selling products or services and information through information networks including the internet (Suyanto, IT Applications for MSMEs Facing Global Competition, 2003). Another opinion expressed by (Turban, 2004) defines e-commerce as the process of buying and selling or exchanging goods, services, and information using computer network media.

Several previous studies help authors to understand cases in research. The first previous study used in this study was a thesis entitled The Effect of E-Commerce on Indonesian Economic Growth compiled by (Dianari, 2017) In this study, it

was explained that the development of e-commerce was represented through the development of the value of e-commerce transactions, the development of the number of business sites, and the number of internet users that had a positive effect on Indonesia's economic growth.

The second study conducted by (Pergiwati, 2013) entitled "The Effectiveness of E-commerce Sites for Sellers" shows that e-commerce sites are very effective for sellers when viewed from the perspective of the active member of TokoBagus.com which is the number one buying and selling site in Indonesia with the achievement of being able to successfully penetrate the number of active members to 2.5 million more people since it was founded eight years ago and more than one hundred thousand visitors every day. In other words, e-commerce sites have a significant impact on the speed of sales, the level of traffic (visits), and income. This proves that e-commerce sites are quite effective for sellers. Third, research conducted by (Harahap, 2013) entitled "Analysis of the impact of E-commerce use on aspects of marketing and operations on the performance of micro, small and medium enterprises in Indonesia" This research consists of three independent variables namely, operations effects, marketing effects, and performance effects and one dependent variable namely E-commerce experience. The results of this study indicate that the operating aspects and marketing aspects have a significant influence on the performance of MSMEs using e-commerce. Fourth, research conducted by Private entitled "The Benefits of Using Social Media in Small and Medium Enterprises (SMEs)" This research was conducted to identify the use of social media and its benefits to SMEs in the Greater Malang region and Surabaya. The results of this study show social media have the potential to increase market share and sales volume. In general, the direction of the four previous studies only discusses the impact of e-commerce on marketing and sales. Marketing in question is the use of internet media as e-commerce where business people can market and sell their products using internet facilities or called e-commerce. The difference in research researchers will focus on the impact of digital economic development in West Sumatra by using electronic commerce and its influence on national economic growth. This focus is made so that the issues discussed are not too broad which will cause the discussion to widen.

Research Hypothesis

Based on the explanation above, the hypothesis of this study is:

H1: The development of digital businesses influences national economic growth

H2: Digital market developments affect national economic growth

H3: The development of the value of digital transactions has an effect on national economic growth
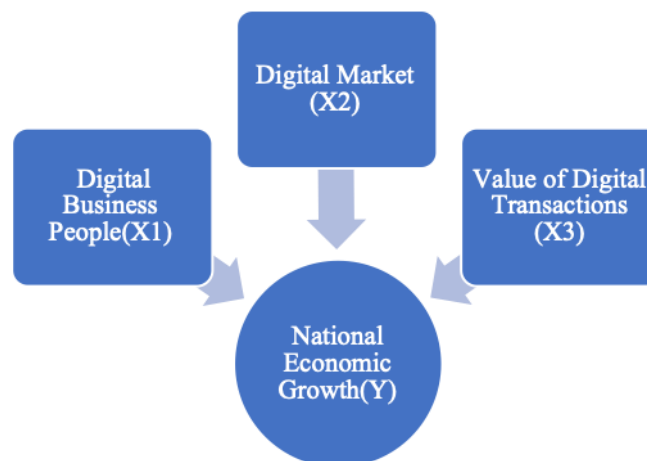
Framework

Figure 1: Digital Economic Growth

RESEARCH METHODOLOGY

The population in this study are cities and districts in West Sumatera.

Data Analysis

The multiple linear regression models in this study were used to express the functional effect between independent variables and dependent variables (Ghozali, 2016). Hypothesis testing will examine the influence of digital economic and national economic growth. Multiple linear regression equation as follows:

$$Y = \alpha + \beta_1 x_1 + \beta x_2 + \beta_3 x_3 + e$$

Information:

Y   =National Economic Growth

A   =Constant

B1,2,3   =Regression Coefficient

X1   =Digital Bussiness People

X2   =Digital Market

X3   =Value of Digital Transaction

RESULTS

Classical Assumption Test Result

Testing classical assumption tests in multiple linear regression models state that multiple linear regression models meet the test of normality, multicollinearity, heteroscedasticity, and autocorrelation.

Multiple Linear Regression Test Result

The hypothesis in this study was tested using multiple regression analysis with the help of SPSS to test the effect of the independent variable with the dependent variable.

Table 1: Result Kolmogrov Test

One-Sample Kolmogorov-Smirnov Test		X1	X2	X3	Y
N		27	27	27	27
Normal Parameters[a]	Mean	32.8674	13.48	77.9293	2617.78
	Std. Deviation	1.70337E1	6.053	1.36982E1	2.528E3
Most Extreme Differences	Absolute	.100	.115	.133	.194
	Positive	.082	.114	.094	.194
	Negative	-.100	-.115	-.133	-.165
Kolmogorov-Smirnov Z		.519	.599	.692	1.007
Asymp. Sig. (2-tailed)		.951	.865	.725	.263

a. Test distribution is Normal.

The normality testing of each variable with nonparametric Kolmogorov-Sminov (KS) statistical tests shows significant numbers for The digital business people (X1), The digital market (X2) and The value of the digital transaction (X3) respectively 0.951, 0.865 and 0.725 which is greater than 0.05 indicates that all variables have a distribution normal data.
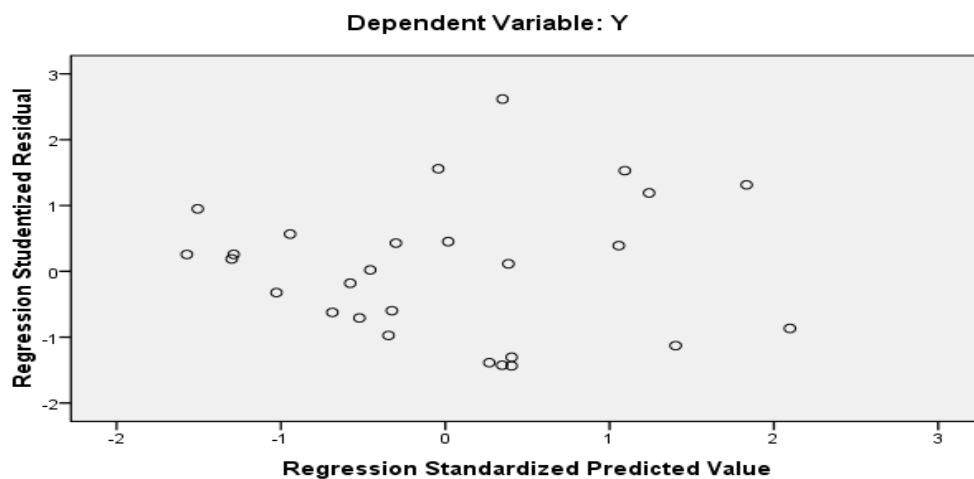
Figure 2: Scatterplot graph

From the Scatterplot Graph test, it can be seen that the points spread randomly and spread both above and below the zero on the - axis. This shows there is no problem of heteroscedasticity.

Descriptive Statistical Analysis

Descriptive statistics describe a data from each variable, namely digital business people, digital market and value of the digital transaction on national economic growth based on the minimum, mean and standard deviation value presented in the following table:

Table 2: Result of Descriptive Statistical Analysis

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
X1	27	2.36	62.86	32.8674	17.03368
X2	27	3	23	13.48	6.053
X3	27	47.90	98.55	77.9293	13.69823
Y	27	155	8000	2617.78	25.998
Valid N (listwise)	27				

Source: Output processed using SPSS Statistic

Table 3: Determinant coefficient Test results (R^2)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.684[a]	.467	.398	1961.790

Table 3 shows the magnitude of the multiple correlation coefficient (R^2), the coefficient of determination (R^2), and the adjusted coefficient of determination (R^2). Where the determinant coefficient value (R Square) is 0,467. This means that 46,7 % of the variant of national economic growth can be explained by variations in digital economic namely digital business people, digital market, and value of digital transactions. And the remaining 53,3 % is explained by other variables not used in this research model.

Table 4: Simultaneous Significant Test Result (Test Statistic F)

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	7.764E7	3	2.588E7	6.725	.002[a]
	Residual	8.852E7	23	3848620.506		
	Total	1.662E8	26			

From the table above it can be seen that the calculated value is 6.725 with a probability of 0.002. This shows that the significant value is smaller than the level of confidence that 0.002<0.005. So it can be concluded that all independent variables (digital business people, the digital market, the value of digital transactions) simultaneously and significantly affect the dependent variable (national economic growth).

Table 5: Significant Individual Parameters Test Result (Test Statistic t)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5511.613	2882.800		1.912	.068
	Digital business	28.973	25.579	.195	1.133	.269
	Digital market	137.519	69.434	.329	1.981	.060
	Digital transactions	-73.144	30.110	-.396	-2.429	.003

a. Dependent Variable: Y

Of the three independent variables included in the regression model, the digital business people, and the digital market has no significance probability far above 0.05, the statistical result id 0.269 and 0.060 while the value of digital transactions has a significant probability far below 0.05. the result of the digital business people and the digital marketers have no significant effect on national economic growth and the value of the digital transactions the result is 0.003 has a significant effect on national economic growth.

CONCLUSION

This research has been able to prove empirically the effect of digital economic development in West Sumatra but the results have not been satisfactory to support national economic growth. Based on the results of testing and analysis, it can be concluded as follows:

The development of the value of digital transactions shows a significant effect on national economic growth. That is the result of the study which shows a significance level of 0.003. The efforts to support the digital economic development wouldn't give the meaning if it is not followed by an increase in national economic growth. Thus, the increasingly high digital development of the economy will increase national economic growth.

The development of digital business and digital markets has no significant effect on national economic growth indicated by the significance of 0.005 greater than specified α ($\alpha = 0.05$) because the result is 0.269 and 0.060. This indicates a barrier to the lack of absorption of skilled workers in the use of technology and challenges for the government to provide greater opportunities for digital business people and digital market share to develop and provide better facilities than before to support these activities.

The development of the digital economy in Indonesia until now, especially in West Sumatra, is included in the positive category characterized by an increase in the use of information technology, among others in the field of entrepreneurship (E-entrepreneurship). The development of E-entrepreneurship has the power to encourage the growth of the digital economy so that it can increase national economic growth.

RESEARCH LIMITATIONS

There are several limitations to this study. The limitations of this study are:

The data processed in this study were sampled in secondary data in the West Sumatra region. The number of samples used in the study can affect the results of the study.

Data collection techniques in this study were using questionnaires and secondary data. The limitations of the study by using a questionnaire that is sometimes the answers given by respondents do not indicate the real situation so that it affects the results of hypothesis testing.

SUGGESTIONS

By looking at the conclusions and limitations stated above, the researcher provides the following suggestions:

In this study, only a sample of 12 cities and districts in West Sumatra was collected. It is hoped that future studies can use even more samples. Future studies can add other independent variables. The number of e-commerce transactions should be increased in the West Sumatra region to increase national economic growth in the future.

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