COMPARISON OF THE E-COMMERCE TRANSACTION VALUE RELATIONSHIP WITH ECONOMIC GROWTH IN INDONESIA AND THE UNITED STATES

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ABSTRACT: The development of technology makes it easy to communicate and to do transaction, especially in the digital economy. The development of the digital economy is currently very rapid where one of them is e-commerce. E-commerce has become one of the pillars of the economic community in developed and developing countries such as the United States and Indonesia. The research objective is to determine the analysis of e-commerce transaction trends in 2019-2023, determine the differences in the growth of e-commerce transactions in Indonesia and the United States and analyze the relationship between e-commerce transactions and economic growth in Indonesia and the United States. The analysis technique used in this research is trend analysis, average difference test and casualty granger analysis. The results showed that the trend of e-commerce transactions in Indonesia and the United States experienced an increasing trend in 2019-2023, there were differences in the growth of e-commerce transactions in Indonesia and the United States and there was a positive and significant relationship between e-commerce transactions and economic growth in Indonesia and United States of America. The implication of this research is the Indonesian government to create a strategic e-commerce design.

KEYWORDS: E-Commerce, Economic Growth.

I. INTRODUCTION

Economic growth is the development of activities in the economy that causes the production of community goods and services to increase so that it will increase the prosperity of the community (Permadi, 2018). Economic growth is one of the important indicators for analyzing economic development that occurs in a country as measured by the difference in Gross Domestic Product (GDP) of a certain year with the previous year. Economists argue that economic growth is a minimum requirement for poverty alleviation to be completed (Khan, 2016). Economic growth is also related to production where the higher goods / services produced eat are comparable with high economic growth (Sumartini & Giantari, 2018). Economic development is a process that results in an increase in real income per capita of a region's population in the long run followed by an improvement in the institutional system (Adipuryanti & Sudibya, 2015).

National development is needed in order to be able to recognize changes in the rate of economic growth, reduce inequality in national income and eradicate poverty. In order to achieve the desired goals in development, the development of a country can be directed at three main things, namely: increasing the availability and distribution of basic needs for the community, increasing the welfare of people's lives and increasing the ability of the community to access both economic activities and social activities in their lives (Rusdiansari, 2018). Indonesia itself is one of the countries that has the largest economic power in the world and is a member of the G20 organization. This is because Indonesia has a stable economic growth in the last 5 years resulting in Indonesia having a purchasing power parity or high purchasing power (Kurniawan & Shunsuke, 2018).

Current technological developments have resulted in the emergence of new thinking concepts for the economic cycle especially in the banking sector which has a large role in the economy. Especially in this era of globalization, technological developments have led to an increase in the increase in online stores where this is followed by the development of online shopping activities (Birlea & Ana, 2017). This is due to the use of computers in the field of marketing and sales in recent years growing rapidly (Dartanto et al., 2019). With the internet marketing and sales process can be done anytime without being bound by time and space (Kamel, 2015). The people (especially in developed countries) are very familiar with the internet, because almost all
kinds of information can be obtained. Information technology is a form of technology used to create, store, change, and use information in all its forms. The application makes the internet one of the main components in information technology (Yasmeen & Sadia, 2015)

The use of the internet has experienced tremendous development in the field of business, especially in large scale companies. Since the discovery of the internet technology in the 1990s, it has expanded because it is seen as providing enormous benefits for the smooth running of business activities. The internet has changed the traditional marketing model where the designation is not only as a medium of communication but sellers and buyers can also transact without being hindered by time and geographical conditions (Naughton, 2016). Seeing this reality, the application of e-commerce technology is one of the important factors to support the success of a company's products. To accelerate and increase sales quickly, by seeing the rapid development of information technology, we can utilize an on-line service in the form of e-commerce.

E-commerce is a revolutionary concept which has fundamentally changed the way of shopping(Aribawa, 2016). Definition of Electronic Commerce (e-commerce) is the process of buying, selling or exchanging products, services and information through a computer network. E-commerce is a part of e-business, where the scope of e-business is broader, not just commerce but also includes collaborating business partners, customer service, job vacancies and so on. In addition to the network technology, E-commerce also requires database technology, e-mail and other forms of non-computer technology such as goods delivery systems, and payment tools for this e-commerce (Kimura & Lurong, 2018). In the globalization environment which is changing from time to time, the speed, competition of various cultural elements is one of the key factors for development and growth in the business environment, including e-commerce which has the potential to dominate the transaction market based on the digital economy. The advantages of e-commerce are cost savings, increased efficiency, and adjustments. To understand electronic commerce, it is important to identify the various terms used, and to assess their origin and usage (Elagana & Frahan, 2016).

The United States itself is considered a pioneer in the field of E-Commerce. Companies such as Amazon and E-Bay have grown to become big companies selling goods online, and making the trend of shopping for the people of the United States itself easy. In Indonesia, the use of E-Commerce itself has grown rapidly with the presence of several large companies such as Go-Jek, Tokopedia, Lazada, Shopee, and the emergence of new companies known as startups. E-commerce also stimulates the growth of the creative economy in society where creative economic growth, especially in developing industries, is directed to be one of the quality roles in the economy so that it can compete in the domestic and foreign markets. (Shahjhe, 2015).

Creative economy is a concept in which the economic era intensifies information and creativity and also relies on ideas and knowledge from human resources as the main factor in the production process (Wiagustini, 2017). The rise of e-commerce transactions in Indonesia has also made the prices of goods more competitive. This is indicated by the implementation of the use of non-cash payment methods or what is commonly called cashless payment. This is also based on the Non-Cash National Movement or commonly abbreviated as GNNT established by Bank Indonesia on August 14 2014. This program aims to encourage people to use non-cash payment services which can increase the use of more modern payment systems. (Kurniawan & Shunsuke, 2018). The use of GNNT also aims to influence the inflation rate. Inflation is defined as an increase in prices in general and continuously.

Inflation is an important concern for every government in all countries in the world including Indonesia (Maggi & Saraswati, 2013). The government should avoid inflation that is too high for goods and services or inflation that can be controlled can have a positive effect on economic growth. Economic growth must also be controlled so that this growth does not cause inflation. Indonesia's inflation is constant below 10%, indicating that inflation in Indonesia is relatively mild. The United States itself experienced inflation fluctuations in the period 2013-2018, after the economic crisis in 2008, the United States economy gradually recovered with inflation in 2013 to 2015 ranging below 2 percent (2013 1.50%; 2014 0.76% and 2015 0 , 73%). Two years after inflation in the United States jumped sharply to above 2%, this was anticipated by the enactment of economic policies such as restrictions on import duties and international trade tariff policies by the current President of the United States, Donald Trump (Shahriari & Mohammadreza, 2015).

Internet (Inter-Network) is the name for a group of computer networks that connect academic, government, commercial, organizational, or individual sites (Imansyah, 2018). The internet provides access to telecommunications services and information resources for millions of users spread all over the world. In e-commerce transactions, internet access is also required. Internet in this case can be classified as one of the promotion of technological development (Alyoubi, 2015). In developing countries such as Indonesia, internet access and the use of smartphones by the public have developed rapidly due to the rapid growth of the youth population (Salamzadeh & Kesim, 2015). This is due to the pursuit of high economic growth, the need for good connectivity (Lubis, 2015). With the increasing e-commerce transactions in Indonesia, it can be ensured that the use and use of internet users in Indonesia is increasing.
The development of internet usage is very massive because of the public aspects of internet use such as access to social media such as Instagram, Twitter, Facebook, etc. This is one of the effects of using the internet to communicate. Especially in the business environment, the impact of internet access is crucial in this digital era. With the increasing number of accesses on the internet it can be assumed that the opening of new business or economic opportunities will result in changes in national output (Ma’ruf & Latri, 2018).

A country has a good internet connection, so the productivity of people in a country is higher such as online retail sellers or Small and Medium Enterprises that can develop rapidly with the existence of E-Commerce. It is also marked by if a country has a slow internet connection it will be directly proportional to the decline in the value of GDP. The United States of America itself is an internet-creating country where initially only intended for military purposes in 1969 until now it has become the most important discovery in human history. The internet has a great influence on science and worldview. By utilizing search engines such as Google, users around the world have easy internet access to various information. The internet symbolizes the spread (decentralization) / knowledge of information and data quickly. The largest number of internet users until 2019 is owned by China with a number reaching 854 million, followed by the United States with 292 million users. Indonesia itself has 171 million internet users, followed by Japan with 118 million and Germany 79 million. It can be seen that the use of the internet in various parts of the world is growing rapidly for the sake of connectivity in the community (Nugraha & Novika, 2017).

The growth of e-commerce can not be separated experiencing rapid growth in parts of the world, Indonesia is one of the countries that experienced growth in the e-commerce sector in the period 2010-2018. Reporting from a British research institute. Indonesia experienced rapid growth in the development of E-commerce reaching 78% overtaking Mexico and the Philippines with growth rates reaching 59% and 51%. This is suspected by the easy access to online shopping and the high number of internet users in Indonesia. E-commerce activities in Indonesia itself has been quite massive in its development in recent years where research conducted by Statistita in 2018 alone searches for products or services via the internet reaching 93% with online store or marketplace visits reaching 90%. This indicates that there is a correlation between the search for products or services on the internet with the level of availability in the marketplace. Statistita also revealed that the purchase of goods or services online through electronic devices in Indonesia reached 86%, through computers reached 37% and through mobile devices by 76% (Pradana, 2015).

From the data presented, there is a correlation between the increase in the number of internet users in Indonesia and the United States, the inflation rate on E-Commerce Transactions and Economic Growth in the two countries. The effect of E-Commerce transactions needs to be identified to find out whether there is a relationship to a country's economic growth. Economic growth is important for improving the welfare of a country's society. In this study there are independent variables and dependent variables that have a relationship or a link between one concept with another concept based on the problem to be studied. The independent variables in this study are Indonesian e-commerce transactions (X1), US e-commerce transactions (X2) while the dependent variable in this study is Indonesian economic growth (Y1) and United States economic growth (Y2).

Based on the discussion of previous studies, it can be formulated a hypothesis: Allegedly e-commerce transactions in Indonesia have a rising trend value in the next 5 years (2019-2023); It is suspected that e-commerce transactions in the United States have a rising trend in the next 5 years (2019-2023); Allegedly there are significant differences between the average e-commerce transactions in Indonesia and in the United States of 2011 - 2018; It is suspected that e-commerce transactions in Indonesia are strongly correlated with Indonesia's economic growth 2011 - 2018; It is suspected that e-commerce transactions in the United States are strongly correlated with economic growth in the United States of 2011 - 2018 and allegedly the correlation of e-commerce transactions with economic growth in Indonesia is stronger correlated than in the United States.

Transaction in this research is a meeting between two parties (Seller and Buyer) which is mutually beneficial with the supporting evidence / data / documents. E-commerce is the use of buying and selling transactions by utilizing the internet through an application or website. E-commerce transactions are the number of transactions made by consumers to sellers through the use of e-commerce. The data obtained are from Bank Indonesia and the Statistics for Indonesian e-commerce transactions and the Census Bureau for US e-commerce transactions, both of which are stated in US $ Billion.

Economic Growth in this study is a process of long-term per capita output growth that occurs when there is a tendency (per capita output to increase) that comes from the internal processes of the economy (the forces within the economy itself), not from outside and is temporary. In this study data on Indonesian economic growth were obtained from Bank Indonesia in the form of percent (%) while United States growth data was obtained from the Census Bureau in the form of percent (%).
II. RESULTS AND DISCUSSION

The development of e-commerce in Indonesia is very rapid where people in general move from traditional transactions to online transactions. The online market which is commonly referred to as the marketplace has become a dream of the Indonesian people shopping for both tertiary and premier needs where e-commerce growth reached 30.86% in the period 2011 - 2018. The ease offered from various platforms and easy connections without having to physically meet up made value e-commerce transactions are increasing every year. The United States itself is a pioneer said to be the center of e-commerce sales in the world experiencing a trend of cultural shift from the previous community to buy offline but now purchases can be made online. The emergence of marketplace platforms such as Amazon, eBay made retail sales of both goods and services in the United States driven by sales volume figures where in the period 2011 - 2018 e-commerce transactions the growth rate reached 12.17%.

Indonesia has experienced an increase every year in the number of e-commerce transactions where in 2011 the number of transactions reached 1 billion dollars and increased almost doubled two years after that which reached 1.8 billion dollars. This is suspected by the growing development of e-commerce infrastructure such as high internet penetration among young people and the increasing popularity of social media among the people. The period of 2014 to 2018 the surge in e-commerce transactions is quite high the number of transactions that occurred where in 2014 e-commerce transactions in Indonesia touched 2.6 billion dollars up to 5.8 billion dollars in 2016 and touched 8.6 billion dollars in 2018. This phenomenon was overcome by the emergence of e-commerce companies such as Tokopedia, Shopee, Lazada, and Zalora. This coupled with free cashback or postage programs offered by many e-commerce companies has increased the number of e-commerce transactions. Period 2011 - 2018 Indonesia has e-commerce growth estimated at 30.86%.

The United States as the country with the largest number of e-commerce transactions in the world experiences a large increase in the number of e-commerce transactions each year. In 2011 the number of transactions traded on the e-commerce platform was only in the range of 52.98 billion dollars, rising to 60.4 billion dollars in 2012 and recording a figure of 68.22 billion dollars in 2013. During this period the number of transactions E-commerce in the United States is increasing because of the high number of young people who shop for their daily needs via smart phone devise for everyday needs. The next period, namely 2014, e-commerce transactions in the United States stood at 77.79 billion dollars, then increased to 101.4 billion dollars in 2016 and in 2018 touched 132.8 billion dollars. Period 2011 - 2018 The United States has an estimated e-commerce growth of 12.17%.

The first research test results are the results of the analysis of Indonesia's e-commerce trends in the next 5 years. The test is carried out to find out how the development of Indonesian e-commerce transactions using the least square method or commonly called the least square model, the following equation is obtained: $Y = 3.975 + 0.56x$. This means that the coefficient analysis of the trend of Indonesian e-commerce transactions is 0.56 and a positive value indicates that if the increase in e-commerce transactions is 1, the e-transactions will increase by 0.56 billion dollars. Based on these calculations it can be predicted that in 2019 the number of e-commerce transactions in Indonesia will reach 9.015 billion dollars, then in 2020 it will increase by 10.135 billion dollars, 2021 will reach 11, 255 billion dollars, 2022 will be 12, 375 billion dollars and in 2023 it will be estimated the number of transactions reached 13.495 billion dollars. This means that Indonesia's e-commerce transactions will have an increasing trend in the next 5 years.

The second research test results are the results of the analysis of the United States e-commerce trend in the next 5 years. The test is conducted to find out how the development of US e-commerce transactions using the least squares method or commonly called the least square model is obtained by the following equation $Y = 87.625 + 5.71x$. This means that the coefficient of analysis of United States e-commerce transaction trends is 5.71 and a positive value indicates that if the increase in e-commerce transactions by 1 then the e-commerce transaction will increase by 5.71 billion dollars. Based on these calculations it can be predicted that in 2019 the number of e-commerce transactions in the United States will reach 139,015 billion dollars, then in 2020 it will increase by 150,435 billion dollars, 2021 will reach 161,855 billion dollars, 2022 will be 173,275 billion dollars and in 2023 the total number of transactions will reach number 184,695 billion dollars. This means that e-commerce transactions in the United States have an upward trend in the next 5 years.

Based on the results of data analysis that e-commerce transactions in Indonesia will experience an increasing trend in the next 5 years period where e-commerce growth will increase by 10.61% in this period. In 2019 it is estimated that e-commerce transactions will be 9.015 billion dollars and in 2023 will reach 13.495 billion dollars. The United States, based on data analysis, experienced significant growth in e-commerce transactions in the next 5 years, which is predicted that in this period e-commerce will grow by 7.36%. In 2019 the number of e-commerce transactions in the United States will be in the range of 139,015 billion dollars and in 2023 will be estimated at 184,695 billion dollars. This fantastic number is also supported by the fact that the United States itself as the largest e-commerce market in the world has adequate infrastructure such as fast internet connections, varied online payment methods, attractive marketplace service design displays that encourage people to move away from traditional shopping methods. to online shopping methods. Indonesia has...
a higher percentage of e-commerce growth than in the United States in the next 5 years it can be assumed that Indonesian people are more fond of shopping online and the growing development of e-commerce supporting infrastructure in various regions in Indonesia is not only centered in big cities.

The comparison between the significance value (Sig.2 tailed) is as follows (0.000) < (0.005). Based on the results of the average difference test above, it can be concluded that H0 is rejected and H1 is accepted, which means that there are significant differences between e-commerce transactions in Indonesia and the United States. A negative sign on the mean difference means that the value of US e-commerce transactions is higher than the value of Indonesian e-commerce transactions with an average difference of 82.64 billion dollars. The ADF test value for Indonesian e-commerce transactions is not stationary at the level and first difference because the ADF value is smaller than the critical value and stationary at the second difference because the ADF value is greater than the critical value and is strengthened with a probability value smaller than 0.05. Indonesia's economic growth variable is known that it is not stationary at the level and first difference because the ADF value is smaller than the critical value and stationary at the second difference because the ADF value is greater than the critical value and strengthened by less than 0.05 in lag 5, where in this lag the highest asterisk * values are collected, namely final prediction error (FPE), Akaike Information Criterion (AIC) and Hannah - Quinn information / criterion (HQ) while likehood ration (LR) and Schwarz information (SC) on lag 4.

Based on the results of the Cointegration Test it can be concluded that the comparison between the value of the trace statistic with the critical value as follows TS (23,04744) > 5% CV (15.49471) and the comparison between the Max-Eigen Statistics (MES) and Critical Value values are as follows MES (14.43351) > 5% CV (14.26460), it can be concluded that H0 is rejected and Ha is accepted because of the value of trace statistics > critical value at the lag level 1 to 5, therefore it can be interpreted that there is a stable long-term relationship between e-commerce transactions and Indonesian economic growth.

The results of the Granger Test Casualty indicate that Variable Y, namely Indonesia's Economic Growth, does not significantly influence Indonesian e-commerce transactions where the value of the F-Stat < F-Table is 0.041 < 2.53. Therefore, H0 is accepted and H1 is rejected, which means there is no causality. These results are reinforced by the comparison with the probability and error term values where the probability value > error term is 0.9988 > 0.05. The results of the Granger Test Casualty above show that Variable X, namely Indonesian e-commerce transactions, significantly influences Indonesia's Economic Growth in Indonesia where the value of F-stat > F-Table 3.87 > 2.53. Therefore H0 is rejected and H1 is accepted which means there is causality. These results are reinforced by the comparison of the probability and error term values of 0.0187 < 0.05.

The results of the relationship granger causality Indonesia illustrates that e-commerce transactions in Indonesia significantly influence Indonesia's economic growth which can be seen in 2018 e-commerce growth reached 78% and supported by active monthly users in the e-commerce market reached 137 million, which can be interpreted that half the Indonesian population visits e-commerce platform services to shop online. This is reinforced by research conducted by INDEF (2018) where e-commerce transactions boosted Indonesia's economic growth by 0.71% whereas in the sectoral sector, the communication services sector gained an additional growth of 18.878%.

The ADF test value for Indonesian e-commerce transactions is not stationary at the first difference because the ADF value is smaller than the critical value and at the level of the probability value greater than 0.05, it causes no statistic. The second difference variable is said to be stationary because the ADF value is greater than the critical value and is strengthened with a probability value smaller than 0.05. The variable of United States economic growth is known that it is not stationary at the level because the ADF value is smaller than the critical value and stationary at the first difference and second difference because the ADF value is greater than the critical value and is strengthened with a probability value smaller than 0.05, the lag value is in lag 1, where in this lag the values with the most asterisks are collected, ie, Likehood ration (LR), Final Prediction Error (FPE), Akaike Information Criterion (AIC), Schwarz information (SC) and Hannah - Quinn information / criterion (HQ).

Based on the results of the Cointegration Test it can be concluded that the comparison between the value of trace statistics with the critical value as follows TS (20,09567) > 5% CV (15.49471) and the comparison between the Max-Eigen Statistics (MES) and Critical Value values are as follows MES (17,94950) > 5% CV (14.26460), it can be concluded that H0 is rejected and Ha is accepted because of the value of trace statistic > critical value at the 1 to 1 lag level, therefore it can be interpreted that there is a stable long-term relationship between US e-commerce transactions and economic growth United States of America.

The results of the Granger Test Casualty show that Variable Y, namely US Economic Growth, does not significantly influence the United States e-commerce transactions where the value of the F-Stat < F-Table is 0.0263 < 2.53. Therefore, H0 is accepted and H1 is rejected, which means there is no causality. These results are reinforced by the comparison with the probability and error term values where the probability value > error term is 0.6121 > 0.05. The results of the Granger Test Casualty above show that Variable X, namely e-
commerce transactions in the United States significantly influence the economic growth of the United States where the value of F-stat > F-Table 2.95 > 2.53. Therefore H0 is rejected and H1 is accepted which means there is causality. These results are strengthened by the comparison of the probability and error term values at the 10% level of 0.0970 < 0.0100.

Analysis of the United States granger causality data itself indicates that United States e-commerce transactions also significantly influence the economic growth of the United States. The role of digital economy which includes e-commerce transactions in it contributes 6.9% to economic growth, or about 1.35 trillion dollars in 2017. This digital economic role also indicates that around 5.1 million Americans are involved in the digital industry where the portion this accounts for 3.3% of the total workforce in the United States (152.1 Million). The average income of workers who work in the Digital Industry is also higher to almost 2 times the average of workers in general where workers who work in the digital industry get 132,223 dollars compared to 68,506 dollars of the average wage of United States workers per annual compensation compensation.

Based on the results of tests conducted in the previous chapters, it is hoped that this research can be used as a reference for future researchers relating to the development of e-commerce both in Indonesia and globally and the development of economic growth in the digital economic era with the factors that influence it. From the results of this study it can be seen that the value of e-commerce transactions in both Indonesia and the United States will experience a positive trend and there is a significant difference between the value of e-commerce transactions in Indonesia and the United States. The implications of this policy are aimed at the Indonesian government in making decisions on developing strategies for the emerging e-commerce market based on the results of research that has been made and exploring the potentials in the digital economy such as the development of e-commerce in the United States.

Based on the results of the analysis described in the previous chapter, several conclusions can be drawn, namely e-commerce transactions in Indonesia and the United States will experience an increasing trend in the next 5 years (2019-2023). The average increase in the next 5 years is the United States of 7.36% and Indonesia of 10.61%. There is a significant difference between the average e-commerce transactions between Indonesia and the United States. There is a positive and significant relationship between e-commerce transactions on economic growth in Indonesia and the United States. The relationship between these two variables is one-way causality which means that e-commerce transactions affect economic growth both in Indonesia and the United States and not vice versa.

The Coordinating Ministry of Economy to accelerate the ratification of the Draft Government Regulation (RPP) on Online Trade Transactions through Electronic Systems (TPMSE / E-commerce) which has been delayed to replace the Presidential Regulation (Perpres) No. 74 of 2017 concerning the Roadmap of an Electronic-Based National Trade System is due to clarify the rules - the rules of buying and selling on e-commerce platforms so that the potential for digital transactions in Indonesia can be explored properly. The Ministry of Industry to encourage micro small and medium businesses to be actively involved in e-commerce. The Ministry of Information and Communication to protect user and seller data on e-commerce platforms and encourage to improve internet access in Indonesia. Bank Indonesia to clarify the rules in the payment system on the e-commerce platform

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