THE IMPACT OF E-MONEY ON INFLATION IN INDONESIA

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ABSTRAK

Dengan menggunakan data time series bulanan pembayaran dengan e-money dan inflasi selama tahun 2016-2021, yang diperoleh dari www.bi. go.id/, www.bps.go.id/, dan www.kemendag.go.id/, penelitian ini bertujuan untuk menentukan pengaruh penggunaan e-money terhadap tingkat inflasi di Indonesia. Penelitian ini menggunakan analisis kuantitatif. Analisis regresi adalah metode analisis data yang digunakan. Hipotesis: H0 menunjukkan bahwa penggunaan uang elektronik tidak memengaruhi tingkat inflasi secara signifikan; H1 menunjukkan bahwa penggunaan uang elektronik memengaruhi tingkat inflasi secara signifikan. Hasilnya, e-money berkontribusi sebesar 0,298 (29,8%) terhadap inflasi. Tidak ada pengaruh yang signifikan terhadap tingkat inflasi dari penggunaan uang elektronik, karena t hitung < t tabel. Model regresinya adalah Y = 25,237 + 0,583X, dengan β = 0,435. Dengan asumsi bahwa nilai e-money tetap (tidak berubah), setiap kenaikan e-money sebesar 1 satuan akan meningkatkan tingkat inflasi sebesar 0,583. Singkatnya, penggunaan uang elektronik tidak memiliki dampak yang signifikan terhadap inflasi.

Kata kunci: Inflasi; Uang; Uang Elektronik

ABSTRACT

The purpose of this study was to estimate the influence of using e-money on the inflation rate in Indonesia, using research data in the form of monthly time series data for e-money payments and inflation for 2016-2021 collected from www.bi.go.id/, www.bps.go.id/, and www.kemendag.go.id/. This research is quantitative in nature. Regression analysis is a data analysis technique. H0 = Using e-money has no significant influence on the inflation rate; H1 = Using e-money has a substantial effect on the inflation rate. As a result, e-money affects inflation by 0.298 (29.8%). Because t counts t table, H0 is accepted, implying that utilizing e-money has no major effect on the inflation rate. The result is that e-money affects 0.298 (29.8%) inflation. Because t count <t table, H0 is accepted, which means that there is no significant effect of using e-money on the inflation rate. The regression model is Y = 25.237 + 0.583X. With β = 0.435, assuming the use of e-money has a fixed (unchanging) value, then every increase in e-money by 1 unit will increase the inflation rate by 0.583. The conclusion is that using e-money does not significantly affect the inflation rate.

Keywords: Inflation; Money; Electronic Money

INTRODUCTION

Money is a means of payment. In its development, money was put into two types, namely currency and demand deposits. Besides being liked by many people, money also has the longest history as a means of payment, before finally the term non-cash payments emerged. The development of globalization has progressed very rapidly. Payment instruments continue to change from cash-based to non-cash with the help of increasingly advanced technology. Non-cash payment systems consist of various bases, ranging from card-based transactions to electronic network-based. In its development, card-based non-cash payment products and electronic networks have different characteristics. Electronic network-based non-cash payment systems are also known as electronic money (Silitonga, 2013).

Electronic money, as defined by Bank Indonesia, is a kind of payment in which the value of money is kept on specific electronic media. The Bank for International Settlements (BIS) in a cryptocurrency study, is a value or prepaid product where you save a certain amount of money on an electronic device you own. In this case, based on Bank Indonesia Regulation No. 16/8/PBI/2014, electronic money is the same as money you store electronically on your computer. You can use this money to make payments or send money to friends and family (Rahmayuni, 2019).

According to the definition of electronic money provided by the Bank for International Settlements (BIS), electronic money is any stored or prepaid good of value that belongs to a person and is used as a transaction instrument. (Hidayati et al., 2006 and Bank Indonesia, 2007). Cryptocurrency payments do not always require an authorization process and are online with the customer's account at the bank. In cryptocurrency, the value of money is stored electronically in the payment instrument in the form of a media server or chip used (Abidin, 2015).

E-money is a legitimate and authorized non-cash or non-cash payment mechanism in which the issuer receives and electronically stores the value of the money in advance. E-money aims to slow the rate of growth in the use of currency. Through the use of the conveniences provided by transaction technologies, persons who employ non-cash transactions can adopt a trend toward a society where there is less use of physical currency. (Waspada, 2012).

Bank Indonesia Regulation No. 16/8/PBI/2014 explains that there are several constituent elements of electronic money itself, including a) If you deposit money with the issuer, they will give you a certain amount of money back as soon as possible; b) Money is saved on a computer chip or in a media server. This means you are able to use it to buy things or exchange them for other currencies.; c) Electronic money is different from regular money. Electronic money is not backed by a physical deposit like regular money. Electronic money is just like regular money, only it's stored in a computer or chip. It is used to make payments and transfers.

Some of the literature released by Bank Indonesia in its research also explains some of the differences between electronic money and other payment instruments such as a payment using electronic money does not always require an authorization process from the bank, and it is not directly related to the customer's account at the bank. Then apart from that, electronic value can be obtained in a number of ways. You can deposit cash or use your bank account to debit the equipment and then store it electronically. With this equipment, you can use it to make payments or receive payments. The amount of money you get will decrease as you use it to make payments, but it will increase if you use it to receive payments or when refilling so that it can be illustrated that electronic money has liquid or liquid properties and has a similar function to money. paper or coins (Pramono, 2006).

Because electronic payments are more practical, every nation's monetary policy must take action. Additionally, monetary policy must create a set of tools to control the expanding usage of electronic money and include this emerging trend in its objectives. (Kamar, 2014).

Electronic money used to pay is very innovative and easy for transactions and can benefit several parties, especially for macro and retail payments. The issuance of e-money can act as a factor that can change the money demand function and can reduce the circulation of the amount of currency (Kalbuadi and Yanthi, 2021). Examples of existing e-money products issued by issuers approved by Bank Indonesia include cards such as Brizzi BRI Cards, Flazz Cards, Bank Mega Cards, and e-money in application forms such as Shopeepay, OVO Cash, Funds, and others (Nainggolan and Garnia, 2021).

E-Money use will affect money supply and will then affect the inflation rate. With the easy, fast, and practical nature of E-Money, people can easily make transactions with one another. The amount of money circulating in the community will also increase, and this is very possible in increasing the level of public consumption (Zunaitin et al., 2017).

Technology-based non-cash payments similar to cash result in a faster circulation of money that affects monetary stability in Indonesia (Sembiring, 2014). This is in accordance with Yuwono's statement (2017) which states that an increase in public consumption will encourage an increase in the velocity of money which can cause inflation.

Inflation is the tendency to increase prices of goods and services generally and continuously (Pratama, 2004). Inflation is a condition where prices increase. There are several factors that affect inflation, first, an increase in aggregate demand due to increased economic activity which is not matched by an increase in aggregate supply due to structural constraints in the economy. Second, the rupiah exchange rate weakened so that prices tended to rise and it was difficult to fall if the rupiah exchange rate strengthened. Third, government policies in the areas of price and income, such as increasing fuel prices, electricity, increasing the minimum wage and employee salaries. Fourth, high public inflation expectations, and there is a very high public tendency towards consumption, triggering price increases (Ridwan, 2013 in Kurniawati, 2019).

Inflation is separated into two categories based on the causal elements, namely (1) natural reasons (natural inflation) and inflation brought on by human error (human error inflation). Various foodstuffs and other agricultural items undergo a very significant decline when a natural disaster strikes and a shortage develops when there is not enough of anything. On the other hand, because of their very significant nature in life, the demand for these various goods has increased. Prices soared far beyond people's purchasing power. Inflation that occurs due to human error includes corruption and bad administration, excessive taxes, and increased currency circulation (Fadilla, 2017).

Expectations, cost-push inflation, and demand-pull inflation are the main contributing elements (Boediono (1982). If the origin can be caused from within the country and also abroad. In addition, there are several

influencing factors, such as rising fuel prices (BBM), money supply (JUB), exchange rates, interest rates, gross domestic product (GDP), and so on.

There are numerous inflation theories. The first is the theory of numbers. This idea places a strong emphasis on how much money is available and how much individuals expect prices to rise. The second theory is Keynesian theory. This theory holds the view that what most determines the stability of national economic life is public demand. This is related to production and available production capacity. The low capacity of goods produced results in the price of goods rising, resulting in inflation. The third is structuralist theory. This theory includes a) Inelasticity of export revenues; b) Inelasticity of food supply or production in the country (Sukirno, 2006).

The quantity theory of money put forward by Irving Fisher states that inflation is caused by the amount of money, with the assumption that the speed of circulation of money and the volume of goods traded are fixed. This theory was denied by Keynes. Keynes revealed that the amount of money is not the only cause of inflation. This idea contends that inflation results from people wanting to live above their means.

Referring to the quantity theory, Keynes argued that the speed of velocity of money is not constant or changing. If there is an addition to the money supply, the transactions carried out by the public will increase. This phenomenon will further increase the demand for output by the public. The inability of the output supply to meet the demand triggers inflation. The same opinion was expressed by Milton Friedman in modern quantity theory. According to Friedman, the velocity of money is influenced by various factors. These various factors include: the general price level, income from bonds and stocks, inflation, tastes, technology, and transportation, as well as the comparison of welfare between humans (Sinaungan, 1995).

This research was done to ascertain how Indonesian inflation might be affected by the use of cryptocurrencies. We reviewed monthly time series data on crypto payments and inflation for the period 2016-2021 obtained from the official website of Bank Indonesia i.e. www.bi.go.id, the official website of the Central Bureau of Statistics, namely www.bps.go.id/ and the official website of the Department of Commerce, namely www.kemendag.go.id/.

Formulation of the Problem
How to determine the effect of using e-money on the inflation rate in Indonesia ?
Research Aim and Significance
The purpose of this study was to estimate the influence of using e-money on the inflation rate in Indonesia, using research data in the form of monthly time series data for e-money payments and inflation for 2016-2021 collected from www.bi.go.id, www.bps.go.id, and www.kemendag.go.id

RESEARCH METHODOLOGY

This type of research is quantitative research with research data in the form of monthly time series data for payments by e-money, and inflation for 2016-2021 in which The Bank Indonesia website has information about banks and their services in www.bi.go.id, the authoritative website of the Central Statistics Agency, namely www. bps.go.id/ and authoritative website of the Ministry of Trade, namely www.kemendag.go.id/.

The use of e-money (X) is the independent variable in this study, and inflation (Y) is the dependent variable (tied). Regression analysis is the method used for data analysis in this study. The study's hypotheses are: H0 = Using e-money has no significant influence on the inflation rate; H1 = Using e-money has a substantial effect on the inflation rate.

RESULTS AND DISCUSSION

This study uses data sourced from Bank Indonesia, the Central Bureau of Statistics, and the Ministry of Trade. The data used are monthly time series data on e-money usage and inflation from 2016-2021. The following is the data of the increase rate of e-money use and the inflation rate:

Table 1. The Increase Rate of E-Money Use and The Inflation Rate

Year	Increase rate	Inflation Rate
2016	25,21%	42,37
2017	42,89%	45,71
2018	73,79%	38,37
2019	67,49%	36,35
2020	29,16%	24,43
2021	32,91%	18,72

Source: https://databoks.katadata.co.id/ and https://www.bi.go.id/id

To find the effect of using e-money on inflation, a regression analysis was shown as follows:

Table 2. Estimation result

Variable	OLS estimation
Inflation	0.583 (0.933)
R Squared	0.298
Constant	25.237** (33.277)
Adj R Square	-0.139

Source: Author's estimation

From the table above it can be seen that R = 0.298. This means that e-money use has an effect of 0.298 (29.8%) on inflation. From the table above, we can see that with a value at df = 4, Alpha 5% for the 2-sided (Two Tailed) Test, then t tabel = 2.776. Meanwhile, we can see t arithmetic in the following table:

From the table above we can see that t count = 0.624. We already know that the t table is 2.776. Thus, it means that t count < t table. This means that H0 is accepted, which means that there is no significant effect of using e-money on the inflation rate. Constant value = 25,237. Constant is the alpha value of the regression equation $Y = \alpha + \beta X$. Meanwhile, the line for using e-money is the regression coefficient of the independent variable (β in the linear regression equation). So, the regression model in this research is as follows: $Y = 25,237 + 0.583X$. With $\beta = 0.435$, this means that assuming the use of e-money has a fixed (unchanging) value, then every increase in e-money by 1 unit will increase the inflation rate by 0.583.

CLOSING

Conclusion

From the analysis above, we can conclude that electronic money does not have a big impact on inflation rates, because it does not add much to the overall supply of money. This is in accordance with the research conducted by Titalessy (2020) found that this increase also contributed to a slowdown in the inflation rate – that is, a general and continuous increase in prices because cash circulation is faster than the supply of goods in the market. Controlled inflation is a good thing because it means a country's economy is growing stably. A figure that is too high signals a dangerous price increase and can lead to high unemployment.

The result of this analysis reveals that in recent years, the rate of inflation has fallen along with an increase in the number of electronic transactions. However, electronic money can help to minimize these price increases. Reducing the amount of cash in circulation, it makes it harder for people to spend money quickly and causes interest rates on money markets to go down. Additionally, the government can save money by producing less cash and by speeding up the process of digitizing the economy. All of these things together help to stimulate the economy and get it back on track during tough times.

The quantity theory of money explains that when there is more money circulating in the economy, prices will go up. This is because, when there are more dollars floating around, it becomes harder to buy things on the market. This can especially be a problem during times of inflation when prices are going up faster than the amount of goods available. Digital transactions, which currently use the Indonesian Standard Quick Response Code (QRIS) – a standard from Bank Indonesia that standardizes transaction codes across all payment platforms – can also help Micro, Small, and Medium Enterprises (MSMEs). Their business can grow more because digital transactions can prevent long queues, save on service fees, and make transactions easier and more systematic.

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