JURNAL PENDIDIKAN EKONOMI, PERKANTORAN DAN AKUNTANSI
http://pub.unj.ac.id/index.php/jpepa

E-MONEY PAYMENT TRANSACTIONS FOR M1 MONEY REQUESTS BEFORE AND AFTER THE COVID-19 PANDEMIC

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Article Info

Article history:
Received: 19 February 2022
Accepted: 17 November 2022
Published: .

Keywords:
Money Demand M1, E-Money, Covid-19 pandemic, Dummy Variables, VECM

Abstract

This article has two objectives, to prove that E-Money payment transactions with an indicator of the value of E-Money transactions can affect the demand for M1 money, and to see the effect before and after the Covid-19 pandemic using a dummy variable. This article was written using monthly time series research data and using the VECM method. The results of the analysis show that the short-term estimation results have two NEM variables in the 1st lag, and the 2nd lag has a positive effect on the five percent significance level. As for the long-term estimation results, there are no significant variables. In addition, in the period before the Covid-19 pandemic and during the Covid-19 Pandemic, it was seen that there was a decrease in the amount of E-Money given to M1 Money Requests when compared to the period before the Covid-19 pandemic. Meanwhile, the results of the study on the Covid-19 pandemic dummy variable showed an impact on the decline in money demand.

Abstrak

Artikel ini memiliki dua tujuan, untuk membuktikan transaksi pembayaran E-Money dengan indikator nilai transaksi E-Money dapat mempengaruhi permintaan uang M1, dan melihat pengaruhnya pada masa sebelum dan sesudah pandemi Covid-19 menggunakan variabel dummy. Artikel ini ditulis menggunakan data penelitian time series bulanan dan menggunakan metode VECM. Dari hasil analisis menunjukan bahwa hasil estimasi jangka pendek ada dua variabel NEM pada lag ke-1, dan lag ke-2 berpengaruh positif pada taraf nyata lima persen. Adapun pada hasil estimasi jangka panjang tidak terdapat variabel yang signifikan. Selain itu, pada periode sebelum terjadinya pandemi Covid-19 dan saat berlangsungnya Pandemi Covid-19, terlihat adanya penurunan yang diberikan E-Money terhadap Permintaan Uang M1 apabila dibandingkan dengan masa sebelum pandemi Covid-19 ini. Sementara itu pada hasil penelitian variabel dummy pandemi Covid-19, menunjukkan adanya dampak pada penurunan permintaan uang.

How to Cite:
Rismawati. (2022). Transaksi Pembayaran E-Money terhadap Permintaan Uang M1 Sebelum dan Sesudah Pandemi COVID-19. *Jurnal Pendidikan Ekonomi, Perkantoran dan Akuntansi*, 7(2), 101-111. https://doi.org/10.21009/JPEPA.007.x.x

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ISSN
2302-2663 (online)
DOI: doi.org/10.21009/JPEPA.007.x.x

INTRODUCTION PRELIMINARY

Money is one of the joints in human life. In the wheels of a country's economy, money must always rotate. If it is late or cannot rotate properly, it will have an impact on the congestion of the country's economic activities.

One function of money is as a*medium of exchange*. With money, especially cash, the goods or services you want to own can be obtained easily. This encourages people and companies to own or hold cash. This situation is referred to as the demand for money, in which the amount of money held or demanded by society and companies to fulfill their goals.

The money that can be owned by the community is closely related to the income they have. From this income, the community can get cash that can be easily used to meet their needs. This is called the demand for money. Demand for money itself is the amount of money that people want to hold and circulate in society and the company as a whole.

Initially, the payment system used was still in the *to-face* based on *paper documents*, where transaction activities between payers and recipients were carried out directly. Then, with the development of *fintech* (*financial technology*), transaction payments can be made using a *non-face to face* digital-based *a lesh cash society*. This is called a non-cash payment instrument.

There are various types of non-cash payments, one of which is electronic money (E-Money). The use of electronic money in micro-economic activities provides a fast payment process at a relatively lower cost, because the value of stored money can be accessed quickly, *off-line*, safely and inexpensively. In addition, the use of electronic money can reduce the growth rate of the use of cash, especially for payments that are small (micro) to retail, where the accuracy of recording transactions is easier.

Apart from that, during the current Covid-19 pandemic, where physical contact is avoided, it also makes non-cash payments more intensively used. All types of services are starting to quickly switch to using non-cash payments, both from the transportation sector to other sectors, in order to stop the spread of Covid-19.

The development of non-cash payment instruments has had an impact on both the economy and monetary policy. In the economy, non-cash payment instruments can reduce *opportunity costs*, in the form of transaction costs and waiting costs for the public to hold money to fulfill transaction needs. Non-cash payment instruments also have the potential to encourage real sector economic activity, due to the convenience provided during transactions.

In monetary policy, the development of non-cash payment instruments has implications for changes in the concept of calculating the money supply, both in the narrow (M1) and broad (M2) sense. The use of E-Money which has *float*, makes it usable at any time, this can be equated with cash/giro.

In addition, during the Covid-19 pandemic which disrupted the sustainability of domestic economic activity, the impact was not only felt on the aggregate demand side, but also on the aggregate supply side, which then had an impact on sluggish purchasing power, an increase in the number of unemployed. The occurrence of these declines will also have an impact on the demand for money and other payment instruments.

The widespread use of non-cash payment services, especially during this pandemic in making a payment transaction using E-Money attracted the attention of researchers, to see if there was any effect on the level of demand for currency and demand deposits (M1).

1. Money

As Walker said, "*Money is what money does*" (Van, 1959). This shows that anything that can perform a task as money, then that something can already be said to be money.

ISSN 2302-2663 (online)
DOI: doi.org/10.21009/JPEB.007.2.3

Thus, it can be concluded that money is everything that has been accepted by society to be used as a legal means of payment in every transaction made, whether in the form of goods, services, payment of debts, or in other forms, in accordance with the duties of money itself.

2. Request for Money

a. Irving Fisher's Theory

Fisher's theory, known as the "Quantity Theory", is formulated as follows: MV=PT

In this case, what is included in M is currency, demand deposits, APMK, and E-Money. APMK, and E-Money as non-cash payment instruments are included in M, due to their characteristics which are easy to use at any time for transactions.

According to this theory, V or the velocity of money is considered constant, but in reality it is not. According to Bambang Pramono, "the velocity of money in Indonesia shows a tendency to increase before the crisis, then decrease during the crisis and increase again after the crisis, especially since 2002, accompanied by improvements in economic conditions" (Pramono et al., 2006). This indicates that there is an increasing role of non-cash payment instruments in replacing cash in economic activities.

b. Keyness

Theory This theory, known as the "Liquidity Preference Theory", distinguishes three motives for holding money, namely:

1) Transaction Motives The
number of transactions carried out also depends on the amount of income one has. The greater the income, the greater the potential for issued transactions.
2) Precautionary motives
In the amount of someone's expenses, there are transactions that are carried out without planning. This is what motivates a person to hold money with precautionary motives.
3) Speculation
Motives Another motive for someone to hold money is speculation motive. Transactions included in this motive relate to securities.

3. E-Money

In the European Central Bank's electronic money report, it is stated that electronic money is broadly defined as "an electronic monetary store that has value in technical devices that can be used widely to make business payments and other purposes without having to involve a bank account in every transaction." , but acts as a prepayment instrument" (European Central Bank, 1998). So, it was explained that electronic money (E-Money) is an instrument in which nominal money is stored that is used to make business payments and other needs.

4. Previous Studies

Research conducted by (Pramono et al., 2006) entitled Impact of Non-Cash Payments on the Economy and Monetary Policy. This study aims to examine the effect of non-cash payments on the demand for currency and M1, which are considered in making economic and monetary policies. The results showed that the presence of non-cash payment instruments reduced the demand for currency and M1.

Research conducted by (Lintangsari et al., 2018) entitled Analysis of the Effect of Non-Cash Payment Instruments on Financial System Stability in Indonesia. This study aims to

ISSN 2302-2663 (online)
DOI: doi.org/10.21009/JPEB.007.2.3

examine the effect of the development of non-cash payment instruments on the money supply (M1), velocity of money, inflation, interest rates, which are indicators of financial system stability. The results of the study show that non-cash payment instruments have a direct or indirect effect on indicators of financial system stability.

Research conducted by (S & Fauzie, 2014) entitled Analysis of the Impact of Non-Cash Payments on the Money Supply in Indonesia. This study aims to analyze the effect of non-cash payments, namely payment instruments in the form of cards, SKNBI and the BI-RTGS system on the money supply (M1 and M2). The results showed that the variables in the non-cash payment system had a positive effect on the money supply (M1), inversely proportional to the influence of the SKNBI transaction value. Then, on the money supply (M2), only two variables have a negative effect, namely the value of E-Money and SKNBI transactions.

Research conducted by (Hafidh & Maimun Sholeh, 2014) entitled Analysis of Non-Cash Transactions (*Less-Cash Transactions*) Influencing*Money Demand*to Realize an Efficient Indonesian Economy. This study aims to analyze the effect of non-cash transactions (*Less-Cash*Transactions) using electronic payment cards on the demand for money in the Indonesian economy. The results showed that all non-cash transaction variables were in accordance with the hypothesis, only the number of ATM and debit card holders was different. This is because the use of ATMs is still limited to cash withdrawals, and has not been widely used as a substitute for payment.

5. Operational Definitions/Variables The

demand for money is a factor in society's holding of money because of motives as a means of payment for transactions, precautionary motives, and speculative motives. The data obtained uses units of billions of rupiah. Data obtained from Bank Indonesia.

Electronic money is a non-cash payment instrument whose funds are stored in an electronic media, where the funds are filled in by the owner before making a transaction, which is stored in the form of a chip or server. The data used is the value of E-Money transactions in units of millions of Rupiah. Data obtained from Bank Indonesia.

METHOD

The object of this study is non-cash payments using the variable value of E-Money as a research indicator of the demand for currency and demand deposits (M1), and how they affected the period before and after the Covid-19 pandemic.

The data used in this study is secondary data available at Bank Indonesia (BI). The research sample selection method uses *purposive sampling*. *Purposive sampling* is a non-probability sampling method that is adjusted to certain criteria. The research sample used comes from monthly time series money supply reports starting from the period 2019 to 2020.

The research methodology used is quantitative research (analyzed using the Eviews 9 program), with the research method using the *Vector Error Correction Model* (VECM). The data analysis technique used is depicted in the figure below:

ISSN 2302-2663 (online)
DOI: doi.org/10.21009/JPEB.007.2.3

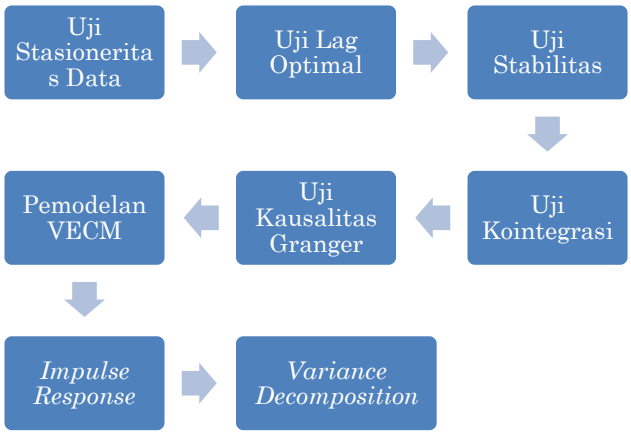

***Figure* 1.** Teknik Analisis Data *Vector Error Correction Model* (VECM)

RESULTS AND DISCUSSION

1. Data Description

Table 1. Table of Research Data Statistics

	Variabel	Descriptive statistics		
		Average	Maximum	Minimum
Before the Pandemic (2019 year)	M1 Money Demand (PU)	1484708,917	1565358,0	1376136,0
	E-Money Value (NEM)	12097122,33	16970133,0	5817363,0
After the Pandemic (2020 year)	M1 Money Demand (PU)	1681039,368	1855624,8	1484402,6
	E-Money Value (NEM)	17075764,17	22135159,5	14955261,0

Based on the table above, the average, maximum and minimum values are obtained. Judging from the maximum and minimum data, there is a pattern that regularly occurs in M1 Money Demand, namely the minimum data obtained at the beginning of the year, and the maximum data at the end of the year. Meanwhile, the value of E-Money transactions, for the pre-pandemic period, was at the beginning and end of the year. However, during the pandemic period, the minimum data is in the middle of the year, namely in June, while the maximum remains at the end of the year.

ISSN 2302-2663 (online)
DOI: doi.org/10.21009/JPEB.007.2.3

2. Data Stationarity Test

Tabel 2. Uji Akar Unit

Var	UJI AKAR UNIT					
	Level			First Diff.		
	t-stat	Prob.	Ket.	t-stat	Prob.	Ket.
NEM	-1.347817	0.5892	Tidak stasioner	**-4.805894**	**0.0010**	**Stasioner**
PU	0.509976	0.9828	Tidak stasioner	**-6.987541**	**0.0000**	**Stasioner**

Pada tabel di atas, menunjukkan bahwa semua variabel, yaitu NEM (Nilai E-Money), dan PU (Permintaan Uang) tidak stasioner pada tingkat level, namun stasioner pada first difference. Sehingga kedua variabel tersebut lolos uji stasioner.

3. Optimal Lag Test

Tabel 3. Lag Test

Lag	LogL	LR	FP	AIC	SC	HQ
0	-474.0163	NA	7.19e+21	56.00192	56.09995	56.09995
1	-467.9521	9.988159	5.68e+21	55.75907	56.05315	56.05315
2	-466.1368	2.562803	7.55e+21	56.01609	56.50622	56.50622
3	-462.9640	3.732630	8.91e+21	56.11342	56.79959	56.79959
4	-452.4747	**9.872324***	4.76e+21	55.34996	56.23219	56.23219
5	-441.6910	7.612014	**2.76e+21***	**54.55188***	**55.63016***	**55.63016***
6	-441.1435	0.257657	6.68e+21	54.95806	56.23238	56.23238

Optimal lag is determined from the number of stars that appear in a lag from the Likelihood Ratio (LR), Final Prediction Error (FPE), Akaike Information Crition (AIC), Schwarz Information Crition (SC), and Hannan-Quin Crition (HQ) criteria. In the table above, many stars appear at lag five (5). This shows that the optimal lag in this study is a lag of five (5).

4. VAR Stability Test

Tabel 4. Stability Test

Root	Modulus	Kesimpulan
-0.234113 - 0.508037i	0.559384	**Stabil**
-0.234113 + 0.508037i	0.559384	**Stabil**
-0.146778	0.146778	**Stabil**
0.034579	0.034579	**Stabil**

A VAR system is said to be stable if all of its roots or roots have a modulus that is less than one. Based on the table above, all the roots have a modulus value of less than one, so it can be said that in this study, the VAR model has been stable.

ISSN 2302-2663 (online)
DOI: doi.org/10.21009/JPEB.007.2.3

5. Cointegration Test

Tabel 5. Cointegration Test

Hypothesized No. of CE(s)	Trace Statistic	0.05 Critical Value
None *	**23.42845**	**20.26184**
At most 1	6.891739	9.164546

Cointegration testing criteria are based on trace statistics. If the value of the trace statistic is greater than the critical value of 0.05, then the alternative hypothesis which states the number of cointegrated ranks is accepted, so that it can be seen how many equations are cointegrated in the system. In the table above it can be seen that there is one rank statistical trace value that is greater than the critical value of 0.05.

6. Granger Causality Test

Tabel 6. Causality Test

	Obs	F-Stat.	Prob.
PU does not Granger Cause NEM	19	7.12158	**0.0081**
NEM does not Granger Cause PU		1.27199	0.3623

Criteria that have a causal relationship are those that have a probability value smaller than α 0.05. Based on the table above, it can be seen that the PU variable (Demand for Money) statistically significantly influences NEM (E-Money Value) which is equal to 0.0081, so H0 is rejected. Meanwhile, NEM (E-Money Value) does not statistically significantly affect PU (Demand for Money) (0.3623) so that H0 is accepted. Therefore, it can be concluded that there is only a unidirectional causality relationship between PU and NEM variables.

7. VECM Modeling

Tabel 7. VECM Estimation Test

Short-term		
CointEq1	-2.076007	**[-2.10867]**
D(PU(-1),2)	0.248646	[0.29677]
D(PU(-2),2)	-0.350124	[-0.50401]
D(PU(-3),2)	-0.302435	[-0.53090]
D(PU(-4),2)	0.050727	[0.14483]
D(NEM(-1),2)	0.032630	**[2.33103]**
D(NEM(-2),2)	0.030346	**[1.76841]**
D(NEM(-3),2)	0.006563	[0.40060]
D(NEM(-4),2)	0.000304	[0.02892]
Long-term		
D(PU(-1))	1.000000	-
D(NEM(-1))	0.007669	[0.98463]
C	-19934.10	**[-4.05351]**

ISSN 2302-2663 (online)
DOI: doi.org/10.21009/JPEB.007.2.3

Based on the table above, in the short term there are 2 variables that are significant at the five percent significant level plus one error correction variable, namely t-stat=2.1314. Variables that are significant at the five percent significance level are NEM at lag 1 and lag 2.

The short-term estimation results show that the NEM variable at lag 1 has a positive effect at the five percent significance level of 0.032 percent. This shows that if there was an increase of one percent in the previous year, it would increase PU by 0.032 percent in the current year. Likewise the 2nd NEM lag variable has a positive effect at a five percent significant level of 0.03 percent. This shows that if there was an increase of one percent in the previous two years, it would increase PU by 0.03 percent in the current year.

As for the long-term estimation results, there are no significant variables at the five percent level of significance. This shows that there is no long-term effect, between E-Money Transactions on M1 Money Demand.

8. Impulse Response Function

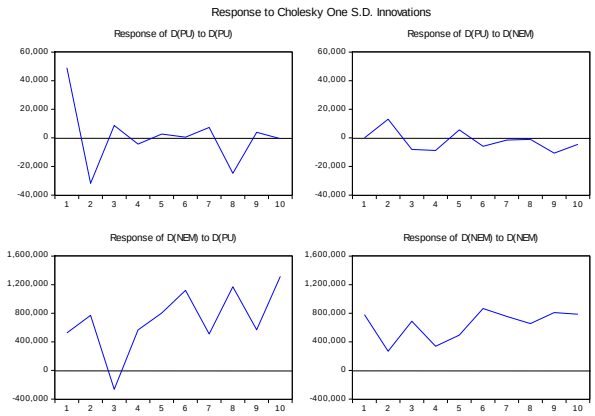

Figure 2. Grafik Uji Impulse Response Function

Based on the figure above, the IRF analysis of the Money Demand (PU) variable for the next 10 periods is as follows:

a. The first graph shows that the PU variable response to shocks is quite large in itself with a negative trend (-), then during the middle of the period PU's response tends to weaken around the equilibrium point.
b. The second graph shows the response of the PU variable to shocks in the NEM variable which starts with a positive (+) trend. Throughout the period, the movement is around the equilibrium point, meaning that the influence of the NEM variable shock is not so permanent on the PU variable.
c. The third graph shows the NEM response to PU variable shocks starting with a positive (+) trend. Even though the movement decreased until it passed the balance point, it returned to strengthen positively in the following periods.
d. The fourth graph shows the response of the NEM level to shocks by itself starting with a negative (-) trend. Throughout the period, the movement remains above the balance point, although it does not tend to be large.

ISSN 2302-2663 (online)
DOI: doi.org/10.21009/JPEB.007.2.3

9. **Decomposition Variant**

Tabel 9. Money Demand Variance Decomposition Test

Variance Decomposition of D(PU):			
Period	S.E.	D(PU)	D(NEM)
1	49023.89	100.0000	0.000000
2	59870.10	95.25550	4.744498
3	61029.32	93.67815	6.321854
4	61817.96	91.80963	8.190372
5	62126.76	91.08640	8.913601
6	62409.00	90.27024	9.729764
7	62851.63	90.35003	9.649968
8	67565.09	91.62482	8.375178
9	68506.25	89.44257	10.55743
10	68659.32	89.05072	10.94928

The table above is a summary of the results of the VD analysis for the M1 level of Money Demand from the shocks given by the E-Money Value variable as well as from the variable itself. The VD analysis in the table above states that in the short term, namely the third quarter: shocks to itself cause 93.67815% of fluctuations in the level of Money Demand, and shocks to E-money Value cause 6.321854%. Meanwhile in the long term, namely in the tenth quarter: shocks to themselves result in weaker fluctuations in the level of demand for money, while shocks to the E-Money Value cause stable fluctuations in the level of E-Money Value.

Tabel 10. Variance Decomposition Test of E-Money Value

Variance Decomposition of D(NEM):			
Period	S.E.	D(PU)	D(NEM)
1	940354.5	31.11165	68.88835
2	1245593.	56.09387	43.90613
3	1446767.	44.87127	55.12873
4	1590127.	49.82179	50.17821
5	1848342.	55.72364	44.27636
6	2328502.	58.28867	41.71133
7	2501013.	54.68507	45.31493
8	2838320.	59.47395	40.52605
9	3005685.	56.61015	43.38985
10	3374412.	60.12653	39.87347

The table above is a summary of the results of the VD analysis for the E-Money Value level from the shocks given by the Money Demand variable M1 as well as from the variable itself. The VD analysis in the table above suggests that in the short term, namely quarter three: shocks to itself account for 55.12873% of the fluctuations in E-Money Value levels, and shocks to M1's Money Demand account for 44.87127%. Meanwhile in the long term, namely in the tenth quarter:

ISSN 2302-2663 (online)
DOI: doi.org/10.21009/JPEB.007.2.3

the shock to itself resulted in weaker fluctuations in the E-Money Value level, while the shock to M1 Money Demand resulted in increased fluctuations.

10. The Relationship between the NEM Variable Time Period Before and After the Covid-19 Pandemic

Changes in the E-Money Value variable for the time period before the Covid-19 pandemic is significant as evidenced by a probability value of 0.0000 which is smaller than the short-term significance of α = 5%, so the E-Money Value variable has a different influence on the demand for M1 money before the Covid-19 Pandemic with a coefficient value of 0.206466. This shows that if the E-Money Value increases by 1%, the M1 Money Demand will increase by 0.206466.

The change in the E-Money Value variable in the time period after the Covid-19 pandemic was significant as evidenced by a probability value of 0.0007 which is smaller than the short-term degree of significance α = 5%, so that the E-Money Value variable has a different effect on the demand for M1 money after Covid-19 pandemic with a coefficient value of 0.144460. This shows that if the E-Money Value increases by 1%, the M1 Money Demand will increase by 0.144460.

Based on these data, it can be seen that there has been a decrease in the amount provided by E-Money to M1 Money Requests when compared to the period before the Covid-19 pandemic.

11. Relationship between the Dummy Variable Time Period Before and After the Covid-19 Pandemic The

Change in the dummy variable for the time period before and after the Covid-19 pandemic is significant as evidenced by a probability value of 0.0102 which is smaller than the degree of short-term significance α = 5%, so all variables have different effects on the demand for M1 money before and after the Covid-19 Pandemic with a coefficient value of -0.066290. This shows that with the Covid-19 Pandemic, it will have an impact on reducing the demand for money by 0.066290.

CONCLUSIONS AND RECOMMENDATIONS

1. Conclusion

Based on the research that has been done, it can be concluded as follows:

a. The short-term estimation results show that the NEM variable in the 1st and 2nd lags has a positive effect at the five percent significance level. The long-term estimation results do not show any long-term effect between E-Money Transactions and M1 Money Demand.
b. Based on the results of the *Impulse Response Function* (IRF), the response of each M1 and E-Money Money Demand variable to shocks in itself, starts with a negative trend, in contrast to the response of the M1 Money Demand variable to E-Money shocks, and vice versa which starts with a positive trend .
c. analysis *Variance Decomposition* (for the level of M1 Money Demand fluctuates strongly from shocks provided by the E-Money Value variable, but weakens from shocks to itself. Meanwhile, the VD analysis for the level of E-Money Value fluctuates from the shock provided by the Money Demand variable M1, but weakens from the variable itself
d. The value of E-Money in the time period before the Covid-19 pandemic had a different influence on the demand for M1 money was greater than the time period

ISSN 2302-2663 (online)
DOI: doi.org/10.21009/JPEB.007.2.3

after the Covid-19 pandemic. This shows that there is a decrease provided by E-Money to M1 Money Demand when compared to the period before the Covid-19 pandemic.

e. Changes from the dummy variable for the time period before and after the Covid-19 pandemic had an impact on reducing the demand for currency and demand deposits (M1).

2. Suggestion

a. For Bank Indonesia to return to monitoring the payment system for the security of non-cash transactions, and transaction costs in using E-Money, especially during this pandemic that banks and non-bank financial institutions have implemented so that all levels of society are more interested in using non-cash payments.

b. For banks and non-bank financial institutions that issue non-cash payment instruments, one of which is E-Money, to be more active in socializing their respective customers. So that people will clearly know the benefits they get when using non-cash payment instruments.

c. For the Government of Indonesia, it is hoped that this research can be used as a reference in determining appropriate government policies during this pandemic.

d. For future researchers, it is suggested to add years of research and other variables that have not been studied in this study.

REFERENCES

Albert Gailord Hart, P. B. K. & A. D. E. (1969). Money, Debt, and Economic Activity. Prentice-Hall.

Bank Indonesia. (2013). Metadata APMK.

Bank Indonesia diakses dari https://www.bi.go.id/id/statistik/ekonomi-keuangan/ssp/uang-elektronik-transaksi.aspx tanggal 1 Maret 2021

Bank Indonesia diakses dari https://www.bi.go.id/id/statistik/ekonomi-keuangan/seki/Default.aspx tanggal 1 Maret 2021

Boulila, H., & Benbouziane, M. (2018). Austerity in Time of Crisis: A Solution or a Dangerous Idea? Evidence from Algeria. Etikonomi, 17(1), 11–24. https://doi.org/10.15408/etk.v17i1.6799

CPSS, A. (2003). Bank for International Settlements – Committee on Payment and Settlement Systems, A Glossary of Terms Used in Payments and Settlement Systems (Issue March).

Dias, J. (2001). Digital Money: Review of Literature and Simulation of Welfare Improvement of This Technological Advance.

Enders, W. (2008). Applied Econometrics Time Series. In John Wiley & Sons.

European Central Bank. (1998). Report on Electronic Money (Issue August). http://www.ecb.int/pub/pdf/other/emoneyen.pdf

Fuady, M. (1995). Hukum tentang Pembiayaan dalam Teori dan Praktek; Leasing, Factoring, Modal Ventura, Pembiayaan Konsumen, Kartu Kredit. Citra Aditya Bakti.

Gujarati, D. N. (2003). Basic Econometrics. McGrew Hill Book Co.

H. Veithal Rivai, Andria Permata Veithzal, F. N. I. (2007). Bank and Financial Institution Management. Raja Grafindo Persada.

Hafidh, A. A., & Maimun Sholeh. (2014). Analisis Transaksi Non-Tunai (Less-Cash Transaction) Dalam Mempengaruhi Permintaan Uang (Money Demand) Guna

ISSN 2302-2663 (online)

DOI: doi.org/10.21009/JPEB.007.2.3

Mewujudkan Perekonomian Indonesia Yang Efisien. Prosiding Seminar Nasional "Meneguhkan Peran Penelitian Dan Pengabdian Kepada Masyarakat Dalam Memuliakan Martabat Manusia". Universitas Negeri Yogyakarta, 750–764.

Hajat, N., Purwana, D., Saptono, A., Saparuddin, Andaru, A. W., Arafat, Y., Mardiati, U., & Marsellia. (2012). Pedoman Penulisan Skripsi Sarjana SARJANA EKONOMI.

Harris, R. I. D. (1995). Using Cointegration Analysis in Econometric Modelling. Harvester Wheatsheaf, University of Portsmouth.

Hartono, S. R. (1995). Aspek Hukum Penggunaan Kartu Kredit.

Hueng, C. J. (1997). Money demand; open-economy shopping-time model; out-of-sample prediction. 205.

Lintangsari, N. N., Hidayati, N., Purnamasari, Y., Carolina, H., & Ramadhan, W. F. (2018). Analisis Pengaruh Instrumen Pembayaran Non-Tunai Terhadap Stabilitas Sistem Keuangan Di Indonesia. Jurnal Dinamika Ekonomi Pembangunan, 1(1), 47. https://doi.org/10.14710/jdep.1.1.47-62

Manullang, M. (1993). Ekonomi Moneter. Ghalia Indonesia.

Mccalcum, B. T., & Goodfiend, M. S. (1988). Theoretical Analysis Of the demand for money. February.

Nursiba. (2015). Analisis Faktor-Faktor yang Memengaruhi Permintaan Uang di Sulawesi Selatan.

Paunescu, A. (2002). Determinants of Demand in Romania.

Pigou, A. C. (1949). The Veil of Money. Macmillan & Co. Ltd.

Pramono, B., Yanuarti, T., Purusitawati, P. D., & D.K, Y. T. E. (2006). Dampak Pembayaran Non Tunai Terhadap Perekonomian dan Kebijakan Moneter. Bank Indonesia, 11(01), 01–55.

Reksoprayitno, S. (2000). Ekonomi Makro. Penerbit BPFE.

Robertson, D. H. (1922). Money. Nisbet & Co. Pp.

S, L., & Fauzie, S. (2014). Analisis Dampak Pembayaran Non Tunai Terhadap Jumlah Uang Beredar Di Indonesia. Jurnal Ekonomi Dan Keuangan, 2(10), 14817.

Saving, T. R. (1972). Transactions Costs and the Firm's Demand for Money. Journal of Money, Credit and Banking, 4(2), 245. https://doi.org/10.2307/1991037

Sayers, R. S. (1967). Modern Banking. Oxford : Clarendon Press.

Simanjuntak, E. P. (1996). Bahan Penataran Dosen Hukum Dagang. Universitas Gajah Mada.

Siti Hidayati, Ida Nuryanti, Agus Firmansyah Aulia Fadly, I. Y. D. (2006). Operasional E-Money. Bank Indonesia, 53, 60.

Sri Mulyati Tri Subari, A. (2003). Kebijakan sistem pembayaran di Indonesia. Bank Indonesia.

Summers, B. J. (1994). The Payment System : Design, Management, and Supervision. International Monetary Fund.

Thomas, R. G. (1964). Our Modern Banking and Monetary System. Prentice-Hall.

Van, J. Z. (1959). Pasal-Pasal Ekonomi II, terjemahan Markoem. J.B. Wolters.

Widarjono, A. (2007). Ekonometrika: Teori dan Aplikasi untuk Ekonomi dan Bisnis. Ekonisia.

Winarno, W. W. (2015). Analisis Ekonometrika dan Statistika dengan Eviews Edisi 4. UPP STIM YKPN.

ISSN 2302-2663 (online)
DOI: doi.org/10.21009/JPEB.007.2.3