

Research Article

Evaluation of the Growth, Obstacles, and Challenges of E-Money During the COVID-19 Pandemic

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Abstract.

During the COVID-19 pandemic in 2020, electronic money (e-money) was a valuable opportunity as a means of payment. This article used empirical research on millennials to evaluate the growth, barriers and challenges of e-money as a new payment tool in Indonesia. Data collection was conducted through interviews with two e-money issuer executives and 23 millennial e-money customers. Using qualitative methods, the study concluded that the development strategy for e-money was to create innovations that can offer users more security. Increased promotions and cashback at affiliated stores with issued products are also the most popular development strategies for customers. Restrictions on e-money customers included security issues, limited merchants, unstable provider networks, and social-cultural factors (the habit of using traditional cash payment methods). The challenge for e-money issuers was competitors with similar products.

Keywords: e-money, payment tool, green finance, COVID-19

1. Introduction

The issue of global warming has existed for a long time and many industries are required to participate in minimizing the occurrence of prolonged global warming. The financial sector uses the concept of green financing as a manifestation of a sustainable commitment where the aim is to encourage environmentally friendly business financing and the use of clean energy. The financial technology revolution is in full swing around the development by seeking a long-term balance between environmental hazards and economic growth [1]. The financial technology is a great achievement of economic development and scientific and technological progress [2]. Financial technology is a combination of green behaviour and the relationship between finance and the business

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world, or finance and ecology [3]. Currently, the implementation of green financing in the banking sector is to reduce the operational impact on the environment, many banks use technology that cuts paper and reduces the need to come to the office. Fintech, as a technological innovation, affects the production and management of companies by changing loan conditions through the provision of financial services, so there is no doubt that it has an impact on the environment and the economy [4,5].

The implementation of green growth strategies also faces uneven bottlenecks every year, impacting the sustainability of green growth [6]. One of the products of the development of digital banking is the creation of e-money (electronic money). The need to regulate e-money arises as technology advances further to the point where e-money is not limited to payment cards only [7]. The introduction of e-money in Indonesia began in 2007 which serves as a more modern and compact substitute for cash. E-money users have increased significantly over time, but this increase has not matched the growth in e-money transactions [8]. Over time, electronic money has grown in popularity during the 2020 COVID-19 pandemic. Restrictions on community movement and a reduction in direct contact between buyers and sellers have made electronic money the best alternative as a means of payment for all trading activities or transported. The pandemic has transformed new existences to reduce the risk of infection [9].

The benefits and ease of use of electronic money can influence individual's interest in using electronic money [9]. Electronic money is used from various circles in society because offers faster and more convenient transactions than cash, especially for small transactions, using electronic money makes these transactions easier and cheaper, ensuring transaction security and speed for both consumers and merchants. Consumers benefit from using payment methods that are cheap, fast, convenient, accessible and reliable, with an acceptable level of risk [10].

The millennial generation is the largest e-money user at this time. Millennials are the generation born between the 1980s and 2000s. Millennials in Indonesia are the most e-money users, which is 59% compared to other generations. The increase in e-money users is not without problems [10]. Infrastructure that is still uneven and poor internet connection in some areas causes the spread of e-money has not been fully fulfilled. This is an evaluation material for e-money issuing banks to improve their services. The biggest problems in e-money development are risk management and marketing management. Security risks such as customer data loss, transaction denials, malware attacks, and malfunctions are just a few of the issues that can arise. On the other hand, an issue is the education of Indonesians who use cash instead of electronic money.

Some barriers perceived by both customers and e-money issuers require further investigation. The results of this review should help formulate other strategies for e-money development. Millennials in particular need to be cognizant of the growth, challenges and opportunities of e-money, especially in the post-corona era. Therefore, the purpose of this study is to qualitatively examine the perceptions of e-money customers and issuers regarding e-money growth, challenges, and opportunities.

2. Methods

The study uses a qualitative study of structured interviews with 25 people. Two of them are e-money issuer managers, BRI for Brizzi products and Mandiri for e-money products, and the remaining 23 are e-money users between the ages of 26 and 40. The city of Surabaya was chosen as the trial location because in Surabaya almost all the facilities provided by the Surabaya City Government use e-money transactions, from parking to transportation. Qualitative research methods are used to help uncover existing phenomena from the perspective of tourists who will provide findings and contribute to science [11].

This study uses manual data analysis with an aggregation approach. This method requires you to count and explain the most important terms and words from your notes. To obtain the data, this survey was conducted using semi-structured interviews [7]. The first step in conducting semi-structured interviews is to design a question structure based on a literature review and determine the indicators for each question. The study used the following indicators to formulate questions (Table 1):

3. Results and Discussion

3.1. Demographic information of respondents

There were 25 respondents to this survey. Two of his e-money issuing company executives are General Manager of Bank Mandiri with over 5 years of professional experience and Bank Rakyat Indonesia with over 3 years of professional experience. On the other hand, her 23 millennial customers selected ranged in age from she's 26 to she's 40, have an average level of education from high school to a master's degree, and have e-money capabilities in her 2 Been using it for over a year. The survey was conducted in an office building in the Basuki Rahmad area, and 23 respondents were employees who worked for the company that rented the building. The millennial customers selected

TABLE 1: Questionnaire indicators.

No	Variable	Indicators
1	Respondent Information	Publisher: Company name Position in the company Length of time working in the company Customer: Profession Age Level of education
2	e-Money Growth Information	Publisher: Type of electronic money issued by the respondent's company The company's goal of issuing e-money, the development of the respondent's e-money over the past five year Development of electronic money by surveyed companies before and after Covid-19 Researched company innovations on e-money to combat Covid-19 Customer: Respondents' knowledge of electronic money Type of electronic money used by respondents Respondent's purpose of using e-money Respondent's e-money usage history for the past 5 years Use of electronic money by respondents pre and post Covid Respondent's perception that electronic money can minimize the risk of Covid-19 transmission
3	E-money barrier information	Publisher and customer: Security Infrastructure Law Socio-cultural
4	E-money challenge information	Publisher: Competitor company Marketing Customer: Discount Explicit costs Merchant

are 10 junior her millennials (ages 26-33) and her 13 senior millennials (ages 34-40). The millennials surveyed were junior executives with 0-3 years of work experience (10), executives with 3-5 years of work experience (8), and executives with 8-10 years of work experience (5). To facilitate data collection, researchers assigned each respondent the following code: P1 represents Bank Mandiri managers, P2 represents Bank Rakyat Indonesia managers, K1 to K10 represent younger millennial customers, and K11 to K23 represent older millennial customers.

3.2. Information on e-money growth in Indonesia

E-money is one of the innovative payment methods born out of the influence of ever-accelerating technological developments. In Indonesia, Bank Indonesia has launched the National Non-Cash Movement (GNNT). According to Agus D.W. Martowardojo in his remarks at the inauguration of GNNT, this movement is aimed at increasing public awareness of the use of non-cash instruments, so that a community or society is gradually formed that uses non-cash instruments more (Less Cash Society/LCS) (bi.go.id). The banking and telecommunications industries are competing to issue e-money products as a form of support for the government's design and as a result, e-money has grown very rapidly over the last five years. Banking has become an important function of

the economic life of many progressive societies which often signifies economic and financial strength, as well as societal and cultural progress [12].

Both publishers that participated in this survey agree with this statement. Bank Mandiri, with its e-Money product, recorded that electronic money transactions grew by 49.06% year on year (yoy) or reached Rp 305.4 trillion. PT Bank Mandiri (Persero) Tbk (Bank Mandiri) noted that, as of the end of September 2021, the frequency of Mandiri e-Money electronic money transactions was 697 million transactions. This figure has recorded the value of transactions reaching more than Rp. 11.8 trillion. Bank Rakyat Indonesia Tbk (BRI) with its Brizzi product also noted that until August 2021, electronic money transactions grew by 223% yoy.

In addition to changes in the use of e-money for consumers during the COVID-19 pandemic, according to the publisher, the increase in the use of e-money during the pandemic was due to many e-commerce transforming products and services so that many people shifted towards digital. However, it is undeniable that the use of BRIZZI e-money has decreased due to the government homecomings during the 2021 pandemic.

Electronic money is currently growing and developing because it is increasingly in demand for millennials because of its practicality. Every year e-money users experience a significant increase [13]. 20 out of 23 respondents stated that they have used e-money since the government introduced electronic money as a means of payment at toll roads. After the Covid-19 outbreak, the use of e-money increased as the government implemented a massive social containment policy (PSBB) to prevent the spread of the virus. As a result, people must get used to and begin to adapt to conditions that require them to stay at home for long periods of time to reduce the potential for Covid-19 transmission. This condition causes the emergence of new behaviours that become a habit in people's lives. One of them is the shift from conventional payment systems to digital. E-money is very useful during the Covid-19 pandemic because it can carry out any transactions without making physical contact with sellers and buyers so as to minimize transmission through physical money transactions. This is reinforced by the research of Gürkaynak and Yilmaz [12] where the use of e-money in the form of cards for financial transactions is increasingly widespread and increasing by Indonesian consumers, including for shopping, paying bills and buying tickets.

3.3. Electronic money constraint information

Conducting transactions using electronic money or e-money has its own added value. Using e-money can make transactions easier, faster, and don't need to carry large

amounts of cash. But on the other hand, there are still risks for the wearer. One of the risks associated with using electronic money is security risk. Basically, security and convenience aspects are the main consideration factors for transaction actors. Security risks that may arise due to the use of digital money are theft and duplication of the original card.

Security and infrastructure issues are of concern to customers. Loss factors and inadequate infrastructure facilities (K1, K2, K5, K8-K12, K18, K20, K23) are their reasons. The uneven development of telecommunication networks in Indonesia has resulted in transaction failures due to unstable cell phone signals. Especially when they are out of town. The failure of the transaction has an impact on whether or not the balance in e-money is reduced. The loss of the card is also a major problem faced by customers because the loss of the card will automatically forfeit the balance in the e-money, or if the card is transferred to someone else's hands to then use the remaining funds. Hacking on e-money products is also an obstacle for customers (K3, K4, K6, K13). The number of people who use electronic money is certainly a target for criminals hacking. Meanwhile, other respondents felt there were no barriers to using e-money. Eliminate signal issues by choosing multiple providers, so you can easily use e-money wherever you are. As for data theft and other risks, the main key is to be more careful in its use. If there are problems there is technical assistance from e-money service providers [10]. The rest are enjoying the opportunities e-money offers, with increasing collaborations with e-commerce merchants such as Shopee Pay, Ovo, Go-Pay and Dana partners, offering many conveniences and attractive promotions.

The final problem found in this study is a sociocultural issue, when an individual prefers cash to electronic money (P1). Paper money still offers certain unique advantages to the users [10]. The security factor makes cash transactions remain a major consideration among the public. This statement was confirmed by another publisher (P2). Until now, there are still many Indonesians who have not accessed digital finance because it turns out that there are still many people who do not have bank accounts, especially for residents in rural areas. However, for millennials, especially the respondents of this survey, it is more efficient to use e-money. However, it is undeniable that many of the respondents also continue to use cash as a means of payment. Eighteen respondents preferred both (cash and e-money), four preferred e-money, and only one preferred cash.

When it comes to e-money, respondents' perceptions as millennials are very optimistic. Respondents' perception of ease of use and convenience shows that 100% of respondents said that e-money made their lives more convenient and efficient. Also,

100% of her respondents said that e-money is easy to use and remember. However, when it comes to security perceptions, only 80% of her respondents said using e-money was safe, 10% said it wasn't safe, and 10% said they were sceptical.

3.4. Electronic money challenge information

Competition in the application-based e-money and e-money services space is heating up, but both publishers are optimistic about dominating the domestic market share by relying on their wide networks. The identification in this sub-chapter is the challenge from competitors where there is high competition in similar products, the challenge of community literacy, and the challenge of user loyalty where there are customer expectations in order to obtain safe, comfortable and reliable e-money services. We have found the strategy of offering promotions and discounts to be very effective. Customer feedback indicates that most customers use e-money to receive certain promotions and discounts. 21 out of 23 respondents said they were interested in e-money campaigns and would switch to another e-money platform whenever they determined the campaigns were more effective. Also, if you think that using electronic money is expensive, you will quit electronic money and switch to another electronic money without hesitation. Customers are aware of several costs associated with e-money, such as administration fees, various bank transfer fees, and top-up fees.

In addition to increasing product promotions and features, further innovations by publishers include expanding dealer networks. Most respondents see no problem finding e-money retailers nearby, but as was the case in this survey, they are millennials living in well-equipped metropolitan areas. The results obtained will be different if conducting research with different types of respondents. The digital transformation of technology has developed rapidly in the past decade and the process has accelerated during the COVID-19 pandemic. Lifestyle changes due to the pandemic will still exist, some will be run hybrid (online and offline) after the pandemic era. Within a decade or two, the digital economy will develop more broadly, all economic sectors in all regions will be digitized. Existing businesses must anticipate and adapt if they are to survive and grow. This explanation is reinforced by research by Dehghan [10] e-money is used as a modern, safe and common means of online and offline payment in the future as an alternative to conventional money and credit cards.

4. Conclusion

E-money is one of the payment instrument innovations that emerged from the impact of increasingly rapid technological developments. The banking and telecommunications industries are competing to issue e-money products as a form of support for the government's design and as a result, e-money has grown very rapidly over the last five years. Electronic money is currently growing and developing because it is increasingly in demand for millennials because of its practicality. After the Covid-19 outbreak, the use of e-money increased as the government implemented a massive social stay-at-home policy (PSBB) to curb the spread of the virus. Electronic money is very useful during the Covid-19 pandemic as all transactions can be carried out without physical contact with the seller or buyer, minimizing the transmission of physical money transactions.

Additionally, the increased use of electronic money during the pandemic is due to many e-commerce companies migrating their products and services in a way that many people are switching to digital. But on the other hand, the risk remains with the wearer. One of the risks that arise with the use of e-money is security risks such as theft and duplication of original cards, uneven infrastructure, hacking of e-money products, social culture when an individual prefers cash to electronic money. Intense competition between e-money publishers causes them to compete in providing the best service for their customers. Increasing promos and discounts on the use of e-money is a very effective strategy.

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