

逢甲大學學生報告 ePaper

Can E-money replace physical currency in the market?

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Abstract

The topic of this research is "Can E-money replace physical currency in the market?"

By exploring how different countries—Sweden, China, and Malaysia—approach the development and adoption of digital currency, we aim to understand how cultural and governmental factors influence the shift toward cashless systems. This study also seeks to examine the common and unique challenges faced by these regions in the digitization of money, in order to generate deeper analysis and potential hypotheses.

Keyword :

E-Money、 Digital Currency、 Digitization of Money

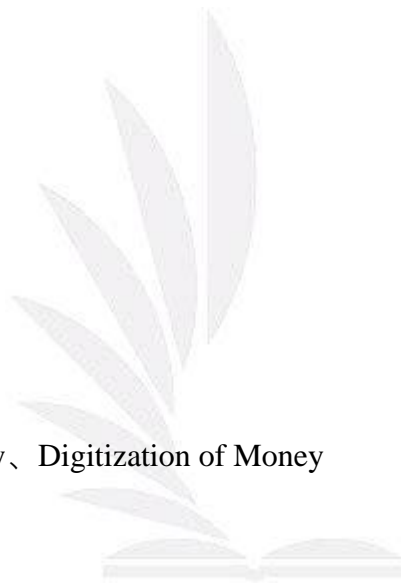


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1. Introduction

1. Technology advancement:

People started using mobile payments and online banking more often.

2. Problems with traditional banking:

International transfers are slow, expensive, and not accessible to everyone.

3. Loss of trust after 2008:

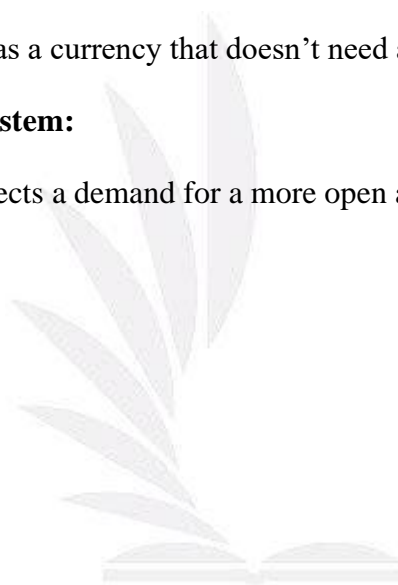
The global financial crisis reduced trust in banks and governments.

4. Desire for decentralization:

Bitcoin was created as a currency that doesn't need a central authority.

5. Hope for a fairer system:

Digital currency reflects a demand for a more open and inclusive financial system.



2. Analysis

2-1 Pros

In modern life, the use of digital currency is becoming more and more common. This reflects not only technological advancement but also people's increasing demand for convenience and efficiency. Below are some of the key advantages:

1. Phone is your wallet

These days, a lot of people only carry their phones when going out, because apps like LINE Pay or Apple Pay can handle most payments. I've even forgotten my wallet a few times, but as long as my phone still had battery, I was fine. It's super convenient and really changes how we live.

2. Fast checkout

I often see people at convenience stores or drink shops paying with their phones. Just one quick scan, and it's done—no need for change or counting coins. This really speeds up the whole line for everyone.

3. Eco-friendly

Using digital payments reduces the need for paper receipts and cash. While it seems like a small thing, over time, it helps cut down on paper usage and is better for the environment. friendly.

4. Safer payments during COVID

During COVID, people were extra cautious about touching things. I remember many stores had signs saying "please use contactless payment." Paying with a phone just felt safer than handing over cash.

5. Detailed transaction records

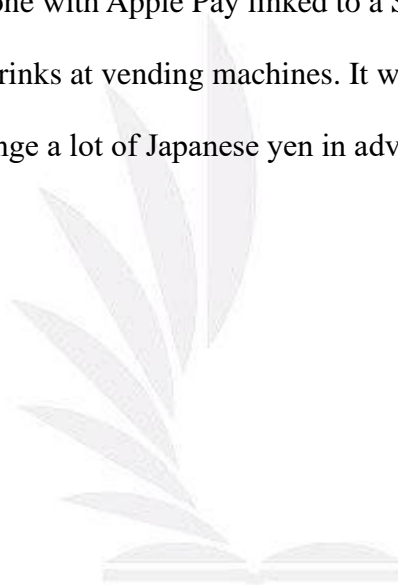
Every time I use an e-payment app, it automatically records what I spent. At the end of the month, I can check the app to see where my money went, which helps me manage my finances better.

6. Digital currency rewards

Many digital payment platforms offer points or discounts as incentives, giving users some nice extras for using their services.

7. Global payments made easy

When traveling, e-payments can be a real lifesaver. For example, when I went to Japan, I used my phone with Apple Pay linked to a Suica card to pay for train rides and even buy drinks at vending machines. It was super convenient—I didn't need to exchange a lot of Japanese yen in advance or carry much cash around.



2-2 Cons

While digital currency does offer a lot of convenience, there are still some downsides that come with it. To avoid risks and limitations, it's important to be careful when using these systems. Here are some common drawbacks:

1. Relies on internet and power

If your phone suddenly runs out of battery, or the internet goes down, or the payment system crashes, just one issue in the process can cause the whole payment to fail and leave you stuck.

2. Risk of fraud

Even though most platforms are secure, scammers keep coming up with new tricks. People might click a fake link or download a fake app and lose their personal information or even money.

3. New fraud tactics

As mentioned earlier, there are always fresh scam tactics being developed, which makes it easy for users to fall into traps if they're not careful.

4. Some places are cash-only

In Taiwan, there are still many places — such as traditional markets or night markets — where only cash is accepted. So even if you have the latest payment method, it won't help in those situations.

5. Platforms charge fees

Some platforms take a small service fee for transactions. While it's usually not much, these fees can add up over time.

6. Difficult for non-tech users

People who aren't used to digital tools, like the elderly, still prefer using cash. The process of learning and adapting can be confusing or frustrating for them.

3. Case Support

3-1 Case-1: Sweden-SW

1. Political Support: There is a strong collaboration between the government and Riksbank (Sweden Central Bank).

2. Implementation:

Research and Pilot (2017–2022)

> Technical testing with Accenture using Distributed Ledger Technology (DLT). Simulated transactions, wallet creation, and integration with existing banking infrastructure.

> Development and Policy Work (2023–2025) Evaluation of legal, economic, and social impacts. Ongoing collaboration with EU and other central banks.

- Swish mobile APP adopted nationwide for peer-to-peer and commercial payments.
- Cash usage rates in south regions below 10%.
- Most businessman and public transport system no longer accept cash.

3-2 Case-2: China-The most well-known **mobile payment country in Asia**

1.Policy Support:

People's Bank of China promotes e-CNY (digital yuan).It is important to note that cash is still legal tender.

2.Problem:

Digital Divide:

- Elderly people and populations in areas with relatively low levels of urbanization may not adapt to digital currency.
- Rural areas and aging populations face challenges in digital transformation.

3.Government Intervention:

The government adopts a flexible regulatory policy, taking a more open attitude towards the development of related technologies while ensuring safety.

Since 2012, they have successively issued the "Administrative Measures for Non-Financial Institution Payment Services," "Implementation Rules for Administrative Measures for Non-Financial Institution Payment Services," "Measures for the Custody of Customer Prepayments by Payment Institutions," and "Administrative Measures for Online Payment Business of Non-Bank Payment Institutions," helping the development of digital currency to be more flexible and rapid.

3-3 Case-3: Malaysia-MY

1.Policy Support: TnG first introduced by malaysia government and design by Teras

Teknology Sdn Bhd, the First apply was insert the microchip into the identical card(IC,Mykad), 2018 collaborate with alipay that now can use at china.

2.Scope of Use

It applies to Medical, Public Transport, Pay Highway Road fee, Grocery and more. Also has its own APP and links to bank accounts.

Which collaborates with many countries such as Singapore, Japan, Macau, etc.

3.Other different E-wallet apply in Malaysia.(list with most popular)

Such as TnG(TNG Digital), Boost(Axiata Digital eCode Sdn Bhd), Grab Pay(GrabPay Malaysia Sdn Bhd), Setel (Petronas Dagangan Berhad), DuitNow(A Payment Network which it have its own QR and E-wallet)



4. Others-future trends of digital currency

1.Acceleration Toward a Cashless Society

As technology and mobile payment platforms continue to evolve, an increasing number of countries are encouraging the shift toward cashless transactions. In particular, urban populations and younger generations are more willing to adopt digital methods due to speed, ease of use, and integration with everyday apps.

2.Enhanced Cybersecurity and Identity Verification

With more financial activities taking place online, digital currency systems are placing greater focus on improving data protection. Advanced encryption methods, biometric logins, and multi-factor authentication are becoming essential tools in preventing fraud and securing personal accounts.

3. Increased Accessibility to Digital Finance

Digital financial services are no longer limited to people with bank accounts. Through smartphones and mobile apps, individuals in rural or underserved areas can now participate in digital payments, store value electronically, and access basic financial tools that were once out of reach.

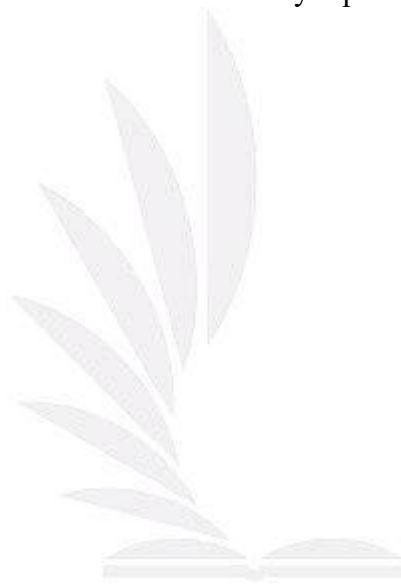
4. Partial Replacement of Physical Cash

In many day-to-day situations, such as buying coffee or taking public transport, digital currency is becoming the default option. As consumers grow more comfortable with these systems, the need for carrying physical money will continue to decline — though

complete replacement may still take time.

5. Conclusion

Although I personally find digital payments to be really convenient, analyzing both the pros and cons made me realize there are still some issues I hadn't considered before. For example, if your phone dies or if an elderly family member doesn't know how to use digital payments, the system that's meant to help might actually create problems instead. I believe digital payments will become more widespread in the future, but for now, they still need to be used alongside cash. It's hard to fully replace physical money in every situation.



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