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Balancing the Risk and Rewards of a Cashless and Digital Society

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Abstract

The emergence of cashless and digital payment systems has revolutionized the way we conduct financial transactions. These systems offer numerous benefits, such as convenience, speed, and security, which have led to their widespread adoption around the world. However, the increasing reliance on cashless and digital payment systems also brings with it a host of risks and challenges.

This research paper will explore the benefits and risks of a cashless and digital society and consider ways to balance the two. First, we will examine the benefits of cashless and digital payment systems, including their convenience, speed, and security. We will also, discuss the potential for these systems to increase financial inclusion and reduce the costs associated with traditional payment methods. Next, we will consider the risks and challenges associated with cashless and digital payment systems. These include privacy and security concerns, the vulnerability of these systems to fraud and hacking, and the potential for financial exclusion of certain groups.

Finally, we will explore strategies for balancing the benefits and risks of a cashless and digital society. This will include a discussion of the role of government regulation, consumer education and awareness, and the development of best practices for the use and management of these systems. Overall, this research paper aims to provide a comprehensive understanding of the benefits and risks of a cashless and digital society and to identify ways to ensure that the benefits of these systems are maximized while minimizing the risks.

Keywords: Cashless, Digital Payment System, Financial Transaction, Financial Inclusion, Digital Society.

Introduction



In recent years, the use of cash has declined dramatically as more and more people turn to digital forms of payment, like debit & credit cards, mobile payments, and online banking. The rise of cashless payment systems has transformed the way we conduct financial transactions. With the tap of a card or the click of a button, we can now make purchases, transfer funds, and pay bills without ever handling physical currency. This shift towards a cashless and digital society has brought with it a range of benefits, including increased convenience, efficiency, and security. However, it has also raised concerns about the potential risks and drawbacks of relying on electronic forms of payment, such as the loss of privacy for example, the reliance on digital payment systems can leave individuals

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vulnerable to cyber-attacks and data breaches. Additionally, the lack of physical cash can make it harder for individuals to protect their privacy and financial independence. Additionally, there are worries regarding the possible harm to small enterprises and the possibility of financial exclusion for people without access to electronic payment options.

As society continues to move towards a cashless and digital future, it is important to carefully consider the benefits and risks of this trend and find ways to balance them. We will also consider the potential implications for individuals, businesses, and society as a whole. This research paper aims to explore the various advantages and disadvantages of a cashless and digital society and to suggest strategies for mitigating the risks while maximizing the benefits. Through an analysis of current trends and research, this paper will provide a nuanced perspective on the pros and cons of cashless and digital payments and offer insights on how to strike a balance between the two.

Large-scale interbank transactions like Real-time Gross Settlement (RTGS) or National Electronic Funds Transfer were a part of digital payments in the beginning (NEFT). But at present, too many international key players came into existence such as Google pay, or amazon pay. Since 2015, Unified Payments Interface (UPI), India's mobile payment platform, experienced significant growth. Additionally, despite the COVID-19 epidemic in India, the volume of digital payment transactions is increasing. Some data on digital payments are collected as:

As compared to the last year 2021 UPI transactions volume and value increased by 99% and 90% respectively. In 2022, UPI clocked over 14.55 billion transactions in volume and 26.19 trillion in terms of value. The top UPI apps used in 2022 are PhonePe, Google Pay, Paytm Payments Bank App, Amazon Pay, etc. Credit cards volume and value are 2.02 billion and 8.77 trillion respectively. While Debit cards transaction volume is 942.7 million and value of 1.81 trillion. Debit cards are increasingly being utilised for smaller-ticket purchases while credit cards are increasingly being used for larger purchases made online. The majority of consumers choose value-added services like EMI or BNPL for high-value goods and services.

India outperformed China (15.7 billion real-time online transactions), the UK (2.8 billion), and the US (1.2 billion) by 25.5 billion real-time online transactions in the epidemic year of 2020. (<https://www.expresscomputer.in>) This is nearly about general trends of transactions moving from physical to digital. According to the latest data, the transaction of digital payments by volume in India in FY2019-20 was 4572Crore, in FY2020-21 it was 5554Crore and in FY2021-22 it was 8840Crore respectively. Further off 566 lakhs Crore has been done in FY 2022-23. (<https://www.livemint.com>)

Definition

A cashless society is one in which traditional forms of currency, such as coins and paper money, are largely replaced by electronic means of payment, such as credit and debit cards, electronic transfers, and mobile payments. In a digital society, electronic devices, such as computers and smartphones, are widely used to access and share information, communicate, and conduct transactions.

A cashless and digital society refers to a society in which most transactions and exchanges are conducted

electronically, without the use of physical currency, and in which digital devices and technologies play a central role in daily life. In such a society, individuals and businesses may use digital payment systems, such as mobile apps or online platforms, to make and receive payments, and may rely on digital technologies, such as the internet, to access and share information, communicate, and conduct a wide range of activities.

The transition to a cashless and digital society can offer many benefits, such as increased convenience, security, and efficiency, as well as the ability to track and analyze financial data. However, it can also raise concerns about privacy, security, and access to financial services for those who may not have access to digital currencies or who may prefer to use traditional forms of currency.

Digital currency, also known as virtual currency, digital money, or electronic currency, is a type of currency which is created and stored electronically and can be used to make online purchases or transfers. It is not a physical form of currency like coins or paper money, but rather exists in digital form and is typically stored in a digital wallet, a software program that allows individuals to make electronic transactions.

There are several different types of digital currencies, including:

Cryptocurrencies: These digital currencies are decentralised, are secured by encryption, and are not governed by a bank or other centralised body. A few examples include Litecoin, Ethereum, and Bitcoin.

Central bank digital currencies (CBDCs): These are electronic analogues of traditional fiat currencies that are issued and supported by central banks, such as the US dollar or the euro.

Stablecoins: These are digital currencies that are pegged to a stable asset, like a traditional fiat currency or a commodity, in order to reduce price volatility.

Digital currencies can be used to make purchases, pay for services, or transfer funds to other individuals or businesses. Some digital currencies, such as cryptocurrencies, have gained widespread popularity and are widely accepted as a form of payment by merchants and consumers. Others, such as CBDCs, are still in development or being tested by central banks.

Literature review

The impact on taxes will be adverse due to the compression in demand, according to *Jain (2017)* in her article "*Making towards a cashless economy: problems and prospects for India.*" As more people want to convert their cash balance into such metal, the demand for luxury goods and gold will rise. She said that not only local investors but also their international counterparts have been impacted by the trust collapse.

According to *Jain (2006)*, e-payments would reduce black money in his paper "*E-Payment and E-Banking.*" The use of resources by banks, NBFCs, and regular Indian residents will be maximised thanks to technology's advantages in terms of speedy, safe, and secure payments and remittances.

In his article "*Credit Cards - Modern Payment System,*" *Vincent (2005)* examined the usage and settlement of credit cards in India and came to the conclusion that both merchants and customers benefited from them.

Shendge (2017) discusses the consequences and

significance of cashless transactions in India in their paper "Impact and importance of cashless transaction in India" and examined using a descriptive technique. For promoting the notion of a cashless economy, they claimed that financial security across digital payment channels is crucial.

Demonetization, according to Balaji & Balaji (2017) in their work "A research on demonetization and its influence on cashless transaction," does more than just make transactions more comfortable; it also reduces the flow of unreported money. He addressed the demonization in numerous nations, including Pakistan, Ghana, Nigeria, Australia, Myanmar, and the Soviet Union.

In his article titled "The Critical Analysis of Cashless Transactions," Chaudhari (2017) claimed that because internet access is necessary for cashless transactions, the government has to look at internet infrastructure. Local markets should be equipped with free Wi-Fi areas, and all major banks need to have a dedicated counter where customers may get help with cashless transactions. He stated that additional fees for cashless transactions must end. To teach the general public about the benefits of switching to cashless transactions, the government must formally reveal all facts on demonetization. He carried out a Primary survey and covered the topic of technological anxiety in a cashless transaction. He employed a variety of analytical methods, including the percentage method, chi-square test, Kolmogorov-Smirnov test, and ANOVA test. He analyzed the demographic profile of respondents used in the research.

In his study "Moving from Cash to Cashless: Challenges and Opportunities for India," Mukhopadhyay (2014) performed a thorough household survey encompassing 3066 households across 8 cities (4 metros). He made an effort to pinpoint the obstacles preventing households from making non-cash payments. His research indicates that 1.38% of total household costs (2.92% in urban areas and 0.55% in rural areas) are made using non-cash instruments. Approximately 7% of families (12% in urban areas and 3% in rural areas) do one or more transactions without using cash. In metropolitan India, almost 80% of families only do one cashless transaction per item. He said that the main barrier to cashless payments is the supply-side limitation, or the seller's refusal to accept such payments. He created a forecasting model for cashless transactions. In order to understand what causes a household to become cashless (in terms of socioeconomics, payment frequency, and network impact), he utilised logistic regression to determine the components that explain the "felt restrictions" by the households.

The cashless society, where difficult-to-handle points and notes are replaced by effective electronic payments initiated by various sorts of plastic cards, is a boom for the 21st century, according to Worthington (1995) study, "THE CASHLESS SOCIETY." If the cashless society comes to be, certain interested groups stand to benefit more than others. The report explains the justification for those who are eager to promote a cashless society as well as the ramifications for marketers tasked with persuading consumers to accept payment by plastic cards. The analysis of the plastic card payment product is divided into three categories: pay later, pay now, and pay before. A prediction is made regarding the potential of each category of plastic cards to advance the development of a financial system and cashless

society in the future.

In their research paper "Plastic money: The road to a cashless society," Bansi Patel and Urvi Amin (2012) discussed how plastic money has become a necessary component of all transactions today, making life easier and better for everyone. With the use of plastic money, it is also possible to control money laundering and to use the financial system effectively, which is also beneficial for tax compliance.

According to Mandeep Kaur and Kamaldeep Kaur (2008) study, "Development of Plastic Cards Market: Past, Present, and Future Scenarios in Indian Banks," banks in India actively embraced plastic money in the 1990s. But when it was first introduced, it wasn't particularly well-liked by Indian customers. The important changes in consumer preference were brought about by changes in the demographic characteristics of consumers, such as their income, marital status, level of education, etc., as well as the advancement of technology and public knowledge of it.

History of Cashless Society



The history of cashless payment systems can be traced back to ancient civilizations, where people used a variety of methods to exchange goods and services, such as bartering, where people traded goods or services directly without the use of currency.

As civilizations developed, they began to use various forms of currency, such as coins made of precious metals or paper money, to facilitate trade and commerce. The use of currency made it easier to exchange goods and services and helped to standardize the value of different items.

In the 20th century, electronic payment systems, such as credit and debit cards, were introduced, which allowed people to make payments using plastic cards that were linked to their bank accounts. The widespread adoption of the internet and mobile technologies in the late 20th and early 21st centuries have also facilitated the growth of digital and cashless payment systems, such as online banking and mobile payments. The first electronic payment systems, such as credit and debit cards, were introduced in the 1950s and 60s, and have become increasingly prevalent in the decades since. The widespread adoption of the internet and mobile technologies in the late 20th and early 21st centuries have also facilitated the growth of digital and cashless payment systems, such as online banking and mobile payments.

In recent years, the COVID-19 pandemic has accelerated the shift towards a cashless society in many countries, as governments and businesses have encouraged the use of contactless payment methods to reduce the risk of

transmission of the virus. In addition, the increasing popularity of cryptocurrencies, such as Bitcoin, has brought attention to the concept of a decentralized, digital currency system.

Background of digital currency

The concept of digital currency dates back to the 1990s, when attempts were made to create digital versions of traditional fiat currencies, such as the US dollar, that could be used for online transactions. These early forms of digital currency were not widely adopted, however, due to concerns about security and the lack of a regulatory framework. In economic terms, the *electric money* is the monetary value provided by the issuer on demand, expressed in government or private monetary units stored in electronic form on an electronic device.

Types of digital currency

- Centralized currency
- Decentralized currency

Centralized currency- Centralized currency is a type of currency that is issued and controlled by a central authority, such as a government or a central bank. In most countries, the main form of centralized currency is traditional fiat currency, such as the US dollar or the euro, which is issued and backed by a central bank.



Centralized currencies are typically issued and regulated by a single entity, which has the authority to create new units of the currency, set monetary policy, and oversee the circulation and use of the currency. Centralized currencies are typically based on a hierarchical structure, in which the central authority has ultimate control over the currency and the financial system.

Many platforms, like *PayPal, eCash, WebMoney, Payoneer, cashU, and Hub Culture's Ven*, offer digital money to end users directly. Other systems restrict sales to digital currency exchanges operated by outside parties. (<https://www.slideshare.net/ClintonDsouza5/electronic-money-emony-security>)



Decentralized currency- Decentralized currency, on the other hand, is a type of currency that is not issued or controlled by any central authority. Decentralized currencies, such as cryptocurrencies, are based on a

distributed ledger technology, such as blockchain, and are created and transferred through a process called mining, in which powerful computers solve complex mathematical problems to validate transactions and add them to the ledger.

Decentralized currencies are designed to be decentralized, meaning they are not controlled by any central authority and are instead governed by a network of users who validate transactions and maintain the ledger. This decentralized structure allows decentralized currencies to operate without the need for a central authority, but it also means that they are not backed by any specific asset or institution and may be subject to significant price volatility. In other words, decentralized electronic cash is maintained and transferred over a peer-to-peer computer network that connects users directly, much like a chat room. The network is not in the hands of one user. *Bitcoin, Litecoin, Ripple, Monetary System, Monero, Dogecoin, Nxt*, are some examples.

What is CBDC?

- A central bank digital currency (CBDC) is a digital version of a traditional fiat currency, such as the US dollar or the euro, that is issued and backed by a central bank. CBDCs are designed to be used as an alternative to cash, and may be used for a variety of purposes, including making payments, storing value, and conducting financial transactions.
- CBDCs are issued and regulated by a central bank, which has the authority to create new units of the currency, set monetary policy, and oversee the circulation and use of the currency. Like traditional fiat currencies, CBDCs are typically based on a centralized structure, in which the central bank has ultimate control over the currency and the financial system.
- CBDCs differ from cryptocurrencies, such as Bitcoin, in that they are issued and backed by a central authority and are subject to regulatory oversight. They also differ from traditional fiat currencies in that they exist in digital form and can be stored and transferred electronically, rather than being physical forms of currency like coins or paper money.
- CBDCs are still in the early stages of development and are being tested or considered by a number of central banks around the world. The use of CBDCs is not yet universal, and their regulation and oversight vary widely from one country to another. (<https://www.bis.org/about/bisih/topics/cbdc.htm>)



“Central banks are exploring DLT (Distributed Ledger Technology) for application in improving financial market infrastructure and considering it as a potential technological solution in implementing central bank digital

currency (CBDC).” —Reserve Bank of India

Typical features for CBDC-

- Central Bank Digital Currency (CBDC) will serve as official currency.
- CBDC must be used in addition to cash and is not meant to be a cash substitute.
- All sizes of businesses and the government must accept CBDC as a form of payment.
- Customers must be able to own and use CBDC without having to have a bank account.
- Must not create the possibility of disrupting the financial sector and the systems that implement

decisions about its supply and movement.

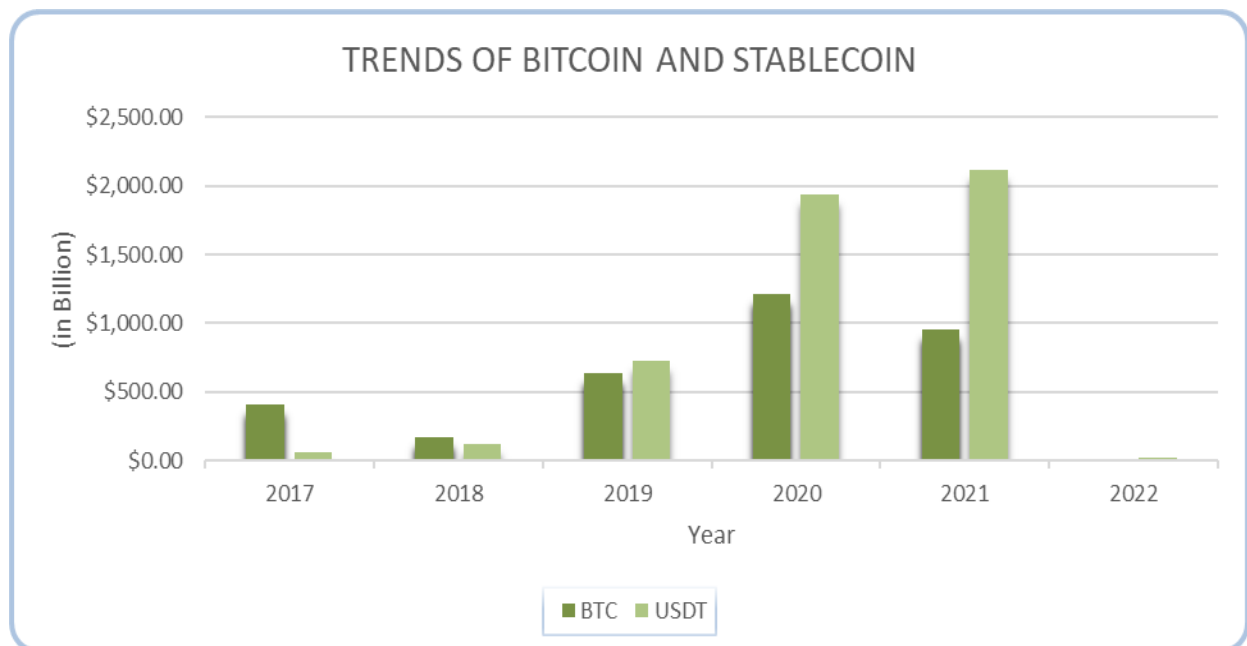
- Channels for obtaining or returning CBDC in exchange for cash and commercial bank money must be made available to consumers and enterprises.
- Without clearing and settlement in today's terminology, it must enable rapid peer-to-peer value transfers. CBDCs may also be traceable and auditable in terms of issuance and ownership.

Difference between CBDC, Bitcoin, and Stablecoin

CBDCs, Bitcoin, and stablecoins are all types of digital currencies, but they differ in a number of ways:

Bitcoin	CBDC	Stablecoin
This is a decentralized cryptocurrency, meaning it is not controlled by any central authority, such as a government or bank. It is based on a distributed ledger technology called blockchain and is created and transferred through a process named mining, in which powerful computers solve complex mathematical problems for validation of transactions and add them to the ledger. Bitcoin is not backed by any specific asset or institution and its value is determined by supply and demand on exchanges	These are digital versions of traditional fiat currencies, like the US dollar or the euro, that are issued and backed by a central bank. CBDCs are issued and regulated by a central bank, which has the authority to create new units of the currency, set monetary policy, and oversee the circulation and use of the currency. Like traditional fiat currencies, CBDCs are typically based on a centralized structure, in which the central bank has ultimate control over the currency and the financial system.	These are digital currencies that are pegged to a stable asset, like a traditional fiat currency or a commodity, in order to reduce price volatility. Stablecoins are designed to maintain a stable value and may be used as a store of value or as a means of exchange in situations where the value of other cryptocurrencies may be too volatile. There are different types of stablecoins, including those that are backed by physical assets, such as gold or real estate, and those that are backed by other cryptocurrencies or fiat currencies.

Trends of Bitcoin and Stablecoin (BTC vs USDC)		
Year	BTC(Billion)	USDT(Billion)
2017	\$410.00	\$62.00
2018	\$168.00	\$122.00
2019	\$633.00	\$728.00
2020	\$1,212.00	\$1,938.00
2021	\$957.00	\$2,119.00
2022	\$14.00	\$17.00



Source: finance.yahoo.com

Benefits / advantages of being fully cashless and digital

Being fully cashless and digital has many benefits for both individuals and society as a whole. According to a study conducted by Mastercard going cashless can lead to a 2%

increase in GDP for developed countries, and a 1.7% increase for developing countries. This is due to the increased efficiency and convenience of digital payments, which can lead to more economic activity and growth. One

of the main benefits of going cashless is the convenience it provides. With digital payment methods such as debit or credit cards, or mobile payment apps, there is no need to carry physical cash or visit an ATM, which can save time and effort. This is especially beneficial for those who do not live near an ATM or who prefer to avoid carrying large amounts of cash. According to a survey conducted by Visa (<https://www.visa.co.uk/about-visa/media-centre/press-releases/2020/06/new-research-reveals-the-uk-is-going-cashless-at-record-speed.html>), 75% of consumers in the UK say that the ability to pay with their phone or card has made their lives easier. In the US, a study by the National Retail Federation (<https://nrf.com/media/press-releases/digital-payment-adoption-grows-but-cash-still-king>) found that 63% of consumers prefer to use digital payment methods for at least some of their transactions. In India, the adoption of digital payment methods has skyrocketed in recent years, with the number of digital transactions increasing by over 500% in the past year. In addition to convenience, digital payments are often faster than cash transactions. There is no need to count or exchange money, which can speed up transactions and reduce waiting times in busy stores or restaurants. A study by the Bank of Canada (<https://www.bankofcanada.ca/2019/07/using-digital-payment-systems-can-reduce-transaction-times-by-up-to-20-per-cent-new-research-finds/>) found that using digital payment methods can reduce transaction times by up to 20%. Digital payments are also generally more secure than cash, as they can be easily traced and cancelled if lost or stolen. This can help to reduce the risk of fraud and protect consumers from financial loss. Going fully cashless and digital can also have environmental benefits. Physical currency requires paper and metal to produce, which may have a negative impact on the environment. By using digital payment methods instead, we can help to reduce the demand for physical currency and the resources needed to produce it. In the UK, going cashless could reduce carbon emissions by up to 16 million tons, according to a study by the Bank of England. Overall, the benefits of being fully cashless and digital are clear. From increased efficiency and convenience to greater security and environmental benefits, going cashless and digital can provide many

Drawbacks / Disadvantages of being fully cashless and digital


While there are many benefits to being fully cashless and digital, there are also some potential risks to consider. One of the main risks is the potential for cyber-attacks or data breaches. As more and more of our financial transactions






are conducted online, the risk of unauthorized access to our personal and financial information increases. Hackers can potentially gain access to our payment details, bank accounts, and other sensitive information, leading to financial loss or identity theft. In the US, the number of data breaches rose by 11% in 2020 (<https://www.pwc.com/us/en/press-releases/2021/pwc-data-breach-investigations-report.html>). In India, there were over 50,000 cyber-attacks reported in 2020 (<https://www.cnbctv18.com/tech/cyber-attacks-in-india-surge-50k-attacks-reported-in-2020-8380661.htm>). In the UK, cyber-attacks rose by 60% in 2020. Another risk of going fully cashless and digital is the potential for service disruptions. If the systems that support digital payments, such as banks or payment processing networks, experience outages or technical issues, it can be difficult or impossible to make or receive payments. This can be a major inconvenience for both individuals and businesses and can lead to financial losses if transactions are not completed. In the US, a power outage at a payment processing center in 2020 led to widespread disruptions and delays in transactions. In India, a technical glitch at a bank caused widespread disruption in 2020 (<https://www.thehindu.com/business/a-day-of-unprecedented-chaos-for-indias-banking-system/article31312504.ece>).

Finally, there is also the risk of being left behind if you do not embrace a cashless and digital lifestyle. As more and more people and businesses adopt digital payment methods, those who do not may find it harder to participate in the economy and access certain goods and services. This can be especially problematic for those who do not have access to the necessary technology or who prefer to use cash for personal or cultural reasons. In the UK, a study by the Bank of England (<https://www.bankofengland.co.uk/-/media/boe/files/report/2017/going-cashless.pdf>) found that older and lower-income individuals were more likely to be reliant on cash. Overall, while being fully cashless and digital can provide many benefits, it is important to be aware of the potential risks and take steps to protect yourself and your financial information


Types of scams and problems regarding cashless and digital society





There are a variety of scams and problems that can arise in a cashless and digital society. Here are some examples with recommended solutions.

S.No	Scams/Problem	Explanation	Example	Recommended Solution
1	Phishing scams 	These are scams in which criminals send fake emails or texts, or create fake websites, in order to trick people into giving them sensitive information such as login credentials or financial information.	if you receive an email claiming to be from your bank, do not click on any links in the email. Instead, open a new web browser and go directly to your bank's website to log in.	To protect yourself from phishing scams, do not click on links in emails or texts from unfamiliar sources, and be sure to verify the authenticity of websites before entering sensitive information.
2	Malware scams	These are scams in which criminals use malware to gain access to your device and steal sensitive information.	if you receive an email with an attachment from an unfamiliar source, do not download the	To protect yourself from malware scams, use antivirus software and keep it up to date, avoid

			attachment.	downloading files from unfamiliar sources, and be cautious when visiting unfamiliar websites.
3	<p>Ponzi/pyramid schemes</p> 	These are scams in which earlier investors are paid returns with the investments of later investors, rather than from profit earned. Eventually, the scheme collapses because there are not enough new investors to support the returns promised to earlier investors.	if someone approaches you with an opportunity to invest in a company that promises unreasonably high returns, be skeptical and do your own research to verify the legitimacy of the company.	To protect yourself from Ponzi/pyramid schemes, be wary of any investment opportunity that seems too good to be true and do your own research before investing.
4	<p>Charity scams</p> 	These are scams in which criminals pretend to be charitable organizations in order to solicit donations, but then keep the donations for themselves instead of using them for charitable purposes.	if you are considering donating to a charity, do an online search for the charity's name along with the word "scam" to see if there have been any reports of fraudulent activity.	To protect yourself from charity scams, research the organization before donating, and be wary of charities that do not provide detailed information about their work and how donations will be used.
5	<p>Imposter scams</p> 	These are scams in which criminals pretend to be a known and trusted individual or organization in order to trick people into giving them sensitive information or money.	If you receive a phone call or email from someone claiming to be a government official, a representative of your bank, or a member.	To protect yourself from imposter scams, do not give out sensitive information or money to anyone you do not know, even if they claim to be a trusted individual or organization.
6	<p>Lottery scams</p> 	These are scams in which criminals pretend to be representatives of a lottery and tell potential victims that they have won a large prize but must pay a fee in order to claim the prize.	If you receive a notification that you have won a lottery that you did not enter, it is likely a scam.	To protect yourself from lottery scams, remember that you cannot win a legitimate lottery if you did not enter it.

• Other problems with their recommended solution.

S.No	Scams/Problems	Explanation	Recommended Solution
1	<p>Credit card fraud</p> 	Criminals can access credit card information and use it to make unauthorized purchases or sell the information to others. This involves the use of fake card readers or ATMs to steal credit or debit card information.	Use secure websites when making online purchases and consider using a credit card with added security features such as <i>two-factor authentication</i> .
2	Identity theft	Personal data, including Social	Protect your personal information by shredding

		Security numbers, can be stolen by criminals and used to create credit accounts or carry out other offences in the victim's identity.	documents with sensitive information, <i>using strong passwords</i> , and being cautious when sharing personal information online or over the phone.
3	<p>Cybersecurity breaches</p> 	Hackers can gain access to computer systems and steal sensitive data, such as financial information or personal records.	Use strong passwords, keep software and security systems up to date, and be cautious when clicking on links or downloading attachments from unfamiliar sources.
4	<p>Economic inequality</p>	Some people may not have access to electronic forms of payment or may not be comfortable using them, which can lead to economic inequality.	Governments and businesses can work to provide education and support to help people access and use electronic payment systems.
5	<p>Mobile payment scams</p> 	These involve the use of fake mobile payment apps or websites to steal payment information or money from users.	Use trusted payment apps such as those offered by major banks or well-known companies and check the app's security measures such as encryption and secure login procedures. Regularly monitor your accounts and transaction history to ensure that there are no unauthorized charges or activity.
6	<p>Investment scams</p> 	These involve the use of fake investment opportunities to trick people into giving away their money.	Before investing in any opportunity, it is important to thoroughly research the company or individual offering the investment. This may include verifying their credentials and checking for any red flags, such as a lack of transparency or unrealistic returns. Or Seek advice from a financial advisor. There is always a risk of losing money when investing so Don't invest more than you can afford to lose.
7	<p>Online auction scams</p>	These involve the use of fake online auctions or websites to sell non-existent or defective products.	It is important to use reputable and trusted online auction sites, such as eBay or Amazon. Before bidding on an item, research the seller, carefully review the item description, use a secure payment method, and be cautious when <u>paying in advance</u> .
8	<p>Payment redirect scams</p>	These involve the use of fake payment pages or links to redirect users to a different site where their payment information can be stolen.	Use trusted websites, such as a padlock icon in the address bar or a URL that begins with "https://", check the website's security measures, such as encryption and secure login procedures, use a secure browser, such as Chrome or Firefox, to help protect against payment redirect scams and monitor your accounts regularly.
9	<p>Payment gateway scams</p> 	These involve the use of fake payment gateways to intercept payment information during the transaction process.	Keep your software and security protocols up to date, make sure to use a secure connection, such as an SSL or TLS connection, and use a strong password. Report any suspicious activity to the appropriate authorities, such as the Federal Trade Commission (FTC) or the Financial Industry Regulatory Authority (FINRA).

(<https://www.consumer.ftc.gov/articles/0076-lottery-scams>)



The impact of a cashless and digital society on financial inclusion and economic inequality.

The transition to a cashless and digital society can have significant impacts on financial inclusion and economic inequality. Here are some of the potential effects:

Positive impacts on financial inclusion:

Digital payment systems can make it smoother for individuals to obtain financial services, even if they have no bank account or are in a remote location. By giving consumers a method to save, borrow, and make payments electronically, mobile banking and digital payment systems. For example, The World Bank estimates that from 2% in 2010 to 89% in 2017, the proportion of adults in Kenya using mobile money accounts rose. <https://data.worldbank.org/indicator/FX.OWN.TOTL.MA.ZS>

Due to the fact that users of digital payment systems do not have to pay for transportation to banks or other financial institutions, they can also lower the cost of obtaining financial services. People with modest incomes or those who live in remote regions may particularly benefit from this. For example, research carried out in India discovered that the adoption of digital payment systems lowered the cost of accessing financial services for those with low incomes, since they were able to complete transactions from the comfort of their homes.

A cashless society can improve financial inclusion by facilitating participation in the formal economy. Unofficially, outside of the official financial system, a sizeable portion of economic activity occurs in many nations. By using digital payment systems, people can more easily engage in formal economic activity, which can make it easier for them to access credit and other financial services.

Negative impacts on financial inclusion:

Digital payment methods may be challenging for some people, especially the elderly or those with impairments, which may restrict their access to financial services. For instance, UK research indicated that older persons were more likely to utilise cash for their financial transactions and were less likely to use digital payment methods. Digital payment systems could raise privacy and security issues, which would deter some users from utilising them. People could be concerned about the possibility of fraud or the theft of their personal information, for instance. In some instances, the shift to a cashless society may be followed by a drop in the supply of currency, which might make it harder for people to participate in the economy who prefer to use cash or do not have access to digital payment

methods. For example, there have been worries about the effects on vulnerable people, such as the elderly or those with disabilities, who may not be able to utilise digital payment systems, in Sweden, which is frequently mentioned as a leader in the transition to a cashless society. (<https://www.bbc.com/news/business-47338932>)

Impacts on economic inequality:

By facilitating people's participation in the formal economy and access to financial services, a cashless society may help to eliminate economic inequality. For example, as was already said, digital payment systems can make it simpler for people to engage in formal economic activity and obtain credit, which can contribute to their ability to earn more money and accumulate wealth. However, there is also the possibility that a cashless society could exacerbate economic inequality if certain groups are disproportionately excluded from participating in the digital economy. For example, if people living in rural areas or low-income individuals do not have access to technology or do not have the necessary skills to use digital payment systems, they may be left behind as the economy becomes increasingly digital.

There is also the risk that the transition to a cashless society could lead to a concentration of power among a few large technology companies, which could further contribute to economic inequality. For example, if a small number of companies dominate the digital payment market, they may be able to charge high fees or set unfavorable terms for users, which could disproportionately impact low-income individuals or small businesses. In summary, the shift to a cashless and digital society has the potential to broaden financial inclusion and lessen economic inequality. However, it is crucial to carefully consider the potential negative impacts and ensure that everyone has the opportunity to participate in the digital economy.

The potential for rural and urban societal inequality in a cashless and digital society.

Here are 10 potential ways in which a cashless and digital society could lead to increased societal inequality between rural and urban areas:

- Digital divide:** In comparison to people who live in rural regions, individuals who live in metropolitan areas may have more access to and usage of technology, particularly digital payment methods. This may be caused by a number of things, including as disparities in infrastructure, educational attainment, and income.
- Decline in access to cash:** A cashless society could lead to a decline in the availability of cash, which could disproportionately affect people living in rural areas.
- Economic disruption:** Economic instability may result from the shift to a cashless society because firms and people who are unable to adjust to the new digital systems risk being left behind.
- Loss of small businesses:** As many small companies in rural regions would not be able to adapt to the new system, the move to a digital payment system could result in a reduction in the number of small enterprises there. (Source:

<https://www.sciencedirect.com/science/article/pii/S0047272719300632>)

5. **Limited access to financial services:** Rural residents can have less access to financial institutions like banks and credit unions, which could make it more challenging for them to engage in the digital economy.
6. **Lack of digital literacy:** Some people living in rural areas may not have the necessary skills or knowledge to use digital payment systems, which could limit their access to financial services.
7. **Lack of infrastructure:** Rural areas may have limited infrastructure, such as internet connectivity or electricity, which could make it more difficult for people in these areas to use digital payment systems.
8. **Limited competition:** A small number of companies may dominate the digital payment market in rural areas, which could lead to high fees or unfavorable terms for users.
9. **Privacy concerns:** People living in rural areas may have concerns about the security and privacy of digital payment systems, which could discourage them from using these systems.
10. **Preference for cash:** Some people living in rural areas may prefer to use cash for their financial transactions, and may not want to switch to digital payment systems.

Equilibrium of rewards and risk of cashless and digital society.

Here are some specific ideas for balancing the benefits and risks of a cashless and digital society, along with relevant sources:

1. **Implement strong cybersecurity measures:** To reduce the risk of cyber-attacks and protect sensitive financial information, it is important to implement strong cybersecurity measures such as encryption, firewalls, and secure servers. This can entail security measures like two-factor authentication, which asks users for something extra in addition to their login credentials.
(<https://www.consumer.ftc.gov/articles/0497-securing-your-wireless-network>).
2. **Develop contingency plans:** In case of technical failures or power outages, it is important to have contingency plans in place to ensure that individuals can still access the financial system and make necessary transactions. This could include measures such as backup power generators and redundant servers
(<https://www.pcworld.com/article/3124170/how-to-prepare-for-a-power-outage.html>).
3. **Protect privacy:** To balance the benefits of digital transactions with privacy concerns, it is important to implement measures to protect personal financial information and prevent its misuse. This could include measures such as data protection laws, privacy policies, and opt-in/opt-out options for the collection and use of personal data. It could also include measures such as anonymized transactions, which do not link a specific transaction to an individual.
4. **Ensure financial inclusion:** To ensure that all individuals can participate in the financial system, it is important to provide access to technology and digital financial services to underserved populations, like the elderly or those living in rural areas. This could include measures such as providing access to

computers and the internet in public libraries or partnering with community organizations to provide training and support for individuals who are not familiar with technology.

5. **Maintain cash options:** While transitioning to a cashless society, it is important to maintain options for individuals who prefer to use cash or who may not have access to digital financial services. This could include maintaining a network of ATMs and other cash distribution points, or allowing individuals to make transactions using cash or check at certain locations.
6. **Foster education and awareness:** To maximize the benefits and minimize the risks of a cashless society, it is important to educate individuals about how to use digital financial services safely and securely, and to raise awareness about potential risks such as scams and cyber-attacks. This could include measures such as public awareness campaigns, educational materials, and training programs
(<https://www.consumer.ftc.gov/topics/online-security>).

Role of government and policy maker in shaping a cashless and digital society

The Indian government has taken several steps to promote a cashless and digital society in India. Some of these steps include:

1. **Launching (UPI) The Unified Payment Interface and (BHIM) Bharat Interface for Money app:** The UPI is a real-time payment system that allows individuals to transfer money between bank accounts instantly. The BHIM app is a digital payment app that allows individuals to make payments using UPI. These platforms have made it easier for individuals to make digital payments and have contributed to the shift towards a cashless society.
2. **Promoting the use of debit and credit cards:** The Indian government has also encouraged the use of debit and credit cards by offering various incentives to individuals and merchants. For example, in 2017, the government launched the "Promotion of Digital Payment" scheme, which provided a discount of 0.75% on the value of the transaction to individuals who used debit or credit cards for fuel purchases. This has helped increase the adoption of digital payments in India.
3. **Promoting digital literacy:** In order to promote a cashless and digital society, the Indian government has also focused on increasing digital literacy among individuals. This has been achieved through initiatives such as the Digital Saksharata Abhiyan, which aims to increase the digital literacy of individuals in rural areas.
4. **Encouraging the use of e-wallets:** The Indian government has also encouraged the use of e-wallets, which are digital platforms that allow individuals to store money electronically and make payments online. In 2017, the government launched the "Promotion of Digital Payment" scheme, which provided a discount of 0.5% on the value of the transaction to individuals who used e-wallets for fuel purchases. This has helped increase the adoption of e-wallets in India.
5. **Jan Dhan Yojana:** The Pradhan Mantri Jan Dhan Yojana (PMJDY) is a financial inclusion scheme launched by the Indian government in 2014. It aims to give access to financial services, including bank

accounts and insurance, to all households in India. As part of the scheme, the government has also provided incentives to individuals to open bank accounts and use digital payment platforms. This has helped increase the adoption of digital payments among underserved and unbanked populations in India.



6. **Digital India:** Launched in 2015, the Digital India initiative is a flagship program of the Indian government with the mission of transforming India into a knowledge-based economy and digitally enabled society. As part of the initiative, the government has taken several steps to promote the use of digital payments, including providing training and awareness programs on digital literacy and encouraging the use of digital platforms for government transactions.
7. **Promotion of Digital Payment:** Launched in 2017, the "Promotion of Digital Payment" scheme is an initiative of the Indian government that aims to promote the use of digital payments in India. As part of the scheme, the government has provided incentives to individuals and merchants who use digital payment platforms, including discounts on the value of transactions.
8. **Merchant Discount Rate:** The "Merchant Discount Rate" (MDR) scheme is an initiative launched by the Indian government in 2017 to encourage merchants to adopt digital payment platforms. As part of the scheme, the government provides a discount of 0.5% on the value of transactions to merchants who accept digital payments.
9. **Implementing the Goods and Services Tax (GST):** The GST is a comprehensive indirect tax levied on the supply of goods and services in India. As part of the GST, the government has mandated the use of digital payment platforms for certain transactions, including the payment of taxes. This has helped increase the adoption of digital payments in India.

Overall, the Indian government has taken several steps to promote a cashless and digital society in India, and these efforts have contributed to the increased adoption of digital payments in the country.

Future prospects and challenges of a cashless and digital society

There are a number of potential benefits to a cashless and digital society in the future. Some of these benefits include:

1. **Increased efficiency:** Digital payment systems can be faster and more efficient than traditional payment methods, such as cash or checks. This can save time and effort for individuals and businesses and make it easier for them to access financial services.
2. **Convenience:** Digital payment systems can also be more convenient than traditional payment methods. For example, individuals can make payments from

anywhere with an internet connection, and they can do so at any time of day. This can be particularly useful for individuals who live in rural or remote areas, or for those who have busy schedules.

3. **Financial inclusion:** A cashless and digital society can also help increase financial inclusion, as it can make it easier for underserved and unbanked populations to access financial services. This can help improve their financial stability and overall well-being.
4. **Economic growth:** A cashless and digital society can also contribute to economic growth, as it can make it easier for individuals and businesses to engage in financial transactions. This can lead to increased economic activity, which can in turn drive economic growth.
5. **Reduced crime:** A shift towards a cashless and digital society could also help reduce crime, as it would make it more difficult for individuals to engage in illegal activities like, money laundering or tax evasion.
6. Overall, while there are certainly challenges to be addressed in order to fully realize the benefits of a cashless and digital society, there is also a great deal of potential for positive impact in the future.

Conclusion

In conclusion, a cashless and digital society has the potential to bring significant benefits, such as increased efficiency and convenience, lower transaction costs, and reduced opportunities for crime. However, it also carries certain risks, such as the potential for financial exclusion, data breaches and cyber-attacks, and the loss of privacy. To maximize the benefits and minimize the risks, it is important for governments and other stakeholders to carefully consider the potential consequences of a cashless society and to implement appropriate measures to address these issues. This may include measures such as promoting financial literacy, providing access to digital financial services for underserved populations, and strengthening cybersecurity and data protection. Ultimately, the decision to move towards a cashless society should be based on a careful balance of the benefits and risks, with a view to maximizing the overall well-being of society.

Additionally, it is important to recognize that the transition to a cashless society may not be an easy or straightforward process, and it is likely to have different impacts on different segments of the population. For example, older individuals or those who are not comfortable with technology may face challenges in adapting to a cashless society. It will be important for policy makers to take these potential impacts into account and to consider ways to mitigate any negative effects.

Overall, a cashless and digital society has the potential to bring many benefits, but it is important to carefully consider the potential risks and to take steps to address them. By taking a balanced and nuanced approach, it may be possible to harness the potential of a cashless society while minimizing potential negative impacts.

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