

A REVIEW OF MONETARY DETERMINANTS OF CRYPTOCURRENCY ADOPTION IN ISLAMIC FINANCIAL SYSTEM

AFDZAAL JEHABAR SADIQ¹, MOHAMED ASLAM AKBAR²

^{1,2} Department of Economics, International Islamic University Malaysia

*Corresponding author: aslamakbar@iium.edu.my

ABSTRACT: This paper discusses the money and financial system from both the conventional and Islamic points of view. To further elucidate this topic, some aspects of the conventional financial system are discussed on the applicability from an Islamic perspective. First, the advancements of technology that had led to the invention of cryptocurrency and how the Islamic financial system can evaluate the determinants of the adoption of such cryptocurrencies were reviewed. Second, the use of digital wallet and how it is encouraged by the government to increase transparency in the financial system and finally, the applicability of a dual-currency model, which covers the idea of revitalizing the dinar and the dirham as well as the implementation of a dual-currency regime in a nation and how it benefits the economy and prevents the failures of the financial system are discussed along the way. The paper reviews scholarly work conducted by both contemporary conventional and Islamic economic scholars. In addition to that, this paper incorporates the views from the classical Islamic scholars such as al-Ghazali, as well as reviewing the money, banking, and financial systems that were conducted during the early Islamic reign, which would be deemed helpful in formulating an Islamic monetary system that could be pre-eminent in today's world.

KEYWORDS: *Dinar, Dirham, Cryptocurrency, Monetary Analysis, Financial System*

1. INTRODUCTION

The money and banking system in today's world is highly important in the economic development of a nation. As the contemporary global economy is intertwined with financial markets, it cannot be denied that the downfall of financial markets would lead to a collapse in the economy, as witnessed in the global financial crisis during the period of 2008 (Mishkin, 2019). Therefore, it is evident that the financial markets play an integral role in the economy, especially during conventional times. The demands for money, as categorized by the Keynesian economic school of thought, are the precautionary, transactional as well as speculative demand for money (Froyen, 2013). This would mean that people demand for money for unprecedented events, for daily transactions as well as due to the speculation of bond prices in the market, which would influence one's desire to hold money in exchange for bonds.

Money can be defined as a store of value, a medium of exchange, as well as a unit of account (McConnell et al., 2018; Nezhad, 2004; Sadr, 2016). It is without a

doubt that a more prominent function of money is as a medium of exchange. In ancient times, the most common medium of exchange was barter trading which had been proved to be inefficient (Oliver & Mpinganjira, 2011). Al-Ghazali had also pointed out the importance of money through his scholarly work, as he recognized the evolution of money as well as its functions. He indicated that there were problems with barter trading which are the indivisibility of goods, lack of a common denominator, as well as the double coincidence of wants. Al-Ghazali acknowledged that money had to evolve to serve the shortcomings of barter trading. This is due to the characteristics of money, which is a fundamental basis of trade and has its usefulness as well as the element of value in the exchange.

Money is an essential commodity that can be extended to the early Islamic era, which relied on the dinar and the dirham as a medium of exchange. As the pre-Islamic era was rich in trade, the need for money being a medium of exchange was a necessity (Sadr, 2016). Similar to the Keynesians' theory of money demand, in the early Islamic era, money would be held for trade, as well as stored for emergencies. The supply of money in the early Islamic economic system was perfectly elastic, which means that the only factor that would determine the equilibrium quantity of money would be the demand for money (Sadr, 2016). The dinar was based on gold, whereas the dirham was made from silver. The reliance on the dinar and dirham could be explained by the trading partners of the Arabic nation, Persia and Rome, which led to the adoption of the dinar and dirham in the Arabic region (Sadr, 2016). The reason for the adoption of the dinar and dirham was due to the small power of the Arabic nation during the early periods in comparison to the political powers of Persia and Rome. The adoption of the dinar and dirham would also enable the Arabic nations to conduct trade with their counterparts through a stable currency. As mentioned by Sadr (2016), the dinars were also exchanged with the dirhams on the basis of their gold or silver content.

According to Nezhad (2004), an issue that would arise from the implementation of the dinar and dirham would be to determine the authenticity of the gold content in the dinar. This would be highly relevant to combat fake currencies in circulation. Therefore, as mentioned by Sadr (2016), the *baitulmal* would play a vital role in ensuring the value of money as well as the purity of the dinar and dirham, which would include ensuring the material contents. Nezhad (2004) also mentioned that among the issues of having the dirham are its weight which would make it immobile as well as the absence of a proper minting technique. This would be among the issues that prove the dinar and dirham are outdated and would not be viable in today's era. In this scholarly study by Nezhad (2004), he portrayed that the dinar and dirham were experiencing a decreasing trend in terms of conversion due to non-economic activities. This would imply that even during the early era of Islam, inflations were prevalent, which had affected the foreign exchange rate between the dinar and dirham.

Thus, the paper reviews the monetary aspects in the economy, particularly the advancements of currency that had led to the existence of cryptocurrencies, such as bitcoin which is rising in popularity, as an accepted mode of payment. On a similar note, the ever-common encouragement of digital wallets by governments such as in Malaysia through incentives has led to questioning the implications and the reason behind such as encouragements towards the economy and its acceptability from an Islamic point of view. The paper also reviews the viability of

having a dual-currency regime in the economy with the revitalization of the dinar and dirham as well as the implementation of a dual-currency regime for the benefits of the economy and prevention of the failures of the financial system. Such innovations in the monetary system could benefit the development of an Islamic monetary system if such advancements align with the permissibility from an Islamic perspective. Even though there are loopholes in such innovations, further discussion will help the concept be altered to recreate an Islamic version that could be used to develop an Islamic financial system.

2. Monetary Analysis

2.1 The Advancement of Cryptocurrency

The dinar and dirham had phased off, leading to the acceptance of fiat currency. Concurrently, the evolution of technology has led to the creation of cryptocurrencies, such as bitcoin and e-wallets. Cryptocurrency can be defined as virtual or digital currency. Although many may view cryptocurrency as a form of investment, it also has a growing potential to be used as money to purchase goods and services. Like any other currency, cryptocurrency asserts the functions of money; a store of value, a medium of exchange, and a unit of account. As the nation is progressing forward, the acceptance of such currencies has been more prevalent, especially among the younger generations, due to convenience as well as efficiency. Instead of carrying fiat money, one can simply bring their smart devices as a platform to perform transactions with just a tap. In a scholarly study by Evan (2015), he stated that in past ages, commodities that are durable, fungible, portable, and scarce were used as money, such as the case of the dinar and dirham, which were gold and silver. He argued that fiat currency had not achieved that backing by commodities, unlike bitcoin (Evan, 2015).

The soundness of bitcoin can also be exhibited in Figure 1, which shows the strength of bitcoin in comparison to other currencies as of 2015. Figure 2, on the other hand, shows the surge of bitcoin and its value over the course of 5 years. Based on Figures 1 and 2, it is without a doubt that the value of bitcoin appreciates and highly in demand.

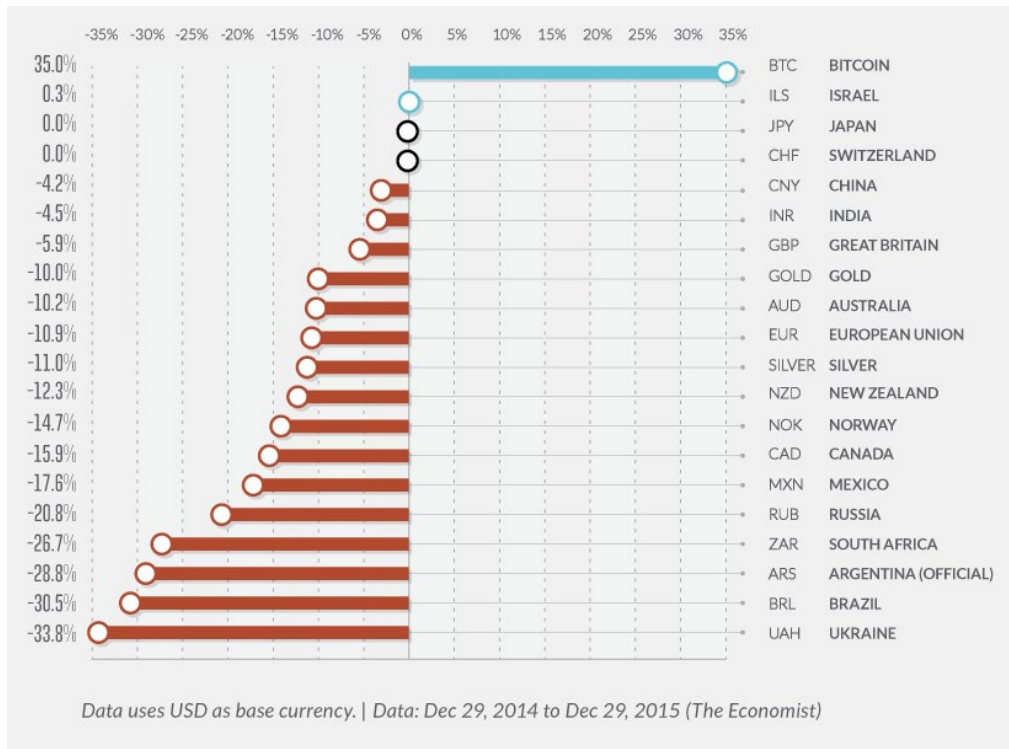


Figure 1: Best performing currencies as of 2015 (Desjardins, 2016)

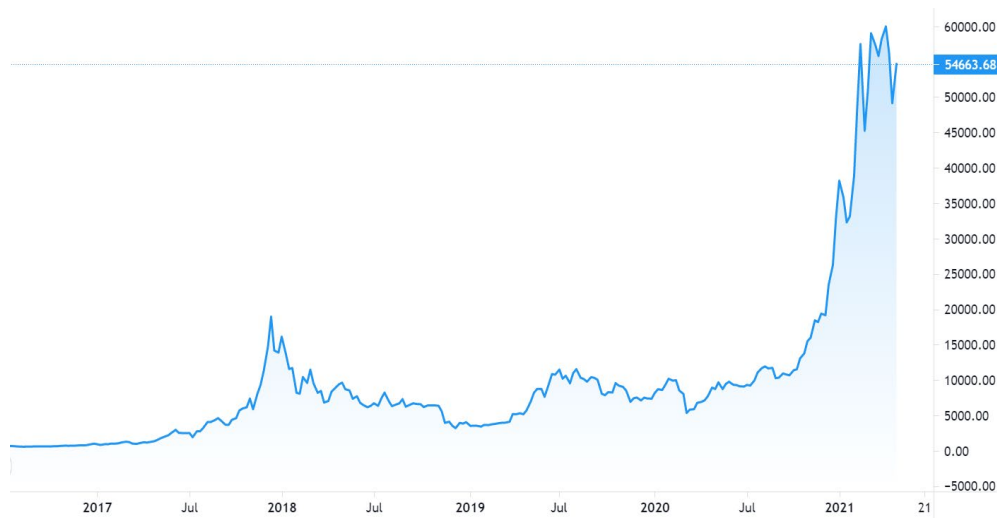


Figure 2: The value of Bitcoin to USD from the year 2017 to 2021 (TradingView, 2021)

Evan (2015) mentioned several positive implications on the usage of bitcoin in the implementation of an Islamic banking and financial system, among which is the usage of bitcoin would facilitate the real economic sector instead of the debt market as what is happening with fiat currencies via the conventional banking system. Besides that, cryptocurrencies are *riba*'-free in contrast to the nature of fiat currency which has the tendency of being used as a commodity to facilitate *riba*' (Evan, 2015). Also, Evan (2015) pointed out that the face value of bitcoin is lower than the

amount of bitcoin in circulation when compared to fiat money where the face value is larger than the amount in circulation partly due to the debt market. This is also explainable through the fractional reserve banking system, where money is artificially created. Among the suggestions given by Evan (2015) is to have the exchange of commodities by banks be in the form of cryptocurrencies based on *musharakah*, as it would facilitate customers in buying and selling cryptocurrencies whilst bypassing the inefficiencies of the banking system. On top of that, the implementation of cryptocurrencies would create a stable banking system as well as a better alternative than gold transactions which would need transportation and physical security due to the tangible nature of gold in contrast to the nature of bitcoin that is virtual.

Be that as it may, there are arguments against the use of bitcoins due to their incompatibility with the Shari'ah on certain aspects of cryptocurrencies. As mentioned by Asif (2018), one of the common disagreements among scholars that deem bitcoin impermissible is that it contains *gharar* (ambiguity) and excessive risk. However, the elements of risk and ambiguity are subjective. As in Islamic jurisprudence, minor ambiguities (*gharar yasir*) are acceptable. Nonetheless, some scholars are of the opinion that cryptocurrencies are purer than conventional fiat money. Among the criticism of bitcoin from an Islamic point of view is that bitcoin lacks intrinsic value as a legal tender due to the fact that it is not backed by any asset (Asif, 2018). In addition to that, the permissibility of the Proof of Stake (POS) protocol used in mining cryptocurrencies is debatable. The POS protocol would mean that the more shares an individual holds, the higher priority they have to mine the cryptocurrency. In response to that, Asif (2018) argued that a bitcoin miner could earn interest on the amount they have put at stake for the sole purpose of validation in the network through the POS protocol.

Over time, some innovations had been made in the transactions of cryptocurrencies. For instance, Asif (2018) mentioned that there is a trend whereby individuals are offering the sale of bitcoin in the future for a fixed price despite fluctuations at that time. This action would not be permissible from an Islamic viewpoint, as commodities that are not in existence cannot be traded with exception to the contracts such as *salam* and *istisna'* (Asif, 2018). The reason behind the prohibition would be due to the uncertain outcome of future transactions of cryptocurrency because of the inability to ensure the deliverability of the product in the future. This is also supported by Saleem (2014), as he pointed out that the main reason for the impermissibility of *gharar* is the vagueness in the contract that would lead to the exploitation of one party.

In order to combat the issues of impermissibility of cryptocurrencies from an Islamic perspective, the issue of the POS system would need to be rectified further through more research (Asif, 2018). A solution to this problem could create a new approach for investors in abiding by the guidelines of the Shari'ah, as cryptocurrencies could play a vital role in the development of an Islamic financial market.

2.2 Digital Wallets

On a similar note to cryptocurrencies, the rise in e-wallets has been evident in the case of Malaysia, with the number of transactions using e-money recording a

whopping 1.8 billion (Noordin & Subramaniam, 2019). From the conventional viewpoint, the use of e-wallets would increase the velocity of money, as exhibited in Fisher’s Quantity Theory of Money (Mishkin, 2019). This would mean that the money in circulation would travel faster whilst increasing the monetary expenditure. This indeed would be better for the economy, as to why the government has been issuing incentives to encourage the use of e-wallets especially through the disbursements of one-off payments to eligible individuals (Cheah, 2020). A study conducted by Pachpande and Kamble (2018), as exhibited in Figure 3, shows that 80% out of 104 respondents claimed to have used e-wallets for transactions, including the payment of utility bills, travel tickets, entertainment, and for transferring money among individuals. On top of that, 75% out of the 104 respondents are keen on recommending the use of e-wallets to others, as shown in Figure 4.

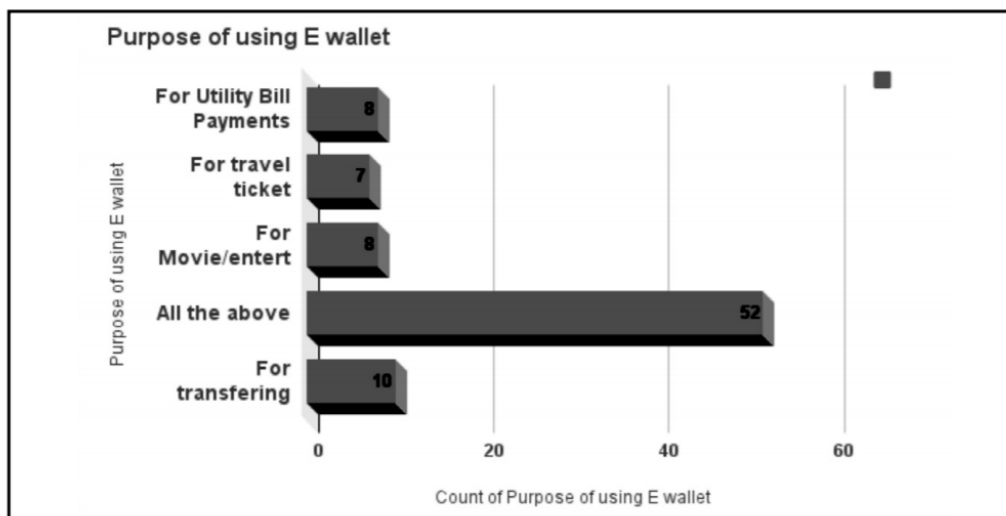


Figure 3: The purpose for using e-wallets (Pachpande & Kamble, 2018)

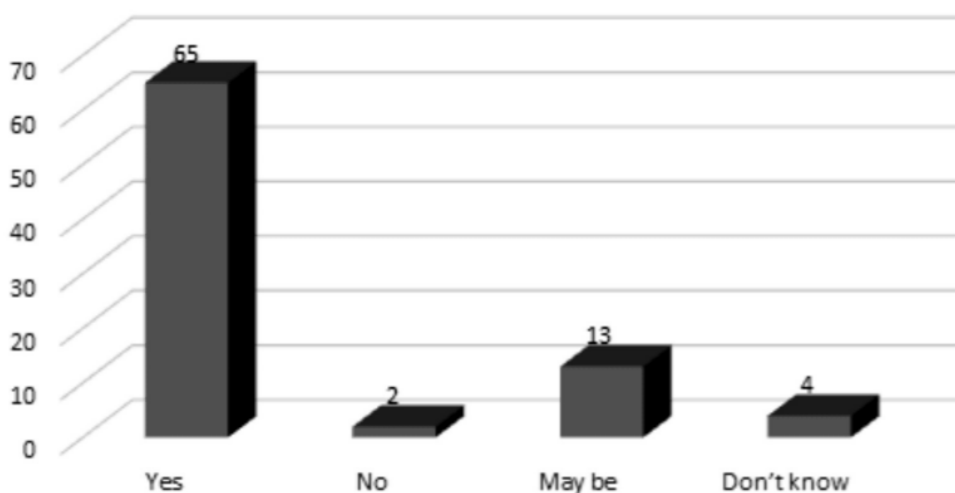


Figure 4: The percentage of recommendation of e-wallets to others (Pachpande & Kamble, 2018)

Figures 3 and 4 show that indeed, e-wallet is seemed to be demanded well among the public and is widely used for various purposes.

Another reason why the use of e-wallets is encouraged by the government is to increase transparency in the financial system. Through this, issues related to corruption such as money laundering and bribery could be traced to the source via the implementation of such digital wallets as a mode of payment. Besides that, the implementation of digital wallets would aid the government in disbursements of transfer payments. As the main reason for transfer payments is to aid the economy by enhancing consumption, through digital wallets, the government can monitor the number of transfer payments that have been consumed. In the event that the transfer payment is not used for consumption, the government can take back the money in order to prevent leakages in the form of savings. The values of justice could be apprehended through the use of e-wallets as misuse of money for abhorrent usage could be easily detected. The spending activities through the data of buying and selling of people could be monitored through the adoption of digital wallets, which can be coded in ways that deny transactions of haram items from being purchased by Muslims. The widespread use of digital wallets as a mode of payment would also reduce the tendency for illegal syndicates to operate due to the fear that their transactions would be recorded. Moreover, the issue of counterfeit fiat money and currency debasement could be solved with the adoption of cryptocurrencies and digital wallets.

With the surge of users in the adoption of digital wallets, questions that arise are from the perspective of the Shari'ah with regards to the rulings on such systems. As mentioned by Mirza (2019), in its entirety, the concept of digital wallets is compliant with the Shari'ah's teachings, with slight amendments that would be needed on the promotions of non-Shariah compliant activities such as conditional lucky draws. Also, digital wallet companies have no right to invest money that is deposited into the digital wallet accounts, similar to the contract of *wadiah* (safekeeping). The acceptability of such innovations is deemed permissible from the Islamic view based on the legal maxim that the principle in transactions is permissible unless they are specifically prohibited in the Shari'ah (Saleem, 2014).

2.3 Dual-Currency System

The feasibility of having a dual-currency system in a country has been shown to be positive based on the search model (Craig & Waller, 2000). A dual-currency system would mean that a country is accepting two different currencies as a mode of payment. Craig and Waller (2000) had also brought forward the discussion that the rationale behind the dual-currency system is to avoid the devaluation of the local currency, the instability of the banking systems as well as to combat the strict restrictions of the government regarding trade via other payment methods. In order to prove the efficacy of having a dual-currency regime, monetary search models were used to prove how the acceptability arises endogenously in economies that lack better payment systems. From the governance point of view, the authors mentioned that the existence of competitive currency exchange rates would lower the cost of holding a new currency (Craig & Waller, 2000).

Craig and Waller (2000) had used the states of Ukraine and the Soviet Union as a basis of comparison in the evaluation of a dual-currency regime. In sum, the

study had shown that, subjected to certain conditions such as the degree of acceptability among the people on a dual-currency regime and the admissibility by the government in allowing such regimes, a dual-currency regime might contribute positively towards the economy of a nation. Nevertheless, it is argued that a more comprehensive study on this issue would aid the governments in potentially helping the policy development of governments to prosper the country (Craig & Waller, 2000).

Having said that, as the implementation of a dual-currency regime in a nation would be beneficial to the economy, the acceptance of bitcoin in the economy as a mode of payment should not be hindered. Moreover, this would open the doors for extended research on the revitalizing of the dinar and dirham as an accepted mode of payment in the economy.

3. CONCLUSION

All in all, it can be said that indeed the Islamic financial system had served its purpose during the early Islamic reign, as it served the community well. The systems of channeling the excess funds from the surplus unit of the economy to the deficit unit were exhibited well in the early Islamic era (Sadr, 2016). The concept of partnership, through contracts such as *mudharabah* and *musharakah*, was executed well as a means to financial services. One of the elements that is lacking in contemporary Islamic and financial services is the lack of connecting individuals of the surplus units and channeling the funds to the deficit unit.

As mentioned by Ariff (2014, as cited in Evans, 2015), the current development of Islamic finance is in its infancy as it focuses on the Shari'ah aspects rather than the actual objectives of an Islamic financial system. This is probably due to the fact that in contemporary times, the existence of such Islamic financial institutions is in the form of a window to conventional banks. With the discussion brought forward through this paper, there might be light at the end of the tunnel for a resurgence of an Islamic economic system from the due changes that could be mended to the existing money and banking system.

Although cryptocurrencies would not seem like a perfect solution, it can be inferred that it is a viable alternative that should be taken into greater consideration as it has the potential to aid the development of a solid Islamic financial and banking system.

As cryptocurrencies are currently on the rise, with digital wallets becoming more of a norm among societies and a commonly accepted mode of payments, there is hope in using the advancements of these technologies to Islamize digital wallets and cryptocurrencies to start a new monetary system that would be backed off by real economic activity instead of the debt market as what was observed through fiat money. Mcconnell et al. (2018) mentioned that the major supply of fiat money is from debts or promises to pay. The improvement of the monetary system would be a good stepping stone for the future developments of an Islamic financial and banking system that would be sustainable at a global level.

As the goals of the financial system should be for the betterment of society, the need for such goals to be reinstated in the financial system is vital, especially in an Islamic financial system that aims to preserve public interest (*maslaha*). The implantation of digital wallets and cryptocurrencies could be a way forward in

developing a morally sustainable mode of payment that is free from counterfeiting, money laundering, corruption, interest (*riba*), and any other prohibited (*haram*) elements. All things considered, regardless of the variations of the system used, the goal must always be to attain the blessings of God through the implementation of a financial system that adheres to the Shari'ah whilst looking after the welfare of society.

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