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The Emerging Financial Technology (FinTech) Innovation: A Movement from Barter Trade to Modern Digital Currency

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Abstract: Background: The evolution of financial technology has significantly transformed global financial systems, shifting economic transactions from traditional barter trade to sophisticated digital ecosystems. This transformation has redefined how value is created, exchanged, and stored within modern economies. **Aim:** The study explored the impact of fintech innovation on traditional financial systems, tracing the evolution from barter to contemporary digital currency. The study further explores the underlying factors driving the adoption of digital financial technologies and their implications for financial systems. **Method:** The study relied on an extensive review and content analysis of existing literature on the evolution of money, fintech innovation, and the development of cryptocurrencies, examining how technological advancements have reshaped financial transactions, financial intermediation, and the broader financial ecosystem. **Research findings:** The findings reveal that fintech innovation, particularly the emergence of decentralized financial systems and digital currencies, has significantly reduced reliance on traditional financial intermediaries. Additionally, digital financial technologies have enhanced transaction efficiency, strengthened financial accessibility, and contributed to broader financial inclusion. **Contribution:** This study contributes to the emerging academic discourse on fintech by providing insights into the historical evolution of financial systems and highlighting the role of technological innovation in shaping modern digital finance. These findings provide implications for policymakers, financial institutions, and researchers seeking to understand the future trajectory of global financial systems.

Keywords: Fintech; Financial Systems; Digital Currency; Fiat Money

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1. Introduction

As financial technology emerged, the need to move from physical fiat money to digital currency became necessary. The rise in fintech use has disrupted the monetary system (Liu, 2021). The term "value" has become increasingly important and is emerging as a trend in every economic enterprise. Value has been defined in different ways and from different perspectives. In economics, value is defined as something that can be exchanged for something with equivalent value (Salehi, 2021). From the economist's perspective, Salehi (2021) highlights that money is the measure of all things and is what should be considered value. Economists argue that money is what constitutes "exchange value". Money has been part of human history and has evolved over the years (Beattie, 2015). Furthermore, Anbugeetha and Nandhini (2021) argue that before money was introduced, the barter system was used as the exchange system, and this system has been in use for hundreds of years. Ozgul (2017) defines barter trade as a non-monetary exchange. It is simply the exchange of goods and services for other goods and services. According to Schrader (1991), barter has three categories: discrete barter, pseudo barter, and rational barter. In a discrete, rational barter, parties do not need to negotiate the monetary value of the goods to be exchanged. Therefore, the conflict is reduced and allows parties to enter a mutual exchange. On the contrary, a pseudo-barter is a good-for-money exchange. It requires parties to establish the monetary value of goods. This causes price negotiation conflicts.

The primary drawback of the barter trade is the double coincidence of wants. Taskinsoy (2020) highlights that although this system was less sophisticated, finding an exact match for what individuals were looking for (i.e., the double coincidence of wants and choice) was sometimes difficult. This is one of the drawbacks of barter trade and is the most cited argument when assessing the drawbacks of barter trade (Schrader, 1991). Furthermore, the following disadvantages were highlighted by (Ajibola, 2023; Nitisha, 2013; Pahwa, 2021). Another issue that led to barter trade being considered inefficient is the issue of the common value of measurement. In the barter trade system, it is difficult to determine the measure of goods to be exchanged against the other. There is no fixed ratio for the exchange of goods. For instance, an individual who is willing to buy cloth in exchange for corn may result in the exchange value issue of corn and cloth (Nitisha, 2013). In this instance, the difficulty

lies in quantifying the value of cloth in exchange for corn. As a result, the intensity of the wants of an individual determines the value exchange. If an individual's intensity of wants is high, that individual may be willing to give up more clothing in exchange for a small quantity of corn. Therefore, the higher the intensity of the wants of an individual, the lower the buying power (Ajibola, 2023; Nitisha, 2013; Pahwa, 2021).

Furthermore, the barter system includes the exchange of indivisible goods. The difficulty arose when exchanging the goods against indivisible goods that lose utility once divided into two parts. For instance, the value of one good may be equal to two times the value of another good to be exchanged (Nitisha, 2013; Pahwa, 2021). This means an individual had to sacrifice two goods that lose value or utility once divided into two in exchange for one item. Another crucial drawback of engaging in a barter system was the issue of deferred considerations. In a barter system, it was difficult to defer the exchange of goods. Meaning an individual would not enter the exchange of corn and provide the cloth in the future. This involves capital payments and interest in today's world (Ajibola, 2023; Nitisha, 2013; Pahwa, 2021). Commodity exchange works the same way as the barter system, but the only difference is that the societies were able to set the prices for different items (Anbugeetha & Nandhini, 2021).

The shift from barter trade to digital currency has challenged the financial system and ecosystem. In this modern world centered on technology, people are more dependent on it than ever before, as it enables them to live more efficiently (Alharbi & Sohaib, 2021). Technological disruption changed the way people define, create, and exchange value (Chaveesuk et al., 2022). Advances in financial technology have led to a transformation from a traditional financial system to a decentralized one, introducing digital currency (Ramassa & Leoni, 2022). Cryptocurrencies have been widely adopted and, as a result, have challenged the financial system and have brought significant changes in the financial landscape.

2. Literature Review

2.1. The Origin of Money

As a result of the inefficiencies inherent in the barter system and commodity exchange, money was introduced. Money was introduced to address the flaws/drawbacks of barter and commodity exchange. A lot has been written about

nature and the origin of money; however, most scholars have not been able to provide satisfactory historical information on the early development of money. The economic explanation for the origin of money is that it was introduced as a result of the inefficiencies identified in the barter system, such as the issue of double coincidence, the exchange of indivisible commodities, and the issue of common value measurement (Araujo et al., 2016).

2.1.1. Theories of Money

a) Metallism and Chartalism Theory: Overview

From the economists' perspective, two theories have been developed that present different views on the nature and origin of money. The two theories are Metallism and Chartalism (Otero-Iglesias, 2015). There has been a debate about the origin and the early emergence of money between those who contend that the value of money is primarily based on the backing of currency by commodities such as gold, silver, and copper (Semenova, 2011). On the contrary, some believe that the use of currency stems from the power of the state-issuing authority rather than from the backing of the currency (Semenova, 2011).

b) Metallism Theory

Metallism theory states that the value of money must be matched to the market value of the independent commodity (Goodhart, 1998). It specifically matched a certain amount of gold. In addition, Semenova (2011) articulates that the early evolution and the origin of money stem from the action of individual barter trade. Money started as a commodity with an intrinsic value. The idea behind the metallism theory was that the limit of how much money must be created is based on the availability of commodities (Söderberg, 2018). However, when compared to the cryptocurrency system, there is a limited amount of digital currency that can be created (Lansky, 2018). People who mine gold are called miners. People who verify cryptocurrency transactions are called miners. The link between metallism and cryptocurrency is the concept of miners (Söderberg, 2018). Thus, Söderberg (2018) concluded that the theory behind cryptocurrency can be called "digital metallism." Metallism theory remains dominant to this date in all social and economic sciences, whilst chartalism remains the alternative paradigm (Semenova, 2011).

c) Chartalism Theory

Another theory, Chartalism (also known as the state theory of money), states that money is a legal creation rather than the result of individual traders' actions.

According to Rallo (2020), this theory was developed by Georg Friedrich von Knapp in 1905 in Germany. Semenova (2011) adds that Knapp's work was then translated into English in the year 1924. This theory was developed in opposition to the metallic view of money (Otero-Iglesias, 2015). The chartalist approach further argues that the actions of the state introduced the social functions of money and its early emergence. The state theory of money specifically articulates that the relationship between the state and the population is what gives money value (Otero-Iglesias, 2015). Money obtained its value from the fact that the state had a monopoly power to extinguish debt and obligations to the state from the underlying population, rather than its intrinsic value as money (Semenova, 2011). Thus, money gradually developed from the concept that the population had to repay debt and other obligations to the state. This argument is contrary to the metallism approach as it contests that the monopoly power to extinguish debt from the population to the state is what gave money value and its acceptability thereon (Semenova, 2011). Therefore, money and the state are inseparable.

2.2. Fiat Money

The research question found in most literature is whether cryptocurrency can fulfill the function of fiat money, such as the South African Rand, Euro, Pound, and other traditional currencies that are used to exchange goods and services in the economy (Ammous, 2018). The purpose of fiat money and cryptocurrency is the same, which is to facilitate transactions (Phillip et al., 2018). However, from the above definitions, it appears that there is a distinct difference between fiat money and cryptocurrency. Chen (2021) defines fiat money as a currency centralized by the government and not backed by commodities such as gold, etc. Legal tender is considered to be the main difference between fiat money and cryptocurrency. Moosa (2019) further highlights that the second difference is that, unlike fiat money, cryptocurrency is managed by algorithms. Money is legally acceptable as a medium of exchange in making transactions (Bunjaku et al., 2017). Workers accept money after performing work, sellers accept money in exchange for their goods, and people save money for future usage (Bunjaku et al., 2017). Another difference highlighted by Segendorf (2014) is that the use of virtual currency by virtual communities can be seen as a voluntary agreement to use a certain item as a form of payment.

2.2.1. The Emergence of Money

a) Cashless Transactions: Cheques, Demand Craft, and Gift Cards

A cheque is one of the oldest modes of cashless transactions. How it works is that after the cheque is issued to a specific person, it gets deposited into the bank. The payment is then processed and approved by that respective bank. Provided there's a mismatch in signatures or there are insufficient funds, the cheque becomes dishonored (Ramya et al., 2017). Another way of having a cashless transaction is to have a demand craft app. This app allows users to receive payments faster. The Demand draft is monitored by the banks. The bank approves it. One of the drawbacks of the Demand draft is that it takes time to get clearance, and one must visit the bank to deposit the Demand draft (Ramya et al., 2017). Gift cards are referred to as ready-made cards. There is money already loaded on this card, which allows the user to spend and buy anything from a specific retailer. The amount is fixed (Ramya et al., 2017).

b) Electronic Payments

The emergence of online banking and online shopping has resulted in the growth of electronic transfers (Hassan et al., 2020). An electronic payment system refers to money transactions that occur online between the buyer and the seller (Humphrey et al., 2001). The buyer buys the product online, and the seller sells the product online. Statista Fintech in 2019 reported that the aggregate amount of online transactions in the virtual payments segment was projected to be over 3 million euros, and in 2023, the number is expected to increase by 2 million euros (Hassan et al., 2020). The online system payment is categorized into various classes, and it includes e-wallet, e-cash, online payments, etc.

c) E-wallet

According to Subaramaniam et al. (2020) an e-wallet is a technology application and software that allows a buyer and a seller to conclude a transaction without using physical cash or money. It is also referred to as a digital wallet. An e-wallet is not a recent development; it has just gained more popularity nowadays. Hassan et al. (2020) articulate that this concept was introduced late in the 90s when Coca-Cola created a system where customers can buy their drinks through text messaging. Then, early in the 2000s, people were able to book their flights, buy their movie tickets, and even order food via their mobile phones. In the early 2010s, Google introduced

an online payment service that allowed customers to complete their payment online. This online service was called Google Wallet (Hassan et al., 2020).

According to Ramya et al. (2017) convenience in completing financial transactions may be what has encouraged the world to go digital. This is because you no longer need to spend time in queues at the automated teller machines when you want to withdraw cash. In the matter of emergencies, this method of payment is extremely useful. The benefit of transacting whenever you want and when you want, without being physically present, is what adds value to this system. It also minimizes the risk of being robbed when carrying wads of cash. Security concerns are a nightmare for everybody (Hassan et al., 2020). To create an e-wallet, the individual is required to provide personal information, credit card details, and payment account details linked to their bank account. The Internet is the playground for scammers and hackers; thus, this Internet transfer is subject to high risk as money can be stolen, and fraud can easily occur. Furthermore, the vulnerability to authenticate the user and verify that the person is who they claim to be causes users to not trust the system. Upadhayaya (2012) highlights that an e-wallet has two ways to protect the interests of the users. Number one, before cards are displayed in the e-wallet, the password must be entered. Secondly, the information on the card is encrypted so that other programs can't read it.

2.3. Post Fiat Money: Digital Currency

The idea of digital currency, sometimes referred to as virtual currency, emerges from electronic transactions of traditional currency (Gilbert & Loi, 2018). According to Alfar et al. (2023) virtual currency acts as a medium of exchange through the Internet and is used to make payments in an electronic form. In a broad sense, if something is centralized, it means that it is approved and managed by a central authority and subject to laws and regulations. Cryptocurrencies are not issued or managed by the government, thus not subject to the laws and regulations of the central authority. Cryptocurrency is defined as an anonymous virtual exchange system in which currency units are generated and distributed (Mukhopadhyay et al., 2016). According to Kamps and Kleinberg (2018) cryptocurrency is a digital medium of exchange that does not require third-party involvement. Banks are among the third parties that are used in traditional financial systems. The central authority does not regulate digital currency (Tredinnick, 2019). To prevent counterfeiting problems, cryptocurrency uses cryptography instead of central institutions (Kamps & Kleinberg, 2018).

Lansky (2018), highlights that cryptocurrency has an element of account and ownership anonymity and requires cryptographic proofs to confirm transactions. Qadir and Varol (2019) define cryptography as a technique that only allows the recipient and the sender to view the message content. Katz and Lindell (2020) highlight that cryptography features codes used for secret communication. Maqsood et al. (2017) further states that one of the cryptography methods involves encryption to conceal information and make sure that it is secure. In Greek, cryptography specifically means "secret writing" (Qadir & Varol, 2019). Since cryptocurrency is not in physical form, ownership is determined through recorded transactions in the blockchain (Siswantoro et al., 2020).

Tokens

Tokens are digital assets that operate in another cryptocurrency's blockchain database (Coryanne Hicks, 2023). There are two types of tokens, namely, security tokens and utility tokens. The first token is a security token. This type of token gives a holder the right of ownership to a specific asset. It is more like an investment and operates the same way as stocks. The holder has ownership of an entity or asset and generates returns from that investment (Di Angelo & Salzer, 2020; Sharm, 2023). The value of security assets is derived from the company's assets valuation and the investor/holder, and the company must adhere to laws and regulations. The second token is a utility token. Adversely, utility tokens are not linked to ownership, and they are unregulated (Di Angelo & Salzer, 2020; Sharm, 2023). They are designed to serve a specific function in a blockchain ecosystem. There is a distinct difference between coins and tokens.

2.3.1. Cryptocurrencies

a) **Bitcoin**

Bitcoin, also known as a virtual currency, is an alternative means of payment (Segendorf, 2014). Bitcoin, the first cryptocurrency that was launched back during the financial crisis in 2008 by the pseudonymous programmer called "Satoshi Nakamoto", was the first digital currency (Warmke, 2021). Satoshi believed banks were responsible for the recession; however, they received bailouts from a central authority. Thus, Bitcoin was created to avoid this unfair system. In this system, the transactions occur without the hand of the intermediary (Warmke, 2021). This allows the users to transfer funds without being blocked or questioned about their purchases, and they are not restricted on how much they can transfer. However, even though

Bitcoin is the most used system, not everyone can understand it. Bitcoin involves a very complex technology system that is hard to understand (Pandya et al., 2019). To this date, "How does Bitcoin work?" remains the most asked question with no simple explanation. In 2018, only a few government-issued currencies were above the estimated market capitalization of Bitcoin. This includes the United States dollar and the South Korean won, amongst others (Hazlett & Luther, 2020). This reflects that the demand for Bitcoin has increased significantly. Currently in 2023, the estimated market capitalization of Bitcoin is over $579,744,358,407, and it is the number one most-valued coin across the globe (CoinMarketCap, 2024). Bouoiyour et al. (2016) highlight that despite its high value, there is still uncertainty about how this value is derived. Is the future promised? Is it short-term?

b) Ethereum

Ethereum comes after Bitcoin as the currency with the largest market capitalization, and in 2018, the market capitalization was valued at over $100 billion (Kim et al., 2018). Ethereum has doubled its value in 2023 and is currently valued at over $200 billion (CoinMarketCap, 2024). This crypto is a competitor to Bitcoin. Ethereum was first introduced in 2014 and was successfully launched in 2015 by Vutalik Buterin (Tikhomirov, 2018). This blockchain application uses a Turing-complete language, which allows users to create smart contracts on the blockchain (Vujičić et al., 2018). The smart contract enables parties to reach an agreement in a digital world without the input of a third party. Physical contracts are converted into codified virtual contracts (Khan et al., 2021). This reduces the risk of human errors and minimizes disputes regarding such contracts. This contract-automated program runs on top of the blockchain and is enforced by consensus protocols (Luu et al., 2016). Smart contracts operate the same way as traditional contracts. Users can include all the terms and conditions. With this smart contract, users can create their own cryptographic rules, including the format of transactions, create their ownership rules, and define the functions of state transitioning (Khan et al., 2021).

Ethereum operates the same way as Bitcoin. It is a decentralized network. It encourages the transfer of tokens from peer-to-peer transactions (Kim et al., 2018). It is, however, more complicated when compared to the top Bitcoin (Buterin, 2016). Ethereum has two types of accounts (Chen et al., 2020). The first account consists of 20-byte addresses and is controlled by a private key (externally owned account). The second account, called a smart contract, also has 20-byte addresses and is controlled by codes (Ferretti & D'Angelo, 2020; Vujičić et al., 2018). The smart

contract account is created by externally owned accounts, which are controlled by private keys. On the contrary, a controlled private key account cannot be created by a smart contract. That's the key distinction factor (Chen & Dubinsky, 2003). Externally owned accounts are primarily used to manage Ether in a blockchain and interact with the code-controlled account by sending transactions. Contracts are primarily used to keep track of transactions that occurred and balance changes.

Transactions in Ethereum are messages sent from one account and received by another account. Ethereum consists of two transactions (Buterin, 2016). The first transaction is an external transaction sent by the account that is controlled by private keys, whilst the second transaction is internal and is sent by the account that is controlled by codes (Chen & Dubinsky, 2003). The main difference between these two transactions is that the transactions sent by the externally owned account are kept in the blockchain, whilst the transactions sent by the contract are not recorded in the blockchain. The similarity between the two transactions is that they are both used to transfer funds and contract creation. Ether can be transferred from account to account. In the same way, miners verify the Bitcoin transaction, the Ether transaction is also verified, and miners are remunerated for doing this process. Ethereum, however, requires parties to pay transaction fees to protect the exhaustion of resources (Chen & Dubinsky, 2003).

c) Dogecoin

Unlike other cryptocurrencies, Dogecoin's foundational history stems from a doge meme (Nani, 2022). The doge meme was first introduced back in February 2010 when Atsuko Sato shared a picture of her dog in her blog posts. Then, later around October, another picture of her dog went viral, but the name "dog" was misspelled as "doge". Later in 2013, Doge finally went viral after the picture of Atsuko Sato's dog was used in the thread (Nani, 2022). Because of its popularity, this meme was used by companies in their marketing. This caught the interest of many people and inspired the developers Billy Markus and Jackson Palmer to develop and introduce a new currency called "Dogecoin" (Chohan, 2021). When Dogecoin entered the market, it was a big success because of the meme being its originality. In 2013, Dogecoin was the most searched cryptocurrency following Bitcoin at number 1. In the year 2021, Dogecoin caught the interest of the world's number one person, and the CEO of Tesla, Elon Musk, who invested over $1.5 billion (Nani, 2022). This investment alone increased the value of Dogecoin significantly, almost quadrupling the value. Established as "joke currency", Dogecoin is part of the top 10 most valued

cryptocurrencies worldwide. Its market capitalization is over $10 billion in 2023 (CoinMarketCap, 2024). Dogecoin has gained growth and an increase in the volume of trade each day. However, there's little literature about Dogecoin yet (Agarwal et al., 2021). Witnessing this growth, researchers are encouraged and inspired to focus their attention and work on Dogecoin.

d) Litecoin

There is no doubt that Bitcoin has had a significant impact on the world of cryptocurrency, and as a result, more cryptocurrencies are introduced and are inspired by Bitcoin. Litecoin is one of the cryptocurrencies that was inspired by Bitcoin (Padmavathi & Suresh, 2019). When Bitcoin was established, it was considered gold. The Litecoin founder considers Litecoin as silver (Jumaili & Karim, 2021). Litecoin is a cryptocurrency that was founded by Charles Lee and introduced in October 2011 (Bhosale & Mavale, 2018). Like Bitcoin and other cryptocurrencies, Litecoin is a peer-to-peer cryptocurrency. It cannot be printed, it is decentralized, and it is one of the largest cryptocurrencies. Litecoin's functionality does not differ from that of other currencies. Litecoin's transactions are recorded in the ledger called the Litecoin blockchain (Gibbs & Yordchim, 2014).

Here's the slight difference between Litecoin and Bitcoin: the processing time for Litecoin transactions in the blockchain is 2.5 minutes, compared to Bitcoin, which takes 10 minutes to process a Bitcoin transaction (Bhosale & Mavale, 2018). Furthermore, the volume of Litecoin in circulation and traded daily is three times higher when compared to Bitcoin volume. Litecoin has 84 million, and Bitcoin has 21 million. The primary reason why Litecoin was developed was to speed up the process of blockchain transactions. In 2013, Litecoin reached its peak of over $1 billion market capitalization value, and it was a better alternative to Bitcoin. In 2023, Litecoin's market capitalization peaked at more than $8 billion (CoinMarketCap, 2024). Litecoin has been growing exponentially and continues to grow, and is currently ranked number 12 (CoinMarketCap, 2024).

e) Ripple

Ripple was founded and launched in 2011 by Chris Larsen through his company, OpenCoin (Bhosale & Mavale, 2018). Ripple is a decentralized cryptocurrency and processes transactions faster on the Ripple blockchain. However, even though most cryptocurrencies come from Bitcoin and try to address the inefficiencies of Bitcoin, Ripple was developed independently of Bitcoin (Armknecht et al., 2015). In 2015,

Ripple was the second-largest cryptocurrency after Bitcoin, based on market capitalization (Armknecht et al., 2015). In 2023, Ripple is not in the top 50 cryptocurrencies based on market capitalization (CoinMarketCap, 2024). Essentially, there are two parties involved in the transactions. The sender and the receiver. Initially, the sender should request a fiat-to-fiat pricing quote from the receiver. Once the pricing quote has been received, it is then approved upon receipt. The sender then submits the payment instructions to the receiver and processes funds via a virtual asset wallet within Ripple XRP. The funds are then transferred by the Ripple XRP to the receiver's wallet within 5 seconds. The receiver then pays the funds to the end beneficiary in fiat money while at the same time converting the received XRP to fiat money. Once the payment has been made, the receiver is then invoiced within business days.

3. Methodology

The study aimed to explore the impact of financial technology (fintech) innovation on traditional financial systems by tracing the evolution of financial exchange from a barter system to modern digital currency. To achieve this objective, the study adopted a qualitative research approach. A qualitative research design was considered appropriate because the study sought to develop a deeper understanding of the historical development of money and the transformation of financial systems driven by technological innovation. Qualitative research allows researchers to analyze non-numerical data and interpret patterns, concepts, and relationships that emerge within existing knowledge. The study relied primarily on qualitative content analysis of existing literature, which involved reviewing and synthesizing scholarly publications related to the evolution of money, fintech innovations, digital payment systems, and cryptocurrencies. Through this approach, the researcher was able to explore how digital currencies are reshaping economic transactions and value exchange. The qualitative approach further enabled the researcher to explore historical developments and conceptual changes in financial systems over time, while identifying emerging trends within the fintech ecosystem.

To ensure the credibility and relevance of the literature reviewed, specific inclusion and exclusion criteria were applied during the literature selection process. For the inclusion criteria, the study considered peer-reviewed journal articles, scholarly books, and reputable academic publications that addressed the evolution of money, fintech, and digital currencies. To capture the most recent developments in fintech

and cryptocurrency adoption, priority was given to studies published within the past five years. However, the foundations of money, barter trade systems, and early theories explaining the origin of money. As part of the qualitative content analysis, literature specifically focused on identifying recurring themes within literature, including financial decentralization, technological innovation in payment systems, financial inclusion, and the regulatory implications of digital currency adoption. To maintain consistency and reliability in the analysis, only studies written in English were included. Furthermore, the exclusion criteria eliminated non-academic sources such as informal publications, blogs, and unverified online materials to ensure that the analysis was based on credible and scholarly sources.

4. Discussion and Analysis

The adoption of cryptocurrency has significantly increased in recent years. This is evidenced by the increase in the number of users, number of wallets created, number of users of cryptocurrency exchange sites, transaction volume, and an increase in market capitalization (Alzahrani & Daim, 2019). The anticipated number of Bitcoin users in 2024 is set to be more than 200 million. In 2018, 24 million crypto wallets were created (Alzahrani & Daim, 2019). This is significantly low when compared to 2023. Ariella (2023) states that there are 420 million crypto users across the globe. There was an increase of 190% between 2018 and 2020. According to CoinMarketCap (2023), there are 1.8+ million cryptos created with a combined market capitalization of over $1 trillion. Furthermore, there are over 600 crypto exchanges. The global currency market is also projected to increase by 56.4% in 2025.

Despite the adoption rate and the popularity of cryptocurrencies, there are different views from scholars, economists, and other authors regarding the future of cryptocurrencies, and some people appreciate the new digital currency system, while others critique this new system (Bunjaku et al., 2017). Judging from the fact that some countries are already committed to accepting Bitcoin as a valid means of payment or currency, and other countries are in the process of accepting it, it technically says a lot about the future of cryptocurrencies. Furthermore, when looking at the market capitalization of cryptocurrency, it shows that the use of cryptocurrency is growing. Rahman and Dawood (2019) add that Bitcoin can be a viable option for making payments. The positive perspective of cryptocurrency use stems from the fact that it makes it easier for parties involved in the transaction to

transfer funds, and it could aid in avoiding or minimizing the fees charged by banks when processing fund transfers (Bunjaku et al., 2017).

On the contrary, pessimists claim that cryptocurrencies are an easy target for criminals (Kethineni et al., 2018). In this regard, as discussed above, cryptocurrencies are very volatile and can be used for money laundering and other illegal financing. Some authors observed the following when explaining why cryptocurrency may not be a viable option for making future transactions: cryptocurrencies do not have government backup and are illiquid because of their vitality (Bunjaku et al., 2017). The adoption of a peer-to-peer transaction financial system has reduced the reliance on central banks as currency regulators. Research revealed that the emergence of digital currency has minimized security concerns and increased the efficiency and inclusivity of financial systems. The examination of the evolution of money offers valuable insight into the challenges fintech has in traditional financial systems and regulation.

4.1. Metallism Theory vs Chartalism Theory Analysis

The question is whether metallism and chartalism both provide adequate historical anthropological background to support their theoretical development of the origin of money. Although metallists theory is acknowledged as the prevailing framework theory, which can be used as an analysis of the origin and the nature of money, chartalists are against this metallism theory and argue that the origin of money stems from the state, and the intrinsic value of money is irrelevant. Metallism has been argued to be constitutionally weak on historical empiricism, as metallists believe that the origin of money stems from scarcity (Söderberg, 2018). On the other hand, chartalism tends to focus on the role of taxation when supporting its theories of the origin of money. The historical theories and methods on the origin of money by chartalism are argued to be adequate when examining the causal roles of fines and fees in the evolution of the unit of measurement, which then subsequently resulted in the evolution of money (Semenova & Wray, 2015). This explains that scholars refer to chartalism as the “tax-money approach”.

Chartalists argue that metallists do not acknowledge the idea of the state when formulating the monetary system. Chartalist believe that money is always associated with the state. This is because the state decides what must be identified as legal tender in its own transaction (Semenova, 2011). This will then be accepted as the medium

of exchange, as it will be accepted as payment in settling private debts. This concept is a proposition to chartalists. Commodities such as gold, silver, or metals that are used to manufacture monetary units are irrelevant. Money is essentially a token, ticket, or chartalists that is issued by the state and accepted as a means of payment (Wray, 2014). In general, money is believed to have originated from commodities such as gold, silver, and other metals. Therefore, it may be appropriate to conclude that metallism theory adequately provides historical evidence that commodities gave rise to the origin and the evolution of money.

5. Conclusion

Fintech innovation from traditional financial systems to decentralized digital currency systems represents a significant change in the financial landscape. The emergence of fintech has shaped the ecosystem and financial system completely. As a result, people have redefined economic value and related transfer, promising the potential benefit of a decentralized system, efficiency in the system, and certainty of security. Digital currencies represent the evolution of money and the incorporation of advances in technology to refine new ways of value storage, transfer, and value creation. As a result of an increase in the usage and adoption of cryptocurrencies, the regulatory framework developers may need to participate in the regulation of digital currency to ensure the interests of the public are protected. The findings highlight that fintech innovations have significantly contributed to the modernization of financial systems by enhancing transaction efficiency, improving financial accessibility, and promoting financial inclusivity, providing individuals and businesses with new opportunities to participate in financial systems without relying solely on traditional banking institutions. The increasing integration of fintech solutions into everyday economic activities indicates that digital finance will continue to play a critical role in shaping future financial systems. Future research should focus on examining the long-term economic implications of digital currencies, the development of regulatory policies for fintech ecosystems, and the role of emerging technologies in shaping the next phase of financial transformation.

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