

Monetary Policy in Digital Age

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Abstract

Monetary policy serves as an essential tool for central banks to regulate economic activities, stabilize prices, and foster sustainable growth. By utilizing a range of measures and instruments, monetary policy can affect the amount and cost of money and credit available in the economy. To achieve these aims, central banks frequently work to impact interest rates, which subsequently helps control the money supply and manage inflation.

Keywords: Monetary Policy, Market Economy, Digital Money, Bitcoin, Payment

Introduction

The discussion around the stability of money's value has been ongoing since money began serving as a method of payment [1]. This topic involves complex relationships that generate differing opinions. Nevertheless, there is a clear understanding that for money to serve its intended functions, maintaining its value is essential. In this light, digitalization introduces new challenges, which will be addressed further on. Simply put, these challenges encompass changes related to the conditions for existing currencies and the emergence of new digital currencies. The notion that digitalization brings entirely new challenges from both angles will be evident in the subsequent sections, even if we keep our analysis at a relatively general level.

To grasp how digitalization presents a unique challenge to monetary policy, we must first clarify what specific issues are involved. To do this, we need to differentiate between certain monetary policy challenges.

System

To appreciate the distinctive impact of digital technology on money, we must first examine the institutional framework and processes involved in creating money [1]. Thus, this section will delve into the monetary system.

At first glance, it might not seem obvious that new technology demands changes to the monetary system. In advanced economies, there is usually a system that relies on central bank money alongside deposits in commercial banks. For a long time, electronic payments or transfers have been quite common, all while the familiar system remained unchanged. However, as we will explore in later sections, that could now be shifting.

The main goal here is to demonstrate that every monetary arrangement, which has sparked intense debate recently, faces completely new challenges. Our intention is not to provide a thorough review of ongoing discussions about potential reforms to the current monetary system. Instead, we aim to identify the specific challenges posed by digitalization and how these challenges are fundamental.

Market Economy

To understand the role of money within a market economy, it is helpful to begin by examining the purpose that market economy is intended to serve [1]. For now, let's simply assume that a market economy exists.

A market economy serves as a system designed to manage the issue of scarcity. In this system, individuals, rather than groups or authorities, determine what is scarce. Cultures that engage in bartering are already well-acquainted with scarcity. Nonetheless, the barter economy has a few significant drawbacks. It places inherent limitations on reducing scarcity because it lacks an efficient division of labor and often results in lower productivity. The introduction of money allows for a more effective division of labor. Clearly, market economies, labor division, and money are interconnected and essential to one another.

Money plays a crucial role in simplifying processes, which can be viewed as lowering transaction costs. In this regard, money aids in dividing labor across various goods and services, which can be customized to suit the interests of those involved, expressed in monetary terms. As a result, money allows for the organization of numerous individuals who may not know each other and don't need to share information.

Digital Money

The primary selling point of Bitcoin today is its inherent monetary policy [2]. In a time of unprecedented actions by central banks worldwide, the concept of stable money with a capped supply stands out sharply.

The decentralized structure of the network enables the existence of scarce digital money with no counterparty risk. Anyone who decides to run Bitcoin software keeps a record of every transaction in a global online ledger and the rules that validate these transactions. Generally, if someone attempts to operate outside of these consensus guidelines, such as generating extra Bitcoin or undoing a transaction, the network users will simply disregard it.

The role of the unchangeable transaction record is crucial, especially when crimes are committed using Bitcoin. It's a common misconception that Bitcoin transactions offer anonymity. In reality, they are only partially anonymous.

Creating a Bitcoin wallet is quick and can be done on a phone or computer, allowing anyone to receive money from anywhere in the world. However, all of the user's actions are recorded on Bitcoin's blockchain and remain accessible indefinitely.

So, why does this matter if the wallet itself isn't linked to a specific identity? There are various ways to connect an individual to funds within the Bitcoin network. A key point of connection is how people exchange Bitcoin for traditional currency. With ongoing regulations in this space, laws like KYC and AML (know your customer/anti-money laundering) require users to provide identification when buying or selling Bitcoin. If coins linked to illegal activities are sold for local currency via a trusted platform, they will likely be tied to a specific identity, catching the attention of law enforcement.

Someone may think about using their illicit profits to buy goods or services. However, authorities can easily track these purchases if an email address or shipping details are included.

Conversely, if a person buys Bitcoin from a regulated exchange, moves it between different wallets, engages in illegal activities, and later uses leftover coins for any service that requires KYC information, they essentially reveal their involvement in crime, regardless of how many wallets the money cycled through since the original purchase.

Besides simple tracking on the blockchain, criminals further expose themselves by making any transactions on Clearnet, which is any unencrypted internet connection. Whenever someone uses the internet, their traffic can often be traced back to their IP address, revealing their location and linking the activity to them. While tools like VPNs or Tor can help protect privacy, a single mistake can lead to exposure. If one forgets to use Tor or accidentally switches off their VPN before completing a Bitcoin transaction with illicit funds, it's too late-the record will live on indefinitely.

Bitcoin

As a monetary system, Bitcoin operates similarly to the gold standard, with its supply determined by productivity within its network [3]. The total number of bitcoins that can exist is capped at 21 million, mirroring the old-fashioned theory where currency had to be backed by gold reserves held by central banks. While these reserves once offered a foundation for money's value, they limited monetary policy. The gold standard is no longer used worldwide; instead, most countries rely on fiat money, which is essentially currency backed by the authority of the state. Thus, the value of money in any region now depends on how much confidence the market has in both the government and the local economy, which fluctuates with free-floating exchange rates and domestic interest rates.

Moreover, the Bitcoin blockchain is designed to create money based on how efficiently miners work. This approach ties the creation of money to productive efforts in sustaining the peer-to-peer payment system, which challenges the disconnect often seen between monetary policies and real economies today. Critics argue that U.S. monetary policy has contributed to rising asset prices and an over-reliance on credit without adequate backing from actual economic growth, leading to the global financial crisis of 2007-09. Additionally, private cryptocurrencies might be less susceptible to policy interference and market manipulation, as seen in recent forex market scandals.

Economists suggest that private cryptocurrencies could serve as a valuable option for countries where citizens are negatively impacted by manipulative monetary policies. By fostering competition, these currencies could help reduce those manipulative trends. In situations where exchange rates are highly unstable, particularly in politically uncertain or fragile states, private cryptocurrencies may even be viewed as a more reliable store of value.

Bitcoin and other cryptocurrencies do not function as monetary systems that cater specifically to a crypto economy. In simpler terms, cryptocurrencies aren't typically utilized for economic activities and growth within a space dedicated to crypto-specific goods or services, which has been quite limited until Ethereum's blockchain emerged in 2015. As a result, their potentially unique monetary characteristics are often eclipsed by their less effective payment capabilities. Instead, these currencies have gained traction primarily in traditional economies that value anonymity, making them popular in underground markets for illegal trades involving weapons, drugs, and stolen identities. For instance, cryptocurrency transactions fueled the notorious Silk Road, which the US Federal Bureau of Investigation shut down in 2017. Additionally, the anonymity of cryptocurrencies is exploited in money laundering schemes through methods like layering and deception.

Consequently, lawmakers are reluctant to legalize cryptocurrency as socially accepted money. Still, for practical reasons, they have applied anti-money laundering regulations to cryptocurrency transactions but have avoided addressing whether cryptocurrencies are truly recognized as money in society and the economy. In 2018, the European Anti-Money Laundering Directive was revised to enforce guidelines requiring virtual currency exchange providers and wallet services to register, ensuring they comply with customer due diligence and monitoring standards to identify potential money laundering activities. One could argue that this approach implies some recognition of cryptocurrencies as money, even if governments do not acknowledge them as legal tender.

Nevertheless, the Preamble to the Anti-Money Laundering Directive indicates that applying such laws to essential intermediaries in cryptocurrency does not imply that cryptocurrencies are implicitly -

recognized as money. These intermediaries may just as well be seen as managing or dealing with digital assets, and anti-money laundering rules also apply to other high-value at-risk sectors like real estate, art, business incorporation, and gambling.

The status of cryptocurrencies as money is negatively impacted by their lack of a monetary system that supports a distinct crypto economy. Additionally, finite monetary systems like Bitcoin might be deemed less than optimal, as they are expected to become deflationary once the total supply cap is reached. This expectation can lead to undesirable market behaviors, such as large holders hoarding Bitcoin to impact its future value and avoid deflation. Thus, the monetary status of many cryptocurrencies is arguably weakened by users' tendency towards self-regulation. The less effective monetary traits of cryptocurrencies have given rise to speculative behavior, with holders mainly viewing them as assets for trading based on anticipated fluctuations in value compared to fiat currencies. This dynamic has resulted in significant volatility within the cryptocurrency market.

Payment

It is essential for developed economies with mature banking systems to take full advantage of the modern monetary framework while integrating new digital technologies [4]. Additionally, the COVID-19 pandemic has highlighted how crucial it is to digitize the economy to keep economic activity going while maintaining social distancing. This makes the digital transformation of the economy and the use of digital payments more important than ever. There are numerous relevant concerns regarding Central Bank Digital Currencies (CBDCs), such as their effects on economic efficiency, financial stability, monetary policy, and data use. Since every payment method, including cash, has strong network externalities, predicting how long it will take for digital payment methods to surpass cash is complex, as this timeline can depend considerably on specific conditions in each country. For instance, in nations where cash is prevalent, the transition to digital payment methods is likely to be gradual due to the existing strong network effects of cash. Additionally, in countries with low interest rates, there will likely continue to be a strong demand for cash, primarily for value storage. However, the trend towards digitizing payments is expected to persist, and the adoption of digital payment methods should gain momentum over the medium term.

To begin with, as digital innovations lead to the growth of various online activities like e-commerce, both businesses and individuals are becoming increasingly aware of the costs that come with handling cash. While consumers might not directly experience these costs, the expenses tied to managing, storing, and transferring cash can be significant, especially for companies and financial institutions.

In light of this, digital payment options are essential as they promise to lower costs, improve efficiency, and encourage the growth of new ventures. By implementing digital technologies in payment processes, it's vital to stimulate new economic activities, including e-commerce, sharing economies, and "as a Service" models, by leveraging the data related to these transactions.

Furthermore, often referred to as the "oil of the twenty-first century," data has become an intangible asset of increasing significance, with digital payment tools gaining interest for their potential to gather data. In this context, the current "data revolution" is propelling the adoption of digital currency. Cash can only convey information about its value, representing what its owner can exchange for goods or services of equivalent worth. In contrast, digital payment methods are capable of capturing a broader range of information, such as who purchases what, when, and where. Many companies are now offering digital payment solutions to gather customer data through incentives and discounts.

To address the challenges related to CBDCs and fully harness the benefits of the data revolution, one viable approach is to implement privately issued, two-layered digital currencies that are tied to sovereign currency units and utilize advanced technologies like blockchain and smart contracts.

Policy Makers

Governments have the primary responsibility to safeguard their citizens and promote development that includes everyone and is sustainable [5]. However, placing all the blame on national lawmakers for the effects of international rules and processes could lead to difficulties for both investors and local communities, and ultimately jeopardize the future stability of the global economy. Rodrik points out that while globalization benefits countries with established institutions, it makes it harder for nations to create the frameworks needed to tackle regulatory and distributional challenges. Developing nations, in contrast to developed ones, often lack the financial and institutional means to craft and enforce detailed and effective national laws.

This flawed perspective in discussions around international investment law suggests that developed and developing countries are on the same level, ignoring the structural barriers that prevent developing nations from formulating and upholding effective laws and institutions.

The issue of capacity is intensified by corporations trying to exert excessive influence over national lawmakers and policymakers. Recent qualitative data indicates that foreign investors sometimes have significant sway over the legislation in host countries. Case studies provide alarming illustrations of this. In a recent investigation, several government officials shared their experiences regarding attempts by foreign companies to shape public health, planning, and environmental regulations. Consistent with findings from prior studies, interviews with officials in developing nations show that when creating and enforcing national regulations, host governments may feel pressure from foreign investors. Fearing the consequences of upsetting a potential investor or jeopardizing current investments, officials might delay the passage of national laws aimed at achieving key public policy goals.

The focus on the state being the only entity responsible for obligations to those often overlooked by global trade and investment conflicts with the increasing awareness that investment treaty law, especially its investor-state arbitration system, tends to restrict rather than strengthen a host government's ability to use its national laws and regulations for achieving important economic and public policy goals. One significant criticism of the investment treaty system has highlighted its tendency to operate with a bias against changes in the regulatory framework of the host state, which is fundamentally at odds with the ever-changing and unpredictable policy challenges that these states encounter. The limiting effect of investment treaties on national legislative and regulatory authority has been extensively acknowledged, leading to one of the key areas in the ongoing reform of investment treaties-even in developed nations-that seeks to establish protections for host governments to legislate and regulate in the broader public interest. However, these protections alone will not solve the underlying issues that currently restrict the ability of developing nations to enact laws and regulations that benefit their citizens. Additionally, holding developing states financially accountable for not implementing international agreements or failing to legislate in favor of local communities could potentially misuse their already scarce financial resources, while also discouraging investors from maximizing the social advantages of their initiatives.

Conclusion

Monetary policy encompasses the actions and strategies a central bank employs to control the money supply and interest rates with the aim of achieving specific economic objectives. Typically, the goals of monetary policy are to maintain price stability, promote employment, support economic growth, and ensure the financial system's stability. It is often carried out alongside fiscal policy, which involves managing government revenues and spending, to ensure balanced economic performance. The approach to monetary policy is not uniform across different countries and can change based on the unique conditions and goals of each nation.

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