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Digital Currencies

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Abstract:

The evolution of societies over time has led to the circulation of money in its various forms as a means of exchange, and may vary according to the geographical area in which the exchange takes place and has evolved from the use of precious metals such as gold, silver and other metals to the use of coins and securities licensed by the State, It was not just the State's role to oversee the use of cash and cash mines. Its tasks are to give confidence and accept funds as an intermediary for exchange between individuals for the success of the currency and the acceptance of individuals, and to create mutual dominance among States.

In our current era the usual cash trades have been reduced to be replaced by electronic transactions and payments or so-called cryptocurrencies or cryptocurrencies, which despite the uncertainty they were initially due to the reality of their virtual/electronic nature was accepted and demand for their prices increased to record levels that were impossible to imagine, It has even made its way to international financial transactions, which have clearly been the focus of everyone's curiosity and interest.

Key words: Digital Currency, Cryptocurrency, Bitcoin, Internet, Mining.

JEL Classification Codes: D24, D41, M19,M39.

Introduction :

The world's monetary system is undergoing several developments, most notably with regard to the emergence of crypto currencies, despite global concerns, these types of currencies have gradually begun to gain the trust of online dealers, but still the use of virtual currencies in many regions of the world is limited and even prohibited , this is due to the lack of support for these currencies by the monetary authorities and the difficulty of access to the majority of individuals to produce and use. (Jordan, 2020, p. 28)

Since its inception, virtual crypto currencies have achieved a noticeable, but simple, spreads ,and that because of the fictional profits due to speculation operations, trust, speed of transaction and confidentiality in dealing. the technology of the ''Block Chain" system has increased the confidence regarding the use of these currencies , which connects all crypto currencies system and verifies the validity of currencies between companies and ensures that miners are not misused by forging currencies. (Mounir Maher Ahmed, Dr Ahmed Sufian Abdallah, Dr Suhail Ben-Sharif, 2018, p. 240)

Following our modern norms of uses of money and trades, many questions rises regarding the emergence of digital currencies and their effects on societies, thus, the following questions arises:

- Are virtual currencies money standards the same as the money in its physical forms?, and what are the implications of using virtual currencies?

- what are the damages and negativities of virtual / crypto currencies uses and what is the view of countries, international bodies and central banks on issuing virtual currencies?

This study aims to define crypto currencies, and clarify its positive aspects and risks associated with their use, and the resulting challenges to regarding law and financial authorities. as no country could alone face this challenge, as crypto currencies know no limits countries must work within the framework of an international organization.

The definition of Digital currency and its characteristics:

The concept of financial intermediation has changed within individuals or even States in modern financial transactions , there is no longer a need to draw a third party in commercial operations such as banks or monetary institutes or others, through this has recently emerged what is known as block chain technology (distributed digital notebooks technology) which has many applications that do not need a third party, these virtual currencies came in a completely different format within the block chain system .

- The definition of Digital currency

before describing the concepts of virtual and digital currencies, we indicate that the currency is considered by the state as money, but it adds the force of law to it as a discharge. Thus, the money is more comprehensive than currencies, as it includes paper money, bank money and commodity money, while currencies are valuable only by the supporting force of law and States recognising them.

The concept of money:

Money is an important and key means in our contemporary economic life where there is no contemporary society that can dispense with money, a useful economic commodity that meets the needs and repays the obligations arising from transactions. Money is a commodity of exchange, not a commodity of production or consumption, without it, all transactions and exchanges become complex, Money has its long history, created by the groups' desire. As a trade-off is the first way to exchange people, (Moussi, 2010, p. 122)

The concept of digital currencies:

Digital currencies are the main umbrella that includes all other forms of currencies, whether electronic, virtual or crypto currency, and regardless of what other names can be applied on them, the main nature of these currencies remains that they are digitally available and do not have a physical presence, although they have some similar features to physical legal currencies.

International organizations and central banks may differ in their views on the definition of digital currencies. Including the definition in a specific form and activity, to expand the concept and make it inclusive of all forms of currencies traded and dealt with through the Internet regardless of the modern technical means relied upon to offer those currencies. (Habiba Abdly, Noureddine Mufaq, 2021, p. 63)

Digital money is defined according to the Egyptian Official Journal : " It is a monetary value denominated in Egyptian pounds or one of the commissions issued by the official cash issuance authorities owed by the licensee to issue it" (Hamad Abdel Fattah Zahra, Mohamed Ahmed Al-Saeed, 2021, p. 5)

Concept of crypto currency:

Crypto currencies are defined as currencies that have no physical presence, they can be met in current USD and EUR currencies depending on their actual value on the market, and are traded online without a central authority or bank behind their issuance (Abdel Fattah Mohamed Ahmed Salah,, 2015, p. 34) , some argued that it was defined as a monetary value stored on a paid electronic means advanced and not linked to a bank account, widely accepted by non-issuers, used as a payment tool for various purposes. (Alwaleed Ahmed Hussein Drabeer, 2021)

Defined by the Netherlands Central Bank as the currency operating outside the formal monetary system, it is a digital representation outside of the central bank system detached from the monetary institutions systems.

The crypto currency is defined as a decentralized process based on a mathematical model protected by coding, it conversion process depends on combining private and public keys in order to validate this process, these processes depend on users' confidence and expectations that others will be ready to share them for a sovereign process, goods or services.

To understand this in a simple way , as an example : the Bitcoin is one of the most popular crypto currencies, the highest value currently, as a crypto currency encrypted from the beginning that the code contains 21 million pieces, Once they are all mined or extracted, there will be no new Bitcoins formations, thus , no new money will be printed as happens in other regular currencies , which means that if you own 1 bitcoin, you own 1 part of 21 million part of the world's total wealth of bitcoin. (Selmanovic)

Today, there are more than 1324 crypto currencies on the market, which despite being virtual e-currencies, have spread in online transactions and have been accepted into many global stores.

It remains to be known that one of the most important features, is that crypto currencies have limited numbers of units due to the fact that most crypto currencies were produced on the idea that they had a market cap, since the process of encrypting while on the creation protocols from the beginning , created a specific number of currencies and with each decryption - or mining by adding a transaction - gradually reduces the number of inventories, which is similar to the idea of precious metals, for example the more gold is extracted the less reserve in the subsoil, It becomes difficult for miners to produce crypto currency units, until the upper limit is reached and the mining process stops completely.

Characteristics of Digital currencies:

Many consider the virtual currency a new type of digital revolution secretions, and it is one of the forms of digital or electronic money available in the virtual world, where it is produced by computer software and is stored in electronic wallets, thus, all virtual currencies are digital, while not all digital currencies are virtual.

In 1998, the European Commission defined electronic money as cash value stored in an electronic means such as a card or computer memory, accepted as a means of payment by contractors other than the issuing organization, and made available to users for use as an alternative to paper money, with the aim of creating electronic transfers of specific value payments (Farida Haddad, Abdelhak Koureimis,, 2021), therefore, it combines many characteristics, positive and negative.

a) Positive aspects of digital currency:

Here are the most important features of dealing in digital currencies that have emerged as they spread in the recent period:

- **Protected from loss of value, or inflation**

Inflation is the scourge of the world's economies, and many ordinary currencies have faced and still facing the risk of inflation, but the idea that digital currencies are produced on the basis of a market cap, and a limited quantity, increases their value as demand rises in line with the market, protecting them from long-term inflation.

- **Self-control and sustainable maintenance**

Managing and maintaining any currency that is a key factor in its development and sustainability, the crypto currencies transactions are stored by Miners in the block chain network on their computers, and in return they receive the same currency as a reward for that, therefore, they maintain accurately and continuously the updates of transaction records, maintaining the integrity and decentralization of the digital currency.

- **Security and Privacy**

Security, and most importantly privacy is the primary motivation for building crypto currencies from the foundation, so blockchain network records are based on different crypto algorithms that are difficult to dismantle or analyze, this makes digital currency safer than normal electronic transactions as well as using pseudonyms or account numbers unrelated to any user, account or stored data that can be linked to a profile, thus achieving the principle of privacy. (Khaled Mohammed Hamdi Samida Mohammed, 2021, p. 22)

- **Easy Currency Exchange**

A very important advantage, which has given digital currencies real value amidst physical transactions where they can be exchanged for regular currencies as a corresponding exchange value, meaning each has a variable exchange rate with major global currencies - such as USD, GBP, EUR or JPY - This has helped in their spread, acceptance and demand as an alternative to normal cash transactions, equivalent in value.

- **Decentralized currency**

Unlike ordinary currencies or government-controlled mandatory currencies represented by central banks, digital currencies are decentralized in nature and can be controlled, increased, interrupted or made available only by users and holders of the largest quantity, or through an organization established or developed before being put on the market, this helps to preserve it from monopoly and protect it from determining flow or value to ensure its stability, privacy, transparency and security.

- **Low cost and speed of remittances**

One of the most important uses of crypto currencies is money transfer, and the cost or fee of transfers is one of the most important factors considered to judge the quality of the system or process of transfer. In crypto currency exchanges, transaction fees paid by the user are reduced to a small amount or possibly up to zero and are done directly between users' accounts and quickly. so we don't need third parties, such as VISA or SWIFT, to verify the transaction, this eliminates the need to pay any additional transaction fees, or wait a long time.

b) –Negative aspects:

Virtual currencies have become a payment method for some and can currently be exchanged or purchased in US. Dollar or Euros between individuals, bodies and companies. no one can interferes in determining their price, but the price is determined based on supply and demand, but there are drawbacks arising from their use as if you forget the PIN of their program, besides many defects related to virtual currencies and can reduce the use and adoption of them as an official currency from which we count :

- **Easy to use in illegal transactions**

Countries and individuals should be aware of the risks of using virtual currencies and according to the FATF (Financial Action Task Force) report of G20 finance ministers and central bankers in July 2018, the increased use of virtual currency activities was due to laundering and groups seeking funds, the financing of terrorism, drug trafficking and containment. (Asim Adel Mohammed Al-Adaila, 2020, p. 40)

The security and absolute privacy that has been the most important feature makes it difficult for governments to track down any user through their portfolio address or know their data. Perhaps, Bitcoin has been used as a means to exchange money and finance in many illegal transactions, and some use crypto currencies to illegally launder money obtained through a clean broker to hide its source.

- **Loss of data could lead to huge financial losses**

Crypto currency developers wanted to create a source code with untraceable crypto currency algorithms and impenetrable authentication protocols, with the aim of making saving money via crypto currencies more secure and confidential than conventional cash, but the other side of this amount of privacy is that if any user loses the key to accessing their digital wallet or account, it cannot be restored. The wallet will remain locked on its currencies, making it missing.

- **Some crypto currencies cannot be disbursed in normal currencies**

This loses the advantage of exchange as some crypto currencies can only be traded against one or certain currencies. This forces the user to convert these cryptocurrencies into one of the major currencies, such as Bitcoin or Ethereum first through private exchanges, and then into the currency he wants. This applies only to a few digital currencies, so fees or commissions may be added on additional transactions in the process, costing unnecessary money.

- **Negative effects of mining on the environment**

Crypto currency mining process is complex and requires modern and sophisticated computers making it energy intensive, so that can't be done on normal computers. Bitcoin Miners, for example, are located in countries like China that use coal to produce electricity.

- **Crypto currency trading exchanges subject to hacking**

Despite the security and privacy of crypto currencies, their trading exchanges are not as secure as that. most exchanges store users' wallet data to run their user ID correctly. professional hackers can infiltrate and access this data and also steal crypto currencies stored in it, and some exchanges, such as Bitfinex or Mt Gox, have been hacked in the past years and stolen units of Bitcoin in thousands equivalent to millions of US dollars. Most exchanges are very safe currently, but there is always the possibility of another breakthrough. (Lafi Mohammed Dradke, 2018, p. 40)

No refund or cancellation policy

If there is a dispute between the parties involved, or if someone accidentally sends money to an wrong wallet address, the sender cannot recover the crypto currencies sent, this may be used by many fraudsters to take away money , because there are no refunds or returns in the process, a transaction can easily be created whose product or services never received. (Tahri al-Siddiq, 2021, p. 438)

- The position of regulations and laws on digital currencies and the impact on the economy

The world found itself faced with a self-imposed problem regarding virtual currencies and their use, States and lawmakers had to take the necessary steps to regulate these virtual currencies because it was clear that legislation was at a loss to regulate them or even to take a unified position on their regards , which made them desperate to address the theories and opinions of States and international institutions seeking to find an adaptation to the issue. (Mohammed Jamal Zain, Abdul Basit Jasim Mohammed,, 2020, p. 14)

This is all more difficult taking in consideration that we know that a legal process appropriate to this phenomenon requires a number of supportive requirements that relate to a strong legal environment governing virtual currency transactions and the consequent need for their dealings to be compatible with substantive legal frameworks to ensure data protection and privacy considerations , on the other hand, their issuance and use must be carried out in a manner that does not threaten States' financial and security stability. (Heba Abdel-Monim, 2020, p. 10)

a) Digital currencies under the scope of regulations and law

The position of the majority of countries is unstable regarding their view on the digital currencies, according to the risks surrounding their use, the different authorities in all countries monitor their development and study international attitudes with keen interest, although this keeps the virtual crypto currency out of control and supervision by the competent authorities. (The Arab Monetary Fund issues the eleventh issue of the "Policy Brief" series on "Reality and Prospects for Issuance, 2020)

The positions of national legislation in many States vis-à-vis virtual currencies differed between refusing to trade and deal with them, or preventing their legal circulation through the enactment of a law containing an explicit provision prohibiting circulation or transaction, and through this section we clarify some States' position on virtual currencies:

- **Algeria:**
  The Financial Code of 2018 of the State of Algeria explains the prohibition of the use and circulation of virtual currencies, stating that "the purchase, sale, use and possession of virtual currencies shall be prohibited". (Asim Adil Mohammed Al-Adailah, p. 40)
- **Qatar:**
  Qatar's official financial banking authorities have announced that banks are prohibited from dealing in virtual currency in any way, exchanging it in any other currency or opening accounts to deal with it, or sending or receiving any money transfers for the purpose of buying or selling that currency. (Bera Munzir Kamal Abdul Latif, M. Inas Bahaaa Naaman, , 2020)
- **Switzerland:**
  The International Bank of Settlements BIS Switzerland has indicated that virtual currencies are dangerous, harmful, worthless and a means of collapsing the

value of assets, the bank noted that virtual currencies become worthless through digital fraud or hack and often traded through fake funds that drive citizens' wealth away from official rules of dealing, the problem of virtual currencies is not in technology either in terms of security or ease but it is essentially a structural problem that can be solved only by subjecting it to law and regulation. (Hamza Adnan Shu'qa, 2021)

- **Lebanon:**

The Government of Lebanon has warned against the use of virtual currencies and any other systems similar to them that may threaten the stability of the country's currency, as they are not commodities and not currencies based on known data or rules of currency mistrust. (Bera Munzir Kamal Abdul Latif, M. Ines Bahaa Numan,,)

- **Egypt:**

The Central Bank of Egypt refuses to use virtual currencies, article 206 of the Central Bank of Egypt Act No. 194 of 2020 stipulates that "crypto currencies or electronic money shall not be issued, traded in, promoted, established or operated platforms for trading or carrying out related activities without obtaining a licence from the board of directors in accordance with the rules and procedures specified by the Bank". (Bera Munzir Kamal Abdul Latif, p. 13)

There are many reasons why different countries refuse to adopt virtual currencies, as previously indicated by the implications on financial stability, few have tried to adopt them because of their technological power or an attempt to impose their international and political control or to dispose of their debts by taking advantage of virtual currency fluctuations, but that requires international approval, and relevant international factors, herby, we demonstrate some international organizations' position on the use of virtual currencies.

b) International Monetary Fund:

The International Monetary Fund (IMF) has not taken any position either in favour of or against virtual currencies, but has discussed their advantages and disadvantages, noting that they represent an evolution of e-commerce and are quick and easy to complete business transactions. IMF has called on the responsible authorities to regulate and monitor them, indicate their negatives and positives traits, and to organise an international cooperation to enact legislation that would combat their risks. (Asim Adel Mohammed Al-Adailah, 2020)

- **The European Union:**

The European Union's finance ministers, at a meeting in 2015, issued a resolution stating that legislation regarding virtual currencies should be enacted due to their frequent circulation and use in financing terrorist organizations. the European Central

Bank has also banned European countries from issuing virtual currencies, stopping many attempts to issue different virtual and crypto currencies.

- **UNICEF:**

  "UNICEF has become the first United Nations organization to adopt virtual currencies, benefiting recipients from lower fees and commissions for remittance of funds abroad, through using digital currencies, in addition to enabling donors to know how their contributions are distributed to various initiatives. Furthermore, when the organization receives a voluntary contribution in virtual currencies, it will not be disbursed and converted into a national currency, but will maintain it in digital form and send it to finance the programmes and operations to which it contributes as a digital currency, thereby maintaining its transparency to donors and ensuring that recipients receive a greater proportion of the original contribution than traditional cash. (UNICEF "Announces Acceptance of Contributions in Digital Currencies, 2019)

c) Digital currencies impact on the economy

Technological advances are inevitably coming and influencing all fields of life, including money, which is influenced by technology, the development, orientation of human thought, compatibility and desires of individuals or nations. Therefore, in line with the international trend and in line with reality and technological progress there are many reasons why most of the world's countries and international organizations refuse to cooperate or to legalise virtual currencies, mostly for the implications of financial and economic stability in the world.

There are many reasons why Algeria like many other countries reject virtual currencies, mainly, these state has not yet reached the Technological level and digital transformation needed to use this modern technology, which requires currencies hypothetical when forming, originating and issuing, moreover, many developing economies depend on other economies, increased imports compared exports and loaded with heaviest debts with which he cannot risk. as well as if the majority of Foreign investors feel any shake and loss of their money or pressure on the economy they will leave the country immediately, causing the stock exchanges to collapse.

Financial stability in any State is considered a pillar for ensuring its economic and political stability there are many aspects of the impact of these virtual currencies on the financial stability of the state, including:

- **Capital flight:**

The money launderer, who owns vast illegitimate funds and establishes economic projects with the intention of laundering them, does not hesitate to liquidate these projects, there are those who link the issuance and supply of money when their objective is achieved with the strength of the State's economy and the increase in national income, where the strength of the State's economy is measured by what it owns. according to reports by the Trade Organization of money: about 80 to 90 percent of world trade is supported by trade finance through banking networks around the world, where trade finance is done through bank letters of guarantee issued by banks on behalf of buyers to the second party to complete the process.

- **Deficit in balance of payments:**

Virtual currencies influence many individuals to enhance tax evasion, increased public spending to cope with the crimes that result from them, their impact on investment and increased demand for consumer goods, especially luxury ones. Imports increase at export expense and consequently a balance of payments deficit.

- **Monetary policy:**

Central banks are affected by the decline in tax profits (those resulting from the right to issue currency). Thus, an important source of central banks' decline, as well as the use of virtual currencies and increased demand for them facilitates capital outflows affecting the foreign exchange market and limits central banks' ability to apply monetary policy efficiently, this would also create risks to financial stability, consumer protection and financial integrity. Threats to fiscal policy could also increase, so states must establish appropriate regulations with the level of risk arising from the use of virtual currencies. (Mohammed Al-Sakhri)

The potential impact of the emergence of crypto currencies on both monetary policy and financial stability is assessed by two main factors: first, the size of these assets, which must compete with the volume of traditional currencies in circulation, which is still far from occurring, as the volume of assets is small compared with the size of traditional currencies, the most important of which is the dollar. the second depends on the nature of cryptocurrency creation, which requires careful procedures.

However, this transition will not be so easy, technical , security, economic and cultural challenges also confront this transformation process in many States, all of them have even advanced at the present time, adding that the process of controlling the national currency and not exiting the national economy is done only according to criteria and controls that will be very complex, if a virtual crypto currency is adopted, crypto currency networks must be integrated ,which is very complex to most of countries .

Therefore , Virtual currencies have many impacts and repercussions on countries' economy and financial stability, affecting capital due to their sense of danger or a balance-of-payments deficit to increase imports affecting the economy's performance, the lack of money in banks as a result of their exchange of high-risk and speculative virtual currencies added to the banks' loss of many of their powers and functions in maintaining monetary stability and controlling the market from inflation , also the loss of large amounts of money in tax fees linked to tax evasion using virtual currencies .

Conclusion

From all what has been mentioned above: work must be gathered to achieve the validity standards of traditional or electronic currencies in virtual currencies before their approval, and work towards the existence of currencies (smart or centrally coded) issued by central or international authorities while ensuring banks' powers and not affecting their current acquisitions before approving the new currency.

Virtual currencies have become a reality; these currencies must be seriously studied by countries and international institutions, especially as technology develops in all fields. the establishment of an international committee based on virtual currencies to take advantage of its benefits and avoid its disadvantages while maintaining the transactions of the current and institutional banking system and working on the development of an International perception of these new currencies rather than leaving it to the whims of some States or individuals.

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