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Tema: DIGITAL CURRENCY: A CONCEPTUAL FRAMEWORK OF PERFORMANCE

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| 1 - 2 | Crypto-currency is a computerised assemblage of binary data and propelled by block chain technology [1]; hence, crypto-currency is curated by information technology engineers to serve as a lighter and faster alternative means for facilitating transactions for the exchange of goods and services [2]. The 21st century information technology advancements have led to unprecedented innovation and the production of unparalleled rapid computer processing systems via miniaturised chips. Accordingly, industrial activities ranging from planning, production, and distribution receive boosts through modern digital information technology and robotics [3].  Crypto-currency is a computerised assemblage of binary data and propelled by block chain technology [1]; hence, crypto-currency is curated by information technology engineers to serve as a lighter and faster alternative means for facilitating transactions for the exchange of goods and services [2]. The 21st century information technology advancements have led to unprecedented innovation and the production of unparalleled rapid computer processing systems via miniaturised chips. Accordingly, industrial activities ranging from planning, production, and distribution receive boosts through modern digital information technology and robotics [3].  The implications of digital currency range from positive effects to challenges [7]. On the one hand, there are many advantages of digital money for the holder, for instance, the holder may now transfer money with little or no cost of transfers, such as the costs charged by the banks. On the other hand, digital money has some disadvantages mostly for monitoring agencies; for instance, digital money makes it somewhat difficult to keep audit trails for effective financial audits [8]. The difficulty with audit trails resonates with the difficulty in taxation tracing and collection. It also comes with heinous money laundering that may evade the monitoring apparatus of government agencies [8]. Albeit the inherent cons, digital money has arrived to exist in the money market with the likelihood to cause limitations in paper money circulation in the future [9]. Certainly, digital money has challenges, especially regarding the auditing profession, which requires some professional innovation to enhance improved auditing and assurance services for digitized corporate financial operations [10]. |  |
| 2 | The digital economy is altering the status quo where humans enjoy government money uncontested [13]. This is because, the current monetary status which is controlled by the governments of the world is gradually shifting and giving way to the contemporary transition towards a digital economy made possible by cryptographic engineering innovation, which has brought an assortment of digital currencies to the fore [13, 14]. Therefore the governments of many nations are gradually building state digital currencies which are mainly digitized versions of their current government money and these digital money projects are somewhat radical as government digital money projects look rather different from current fiat paper money for example the United States dollar [13]  Crypto-currency is a means of payment, which mostly applies in an online system of selling and purchasing goods and services. Hence, digital money or digital currencies form an integral part of the financial market software structure [15]. Crypto-currency functions on the platform of distributed ledger assemblage, which is referred to as block-chain. According to [15] there is no known authority, which controls or mediates in the usage of cryptocurrency, the reason being that the software design works on peer-to-peer operations. The crypto currency could hardly function without the support of a decentralised and distributed database technology – the blochchain [4]. In their proposal for an improved electronic method of payment, which bypasses a trusted third party, [16] argue that before the thought of digital money, electronic commercial transactions relied only on banks to facilitate electronic payments between two parties as the trusted third party.  , [16] argue further, that electronic payment via the banking system is fraught with the high cost of the transaction, hence high bank charges; there are also limitations on the size of payments via the bank’s electronic systems. These, coupled with an inherent risk of the acceptable percentage of risk and fluidity of trust raise the cost of bank system electronic transactions. In addition, clients have ripped off their private information given the trust and fraud issues. Hence [16] initiated alternative electronic payment which uses cryptographic proof; thus instead of relying on a third party trust (the bank), two parties can use cryptographic means and engage in commercial transactions to sell, buy, pay and receive money without relying on a third party trust. Thus, the rooting of digital money is founded on convenience, low cost, third party trust issue avoidance and peer-to-peer direct dealing.  cryptocurrency transaction is an effective transfer of digital money by using cryptocurrcy between two authorised users of the block-chain network [17] |  |
| 3 | Blockchain is the core technology, which underlies the existence and functioning of digital money. In digital commercial descriptions, blockchain refers to a digitalised transaction ledger, which is managed by an array of computer systems in a protected frame that insulates it from fraudulent alterations and/or criminal hacking. The system’s technology makes it amenable for participants to engage in a one-on-one transaction, selling, buying, and payment without resorting to any authoritative third party control such as the government or the banking system. This means that the transactions keep growing and pile up into huge records, or blocks, and the computer array system keeps the records or blocks connected by means of cryptography [17, 18]. In their study, [17] expatiates the concept of blockchain further; they highlight that although blockchains are digital ledgers, they are tightly tamper protected and are stored in multiple computer systems devoid of repository and centralisation. Given its formation, blockchain enhances the ability of several participants to record their transactions simultaneously, and the encryptions remain unchangeable once the recorded transactions have been entered [17]. Accordingly, Bitcoin is the maiden amongst the currently diverse bourgeoning blockchain supported cryptocurrencies. The protective technique, which is cryptography remains a vital strategy to protect cryptocurrencies. Cryptography in the context of digital money and blockchain is a modern information technology technique, which protects and reserves the contents of an electronic message solely for the view of the sender and receiver without any third party accessibility. Hence, the concept derived its root from the Greek word Kryptos – a word used in Greek to describe a hidden object [19].  Cryptography is the bulwark that is pivotal to the emergence and bourgeoning of crypto-currency. |  |
| 4 | crypto-currency security relies on the algorithms of encryption and attendant decryption techniques made possible by cryptography [23]  The security of cryptography works the algorithm encryption wherein texts are scrambled to produce ciphertext – which is an indecipherable text format, which the recipient can use in decoding (decrypting) the data when received.  identifies three main techniques of cryptography namely authentication, asymmetric-key and symmetrickey. Authentication provides two main types of data security, which are integrity and source security. Integrity security ensures that the original data has not been modified along the channel of transmission. Source authentication assists in tracing the system or user who created the data.  Asymmetric-key, which is popularly referred to as public key is a system of cryptography that produces two keys – a public key and private key. Whilst data is sent with a public key, the recipient may only decrypt the data with a private key – thus enhancing protection to the sent data or information. The symmetric-key functions in stark opposite to asymmetric-key, in that one secret key is generated for both encryption and decryption of data; therefore under this method, only the holder of the secret key used in encrypting the data may have access to the information at the receiving end. Both methods of cryptography provide security to the operation of digital or crypto-currency |  |
| 5 | Cryptography provides the impetus to an important innovation orchestrated by digital money, which is the blockchain. Experts regard block-chain as the catalyst that enhances conceivable peer-to-peer digital currency exchange. Accordingly, block-chain is the umbrella that binds together all the Bitcoin transactions in a distributed database and with high-level security [25]. |  |