

# The Effectiveness of Blockchain Smart Contracts in Reshaping the Business Landscape in Nigeria

Ifeoma E. Nwafor\*

## SUMMARY

*The Corona Virus Disease 2019 (COVID-19) pandemic has had, and continues to have, a stark economic impact/aftermath on all sectors of life, particularly the health and business sector. Businesses across the globe were compelled to shut down and drastically reduce operations. The impact of commercial transactions coming to a halt resulted in changes that have affected commercial transactions and consumer behaviour. Reported sharp declines in businesses across the globe are unprecedented. At challenging times like this, information technology can come to the rescue to shape world trade and the future economy. Technological mechanisms, such as blockchain smart contracts, can be implemented to avoid economic uncertainty since physical contracts in contract formation and execution are almost impossible during a pandemic. Smart contracts are automation applications that run on blockchain platforms to digitally accelerate the authentication, control, or performance of contract agreements. It is faster, cheaper, accurate and provides a secure environment in multiple fields, from financial services, health-care, voting and energy resources. This article adopts a doctrinal approach. It highlights the role and convergence of technology, law and commercial transactions under COVID-19 and beyond. It explores the benefits of smart contracts and canvasses for legal measures to regulate/supervise blockchain technology in Nigeria effectively.*

## KEYWORDS:

*Blockchain smart contracts, Nigeria, smart contracts, pandemic, commercial transactions*

## I INTRODUCTION

There is a consensus amongst economists that the Corona virus disease 2019 (COVID-19) pandemic has had severe negative impacts on the global economy.<sup>1</sup> Before the virus became a global pandemic, early predictions were that most economies would lose at least 2.4% of the value of their gross domestic product (GDP) over 2020.<sup>2</sup> Several heavyweight companies worldwide have been forced to either declare bankruptcy, close numerous stores,<sup>3</sup> discontinue production<sup>4</sup> or announce permanent closure.<sup>5</sup> For instance, Nike Inc, the

world's largest footwear company, reported a fourth-quarter loss owing to stores' closure for weeks spurred on by the pandemic.<sup>6</sup> The company's shares plunged down 3.3% in extended trading.<sup>7</sup> Also, the United Kingdom's Victoria's Secret branch, a famous lingerie brand, filed for bankruptcy due to the country's lockdown and fierce competition from online rivals.<sup>8</sup>

The Nigerian economy has also been crippled owing to the shutdown of the global economy. The drastic drop in oil prices and demand on the global scene stripped Nigeria of its earnings, since oil is the primary revenue source.<sup>9</sup> The Nigerian statistics bureau reports that 'Nigeria's economy contracted by 6.1% year on year in the second quarter of this year'.<sup>10</sup> The pandemic has also affected the Nigerian labour force; numerous Nigerians became unemployed owing to the pandemic.

The world of business experiences changes in its mode of operations regularly. These changes are mostly aimed at improving the speed and efficiency in which commercial transactions are transacted. Businesses across the globe were forced to develop solutions for their craft amidst the pandemic. Various technological approaches and advancements were employed in the business scene to reduce the loss of earnings. Such technological approaches include the accelerated e-commerce boom,<sup>11</sup> the use of live-stream conferences to replace face-to-face meetings, artificial intelligence (AI) facial recognition software for check-in services and temperature checks in the hospitality industry, the use of robots in room service and housekeeping deliveries.<sup>12</sup> The deployment of blockchain smart contracts in the business world has been embraced owing to the reduction of face-to-face exchanges and physical contact during the pandemic.

Blockchain technology is one of the leading innovations that promote countries' digital transformation in the business world. Blockchain is 'a system of recording information in a way that makes it difficult or impossible to change, hack or cheat the system'.<sup>13</sup> It is a legit digital form of transaction duplicated and distributed across the entire network of a computer system on the blockchain.<sup>14</sup>

The benefits of blockchain smart contracts cannot be over-emphasized. However, the accelerated use of multiple digital advancements amidst the pandemic must be considered alongside the challenges and risks associated with

<sup>6</sup> Nike Swings to Quarterly Loss Due to COVID-19 Impact (Jun. 2020), <https://www.reuters.com/article/nike-results-idINL4N236S> (accessed 27 Feb. 2021).

<sup>7</sup> *Ibid.*

<sup>8</sup> Victoria's Secret UK Business Files for Bankruptcy (Jun. 2020), <https://cpp-luxury.com/victorias-secret-uk-business-files-for-bankruptcy/> (accessed 27 Feb. 2021).

<sup>9</sup> Yomi Kazeem, *Here's How COVID-19 has Battered Africa's Largest Economy* (Aug. 2020), <https://qz.com/africa/1895582/nigeria-economy-gdp-drops-6-1-percent-in-q2-2020/> (accessed 27 Feb. 2020).

<sup>10</sup> *Ibid.*

<sup>11</sup> E-commerce was in existence and use before the COVID-19 pandemic. However, with the pandemic it gained extreme popularity.

<sup>12</sup> Arthur Lau, *New Technologies Used in COVID-19 for Business Survival: Insights from the Hotel Sector in China*, 22 *Inf Technol Tourism* (2020), <https://doi.org/10.1007/s40558-020-00193-z>.

<sup>13</sup> *Blockchain Explained: What Is Blockchain?*, <https://www.euromoney.com/learning/blockchain-explained/what-is-blockchain> (accessed 27 Feb. 2021).

<sup>14</sup> Dmitry Efanov & Pavel Roschin, *The All-Pervasiveness of the Blockchain Technology*, <https://scholar.google.com/> (accessed 28 Feb. 2021).

\* Lecturer, Faculty of Law, Godfrey Okoye University, Enugu, Nigeria. Email: ifeomanwafor900@gmail.com; nwaforifeoma@gouni.edu.

<sup>1</sup> *Impact of the Coronavirus Pandemic on the Global Economy: Statistics & Facts* (Feb. 2021), <https://www.statista.com/topics/6139/COVID-19-impact-on-the-global-economy/> (accessed 27 Feb. 2021).

<sup>2</sup> *Ibid.*

<sup>3</sup> Zara, a popular clothing line, being a victim of the pandemic, closed 1,200 stores.

<sup>4</sup> Chanel and Hermes, which are famous luxury brands, discontinued production of their goods under the weight of the pandemic.

<sup>5</sup> Starbucks announced the permanent closure of 400 stores.

technological transformation. The majority of academic debate has focused on the impact of COVID-19 on the global economy,<sup>15</sup> the force majeure clause in contracts<sup>16</sup> and the e-commerce boom during the pandemic. The crucial benefits of technological approaches like blockchain-enabled smart contracts have been accorded little attention. To fill this gap, this article offers insights on the tremendous benefits of smart contracts during and beyond the COVID-19 era. In particular, this study introduces the blockchain smart contract and its relationship with cryptocurrency. It discusses its challenges and advances recommendations for tackling these challenges. It also stresses the need to regulate its use in Nigeria. This article is divided into four sections. Section 1 is the introduction, while section 2 explains blockchain technology, smart contracts, how they work and the advantages. Section 3 explores the role and relationship between technology, law and commercial transactions. It also highlights the need to supervise smart contracts to avoid negative consequences. Section 4 provides concluding remarks.

## 2 DEFINING BLOCKCHAIN TECHNOLOGY AND SMART CONTRACTS

Blockchain is a time-stamped series of immutable records of data managed by a cluster of computers not owned by any single entity. Each of these blocks of data are secure and bound to each other using cryptographic principles.<sup>17</sup> Blockchain is defined as a shared secured decentralized medium. It is a vast digital ledger of economic transactions, used to record anything of value and importance.<sup>18</sup> The decentralized nature of blockchain technology and its enhanced security and distributed ledger system are some of the key features that have made blockchain technology popular in a digital economy.<sup>19</sup> Blockchain is a technology that offers a way for untrusted parties to reach an agreement on a common digital history.<sup>20</sup> Standard digital history is important because digital assets and transactions are, in theory, easily faked or duplicated. It solves this problem without using a trusted intermediary.<sup>21</sup>

From the above definitions, one can rightly deduce that blockchain is an innovative way of storing and transferring information without that medium necessarily being

controlled by a person. Blockchain is celebrated as a technological innovation that permits the revolutionization of how society trades and interacts.<sup>22</sup> It allows 'mutually mistrusting entities to perform financial payments without relying on a central trusted third party while offering a transparent and integrity protected data storage'.<sup>23</sup>

Nick Szabo, an American computer scientist, first proposed smart contracts in 1994. He invented a virtual currency he named bit gold.<sup>24</sup> Several years later, he reintroduced the concept of blockchain as one related to commercial practices through the model of electronic commerce protocol between strangers on the internet.<sup>25</sup> A smart contract is a term used to describe computer code that automatically executes all or parts of the transaction steps of an oral or written agreement between two parties.<sup>26</sup> It is a self-executing contract with the terms of the agreement between the buyer and seller directly written into code lines.<sup>27</sup> It is a computer procedure envisioned to digitally facilitate, verify, or enforce code write-ups' negotiation or performance.<sup>28</sup> These transactions are traceable and irreversible.

At the core, smart contracts are self-executing contracts.<sup>29</sup> They help transfer money, shares, assets and property in a transparent, conflict-free manner without a middleman's services.<sup>30</sup> An example of a smart contract is a cryptocurrency for transferring funds to other users based on a public-private key pair of a digital signature.<sup>31</sup> Cryptocurrency is primarily connected with smart contracts. In other words, smart contracts are 'the basis for the transference of cryptocurrency and digital tokens' (in essence, a digital representation of a physical asset or utility).<sup>32</sup> Smart contracts 'are codes algorithms that implement a set of rules agreed to by all the parties running the blockchain'.<sup>33</sup> In summary, a smart contract is a digital version of the traditional paper-based contract that routinely verifies the performance and enforcement of the terms of a contract agreement.<sup>34</sup>

<sup>22</sup> Karl Wust & Arthur Gervais, *Do You Need a Blockchain?*, 2018 Crypto Valley Conference on Blockchain Technology (CVCBT) Zug Switzerland, 2018, doi: 10.1109/CVCBT.2018.00011.

<sup>23</sup> *Ibid.*

<sup>24</sup> Jorgen Svennevik Notland, *Smart Contract History and Law* (2019), <https://jorgen.medium.com> (accessed 28 Feb. 2021).

<sup>25</sup> *What are Smart Contracts?*, <https://cointelegraph.com/ethereum-for-beginners/what-are-smart-contracts-guide-for-beginners> (accessed 28 Feb. 2021).

<sup>26</sup> *Ibid.*

<sup>27</sup> *Smart Contracts: Overview. How it Works, Role in Blockchain Tech*, <https://www.corporatefinanceinstitute.com/resources/knowledge/deals/smart-contract/> (accessed 27 Feb. 2021).

<sup>28</sup> Ameer Rosic, *Smart Contracts: The Blockchain Technology That Will Replace Lawyers*, <https://blockgeeks.com/guides/smart-contracts/> (accessed 27 Feb. 2021).

<sup>29</sup> Bisi Akodu, *Cryptocurrency and Government Regulation in Nigeria* (Feb. 2019), <https://oal.law/cryptocurrency-in-nigeria> (accessed 19 Feb. 2021).

<sup>30</sup> Rosic, *supra* n. 28.

<sup>31</sup> Notland, *supra* n. 24.

<sup>32</sup> *Ibid.*

<sup>33</sup> *Blockchain & Cryptocurrency Regulation 2021: 12 Legal Issues Surrounding the Use of Smart Contracts*, <https://www.globallegalinsights.com/practice-areas/blockchain-laws-and-regulations/12-legal-issues-surrounding-the-use-of-smart-contracts> (accessed 28 Feb. 2021).

<sup>34</sup> *Smart Contracts: Overview. How it Works, Role in Blockchain Tech*, *supra* n. 27.

<sup>15</sup> Naveen Donthu & Anders Gustafsson, *Effects of COVID-19 on Business and Research*, 117 J. Bus. Res. 284 (2020).

<sup>16</sup> Carter B. Casady & David Baxter, *Pandemic, Public-Private Partnership (PPPs), and Force Majeure: COVID-19 Expectations and Implications*, 38(12) *Construction Mgmt. & Econ.* 1077 (2020). Renjith Matthew, *Force-Majeure Under Contract Law in the Context of COVID-19 Pandemic* (2020), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3588338](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3588338) (accessed 28 Feb. 2021).

<sup>17</sup> Ameer Rosic, *What Is Blockchain Technology? A Step-by-Step Guide for Beginners*, [https://blockgeeks.com/guides/what-is-blockchain-technology/#:~:text=A%20blockchain%20is%2C%20in%20the,cryptographic%20principles%20\(i.e.%20chain\)](https://blockgeeks.com/guides/what-is-blockchain-technology/#:~:text=A%20blockchain%20is%2C%20in%20the,cryptographic%20principles%20(i.e.%20chain)) (accessed 18 Feb. 2021).

<sup>18</sup> Chain Trade, *10 Advantages of Using Smart Contracts* (Dec. 2017), <https://medium.com/@ChainTrade/10-advantages-of-using-smart-contracts-bc29c508691a> (accessed 27 Feb. 2021).

<sup>19</sup> Jake Frankenfield, *Smart Contracts [Oct. 2019] 'Investopedia'*, <https://www.investopedia.com/terms/s/smartcontracts.asp#:~:text=A%20smart%20contract%20is%20a,a%20distributed%2C%20decentralized%20blockchain%20network> (accessed 18 Feb. 2021).

<sup>20</sup> *Ibid.*

<sup>21</sup> *Ibid.*

A smart contract consists of several parts, which are the signatories,<sup>35</sup> the subject of the agreement, the specific terms of the contract and the appropriate environment. Such an environment should allow the use of public-key cryptography that permits users to sign off for the transaction using their unique, specially generated cryptographic codes.<sup>36</sup>

### 2.1 How Does A Blockchain Smart Contract Work?

There are several steps before a transaction is added to a blockchain. Firstly, the parties to the contract would determine the terms of the contract transaction. Secondly, a block representing that transaction is created and translated into programming codes; the code means several different conditional statements. When the code is made, it is stored in the blockchain network and reproduced among the blockchain participants.<sup>37</sup> Subsequently, the code is administered and implemented by all computer networks. If a term of the contract is satisfied and all blockchain network participants verify it, then the relevant transaction is executed, and the transaction is complete.<sup>38</sup>

A standard paper contract utilizes the services of a trusted third party to execute a contract agreement. A smart contract eliminates the use of intermediaries or third parties, which automates the tedious manual process of performing and conducting contracts of the past.

A good example to further explain a smart contract process is an agreement between a farmer and an insurer, where the insurer will pay the farmer when temperatures drop below a certain degree.<sup>39</sup> With a traditional contract, the farmer would check the temperature daily and make a claim to the insurer once the temperature matches the accepted degree. Then, he would wait for the insurer to confirm his claim and pay him or dispute the claim. For automated contracts, the parties would generate a smart contract that automatically receives a feed of the official temperature<sup>40</sup> and then transfers funds from the insurer's account to the farmer's account once the temperature reaches the agreed-upon level. A third party is not needed to complete the transaction.<sup>41</sup>

A smart contract is also likened to a vending machine, where you drop the required amount of a cryptocurrency into the automated contract, and your driver's licence, escrow, house ownership or anything of value rights drops into your account.<sup>42</sup> It works on an 'if then principle', that is, for instance, the ownership right of a property is passed on to the buyer immediately the agreed sum is sent to the system.<sup>43</sup>

There are numerous benefits of employing smart contracts in the COVID-19 era and beyond. During a pandemic, physical contact is almost impossible; smart contracts can

be employed since no intermediary is required in executing the contract. It enables a hitch-free contract development and performance that would radically transform the landscape for the business community. The use of smart contracts provides numerous potentials to tackle pressing and emerging demands in the commercial fields in times like the COVID-19 era.

### 2.2 Advantages of Smart Contracts

#### 2.2.1 Accuracy and Transparency

Accuracy is a fundamental requirement of a smart contract to record all the contractual terms and conditions precisely. An omission, no matter how small, would have a negative effect on the transaction. Contractual terms and conditions are pre-defined and pre-embedded in a smart contract. Once a condition is met, remittance occurs spontaneously and is recorded.<sup>44</sup> Automated contracts avoid such snags of manually filling out bulky paperwork.<sup>45</sup> It is less prone to errors owing to the absence of human intervention in the contract execution.

Smart contracts are fully transparent and available every second of the day, all days of the week and all year round. The transaction is archived, and it can be reviewed, audited and validated by relevant parties.<sup>46</sup> Tracing and archiving traditional contracts is tedious, and it is often maintained offline. A smart contract transaction is traceable from the point of inception to the end of the contract execution.<sup>47</sup> Since all parties have access to the terms of a contract, no party can deny or alter his obligations. This enhances complete transactional transparency and reduces the likelihood of manipulation, bias or error. This also decreases monitoring costs and risks of opportunistic behaviour.<sup>48</sup>

#### 2.2.2 Intermediaries, Automation and Time Saving

Several go-betweens, such as advisors, estate agents, notaries and other intermediaries, play vital roles with paper-based contracts, slowing down the entire business transaction. Smart contracts run on software, they are automated and programmable, and they run on the internet.<sup>49</sup> Their automated nature dispenses with the need for intermediaries, so deals are executed speedily, which saves hours off traditional business processes.

#### 2.2.3 Cost

The elimination of intermediaries or cost fees during the execution of a smart contract saves on costs. Smart contracts improve the efficiency and speed with which commercial arrangements are carried out. They are automated, so less or no time is spent

<sup>35</sup> The contractual parties.

<sup>36</sup> *What are Smart Contracts?*, *supra* n. 25.

<sup>37</sup> *Blockchain & Cryptocurrency Regulation 2021: 12 Legal Issues Surrounding the Use of Smart Contracts*, *supra* n. 33.

<sup>38</sup> *Ibid.*

<sup>39</sup> *Blockchain & Cryptocurrency Regulation 2021: 12 Legal Issues Surrounding the Use of Smart Contracts*, *supra* n. 33.

<sup>40</sup> Using the measure agreed on by the parties.

<sup>41</sup> *Blockchain & Cryptocurrency Regulation 2021: 12 Legal Issues Surrounding the Use of Smart Contracts*, *supra* n. 33.

<sup>42</sup> *What are Smart Contracts?*, *supra* n. 25.

<sup>43</sup> *Ibid.*

<sup>44</sup> *What Is a Smart Contract in Blockchain* (Oct. 2020), <<https://www.simplilearn.com/tutorials/blockchain-tutorial/what-is-smart-contract> (accessed 27 Feb. 2021).

<sup>45</sup> *Trade*, *supra* n. 18.

<sup>46</sup> *What Is a Smart Contract in Blockchain*, *supra* n. 44.

<sup>47</sup> *Ibid.*

<sup>48</sup> *Ibid.*

<sup>49</sup> *Ibid.*

proof-reading paperwork. It is cost-effective, distances pose no barrier, and they can be executed in minutes.<sup>50</sup>

#### 2.2.4 Security

Automated contracts employ the highest standard of data encryption currently available. It is one of the most secured technological tools on the world wide web.<sup>51</sup> If developed properly, it is almost impossible to hack into a smart contract. Complex cryptography is deployed to keep the information on the contract secure.

#### 2.2.5 Trust

The autonomous, transparent, and secure features of a smart contract eliminate the possibility of manipulation, bias or error. This builds trust amongst parties in a commercial transaction. Smart contracts promote trust. Transactions are performed following predetermined laws, and the encrypted records of these transactions are circulated over contractual parties.<sup>52</sup> The information, terms and conditions of the contract are clear – verification by parties and the immutability of the work guarantee that the smart contract cannot be broken. Smart contracts offer better security as all actions are recorded and certified. Blockchain transaction documents are encrypted. That makes them extremely difficult to manipulate or hack into. Security features can also be integrated into a smart contract to automatically generate backups and duplicates in the event of damage, data losses to the original one or hacks.<sup>53</sup>

### 2.3 Smart Contracts and Commercial Transactions

Currently, automated contracts are significant in trade in banking and credit services, digital financial assets with the legal transfer of ownership, healthcare, logistics processes, decentralized storage, use of renewable energy and voting.<sup>54</sup> Smart contracts are maximally utilized in supply chain management. Supply chains are now more transparent because the automated procedure facilitates the smooth flow of goods and promotes trust in the trade. Smart contracts record ownership rights as goods travel through the supply chain, verifying, who is accountable for the product at any given time. The final product can be confirmed at each stage of the delivery process until it reaches the customer. Smart contracts can be employed in the insurance sector, mortgage and financial services sector. The opportunities for smart contracts in financial services include payment processing, trade finance, resolution of financial instruments, and regulatory technology such as streamlined ‘know your customer’ certification.<sup>55</sup>

Nations and businesses are embracing the use of smart contracts in various areas. For instance, a group of 61 South Korean and Japanese banks are testing Ripple’s Blockchain and smart contracts to promote cross-border money transfers

between the two nations. Also, four major American banks<sup>56</sup> and the Depository Trust and Clearing Corporation successfully traded credit default swaps on an Axoni developed blockchain-enabled smart contract.<sup>57</sup>

## 3 THE ROLE AND RELATIONSHIP BETWEEN TECHNOLOGY, LAW AND COMMERCIAL TRANSACTIONS

### 3.1 Technology and Commercial Transactions

Pre-COVID-19 pandemic technology played a significant role in commercial transactions. In business, technology has made it possible for a wider group of persons to transact. It has enhanced the growth and development of commercial transactions. The internet, a product of technology, makes communication easier and faster. A company’s in-house staff do not necessarily need to converge in a specific location to carry out their assigned task; mails, zoom meetings, and other digital channels have made the transfer of information and communication in the workplace expedient.

Technology has enhanced business and marketing growth. Advertising is an effective way of promoting a business. Entrepreneurs and business partners at all levels have utilized social media platforms to build traffic and create a visible presence. Instead of relying solely on television advert placements, thanks to technology, businesses now focus on employing experts who are familiar with social media marketing. Technology in advertising has made it possible for a business to find its target customers, thereby saving funds and making more profit. It has made it easier to have a storage database; hence corporate entities maintain a database of their clients/customers, build relationships with them and receive feedback. The result? Businesses improve on the goods and services they offer to meet demand, make more informed strategic decisions, close more deals and make more profit.

The COVID-19 pandemic heightened the convergence between technology, law and commercial dealings. Technological tools prevented companies, industries and the world economy from experiencing a total economic blackout. The staff of companies could work remotely, thanks to digital channels like Google classroom, Zoom cloud meetings, Microsoft teams, emails and AI robotic services. Schools could function, and students continued learning using technological mechanisms.

The McKinsey Global Survey of executives<sup>58</sup> reveals that consumers moved drastically to online channels during the pandemic, companies and industries responded in turn. The survey results confirm the rapid shift toward interacting with customers through digital media.<sup>59</sup> Also, the arbitration

<sup>56</sup> Bank of America Merrill Lynch, Citi, Credit Suisse and JP Morgan.

<sup>57</sup> *What are Smart Contracts?*, *supra* n. 25.

<sup>58</sup> The survey was conducted from 7 Jul. to 31 July 2020 and gathered responses from 899 C-level executives and senior managers representing the full range of regions, industries and companies.

<sup>59</sup> McKinsey, *How COVID-19 Has Pushed Companies Over The Technology Tipping Point – And Transformed Business Forever* (Oct. 2020), <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/how-COVID-19-has-pushed-companies-over-the-technology-tipping-point-and-transformed-business-forever> (accessed 26 Feb. 2021).

<sup>50</sup> Cf., *Smart Contracts – Overview, Uses, Benefits, Limitations*, <https://corporatefinanceinstitute.com/resources/knowledge/deals/smart-contracts/> (accessed 20 Feb. 2021).

<sup>51</sup> Trade, *supra* n. 18.

<sup>52</sup> *Ibid.*

<sup>53</sup> *Ibid.*

<sup>54</sup> Cf., *supra* n. 50.

<sup>55</sup> *Ibid.*

community swiftly implemented harmonized policy reforms to adopt online dispute resolution (ODR) mechanisms to facilitate the resolution of arbitration matters.<sup>60</sup>

Technology magnified the running of a virtual office. Some business owners no longer maintain a physical office. This trend was emboldened by the outbreak of the pandemic, which has lasted from 2019 to date. Naletamby rightly opines that digital learning and workspaces connected by internet infrastructure and virtual platforms have increasingly become a stronghold for learning institutions and businesses as they connect remote students and workers worldwide.<sup>61</sup>

The COVID-19 pandemic has destabilized global commerce. Still, innovative solutions and technology tools offer a glimmer of hope for industries to boost resilience. The importance of technology can never be underestimated and has never been more useful. The business world is embracing and maximizing the use of various technological tools to avoid being victims of the pandemic. Many developed and deployed digital services are universal and inclusive, which will help shield businesses from being stalled or eventually folding up.

### 3.2 Law, Technology and Commercial Transactions

The preceding sections of this study explore the benefits of smart contracts amidst and beyond the COVID-19 era. Cryptocurrency is interconnected with smart contracts, it can be argued that a smart contract can only exist through it. The interconnectivity of smart contracts and cryptocurrency poses the questions, are smart contracts enforceable in Nigeria? Is cryptocurrency legal tender in Nigeria?

Electronic contracts are recognized in Nigeria by existing legal frameworks such as the Evidence Act and the Cybercrime Act.<sup>62</sup> This recognition would likely ensure that courts recognize the code's validity that executes a smart contract's provisions.<sup>63</sup>

Nigeria has no specific law or regulations on blockchain technology or smart contracts. However, specific existing legislation and regulations generally apply to some blockchain applications across various trades.<sup>64</sup> The Investments and Securities Act 2007 regulates investments and securities in Nigeria and establishes the Securities and Exchange Commission (SEC), which is empowered to enforce the Act.<sup>65</sup> Among other things, the Act regulates collective investment schemes, initial public offerings and securities. Therefore, initial coin offerings (ICOs), securities token offerings, token generation events and similar offers of securities to

the public may fall under SEC regulation.<sup>66</sup> The Commission's position is that crypto-assets are securities unless proven otherwise. Consequently, all blockchain-based offers of digital assets in Nigeria and Nigerian sponsors or issuers, foreign sponsors or issuers targeting Nigerian investors shall be subject to the Commission's regulation.<sup>67</sup>

Section 55 of the Investment and Securities Act, 2007 covers Electronic and other means of issuing and transferring securities. It provides thus:

55(1) Securities registered by the Commission including securities issued pursuant to part XIII of this Act, may be issued or transferred electronically or by any other means or system approved by the Commission under such terms and conditions as the Commission may prescribe, through a securities exchange or capital trade point or any other self-regulatory organisation.

This section's provision points out that the Act recognizes digital securities that are transferable in electronic format. However, the law only relates to electronic securities.

Currently, cryptocurrency is not legal tender in Nigeria. Recently the Central Bank of Nigeria (CBN) issued a five-page statement reiterating its stand on cryptocurrency. The statement highlighted the fact that the CBN, through its circular dated 12 January 2017, had forbidden all banks in the country to use, hold, trade and/or transact in cryptocurrency.<sup>68</sup> Nonetheless, there is an increased use of cryptocurrencies for illegal activities by cybercriminals (especially for money laundering) and terrorists in Nigeria.<sup>69</sup> CBN elucidated that cryptocurrencies are issued by unlicensed and unregulated entities, which contravenes existing law as they are not legal tender.<sup>70</sup> It further justified the ban by highlighting that the anonymity and volatility of cryptocurrency threatened the stability of Nigerian financial institutions.

Irrespective of the compelling reasons to regulate cryptocurrency, it seems the process is an enigma for regulators and

<sup>60</sup> Ifeoma E. Nwafor, *COVID-19 Pandemic and the Future of Arbitration Practice in Nigeria*, 6 BJPL 360 (2020).

<sup>61</sup> Stefan Naletamby, *COVID-19 Pandemic Bolsters Case for Technology-Based Economic Resilience* (Apr. 2020), <https://www.google.com/search?q=Technology+in+commercial+transactions+during+the+pandemic&oq=Technology+in+commercial+transactions+during+the+pandemic&aqs=chrome:69i57j33.15063j0j9&client=ms-android-transion-tecno-rev1&sourceid=chrome-mobile&ie=UTF-8> (accessed 26 Feb. 2021).

<sup>62</sup> Section 93 (2) and (3) of the Evidence Act and s. 17 of the Cybercrimes Act recognize the use of electronic signatures.

<sup>63</sup> *MTN (Nig) Comm Ltd v. CC Inv Ltd* (2015) 7 NWLR (Pt 1459) 444.

<sup>64</sup> Senator Ihenyen, *Nigeria: Blockchain Comparative Guide* (May 2020), <https://www.mondaq.com/nigeria/technology/935300/blockchain-comparative-guide> (accessed 20 Feb. 2021).

<sup>65</sup> See 2007 Investment and Securities Act, s. 13.

<sup>66</sup> *Statement on Digital Assets and their Classification and Treatment* (Sept. 2020), <https://sec.gov.ng/statement-on-digital-assets-and-their-classification-and-treatment/> (accessed 28 Feb. 2021).

<sup>67</sup> Other regulatory frameworks could apply such as the Nigeria Data Protection Regulation 2019, the Economic and Financial Crime Commission (Establishment) Act 2004, the Money Laundering (Prohibition) Act, 2011 (as amended), the National Health Act, the Finance Act 2019, the National Identity Management Act 2017, the Companies and Allied Matters Act, the Three-Tier KYC Requirements 2013; the Anti-money Laundering/Combating the Financing of Terrorism (Administrative Sanctions) Regulations 2018, the AML/CFT Policy and Procedure Manual 2018, the Consumer Protection for Banks and Other Financial Institutions 2016, the Consumer Protection Regulations 2019, the Guidelines on Mobile Money Services in Nigeria, the Guidelines on International Mobile Money Remittance Services, the Guidelines on International Money Transfer Service and the Central Bank of Nigeria Act 2007.

<sup>68</sup> Sandal Handagama, *Nigerian Central Bank Says Its Ban on Crypto Accounts Is Nothing New* (Feb. 2021), <https://www.coindesk.com/nigerian-central-bank-says-its-ban-on-crypto-accounts-is-nothing-new> (accessed 28 Feb. 2021).

<sup>69</sup> The paper recognizes that cryptocurrency is increasingly being used for money laundering and terrorism. However, this subject will not be discussed in detail because it is beyond the scope of this study.

<sup>70</sup> Aderonke Alex-Adedipe & Olawale Atanda, *Nigeria: Prohibition of Cryptocurrency Transactions by the Central Bank of Nigeria* (Feb. 2021), <https://www.mondaq.com/nigeria/fin-tech/1036556/prohibition-of-cryptocurrency-transactions-by-the-central-bank-of-nigeria> (accessed 28 Feb. 2021).

policymakers. This article argues that legalizing and regulating cryptocurrency in Nigeria would positively reshape commercial transactions in challenging times like the COVID-19 era.<sup>71</sup>

#### 4 CONCLUSION

Blockchain technologies have been in the news headlines in recent years for their revolutionary impact on currency, financial markets, artificial intelligence and technology as a whole. As a decentralized ledger that ensures transparency and data security while preventing double-spending, blockchain is intertwined with cryptocurrency, which functions through it. Blockchain smart contracts have gained popularity owing to their advantages over traditional paper-based contracts for several industries. They are more reliable, speedy and trustworthy than traditional contract law, and they offer better security as all actions are

recorded and verified. Before the COVID-19 pandemic, contracts were negotiated, signed and performed by parties in face-to-face meetings and dealings. International trade involved parties from different countries, regions and continents. The pandemic has resulted in travel restrictions, closure of land and coastal borders by several countries and the halting of businesses worldwide. The business world employed various technological mechanisms, such as smart contracts, to ensure cash inflow in the global economy. This article highlights the benefits of automated contracts in reshaping the business community in Nigeria. The current CBN ban on cryptocurrency transactions will hinder the Nigerian commercial circle from harnessing the effectiveness of smart contracts during the COVID-19 era and beyond. This article canvasses for legal measures that will effectively regulate digital assets, which include cryptocurrency, cryptocurrency transactions in Nigeria and minimize the threat of cybercrimes and terrorism usually linked to such transactions.

<sup>71</sup> The United States (US) have passed laws affecting these technologies. In Colorado, a bipartisan bill was passed which promotes the use of blockchain for government record-keeping. There are other securities and sales laws that provides regulatory authority over the use of cryptocurrencies in the US. There is no specific European Union (EU) Parliament legislation on cryptocurrencies. However, the fifth EU Anti-Money Laundering Directive, which came into force in Jan. 2020 will greatly affect cryptocurrency use.