



BLOCKCHAIN (KLEROS) AS A TOOL FOR TRANSFORMATION OF LEGAL SERVICES AND JUSTICE DELIVERY IN AFRICA

Olaleye Oladimeji
2021.



Outline

1. Abstract
2. Introduction
3. Decentralised Virtual Law Firms
4. Types of Law Firms
5. Key Benefits of Decentralization
6. The African Continental Free Trade Area (AfCFTA) and Dispute Resolution
7. What is Blockchain and Non-Fungible Tokens?
8. Enterprise Management Systems
9. Gen-Z Lawyers and the Gig economy Core Virtual Law Firm Tools
10. Digital Seals and Stamps
11. Tokenising legal services
12. Escrow as a Service
13. Arbitration and Kleros Court
14. Importance of Digitising legal services
15. Major Challenges
16. Conclusion



Abstract

Africa is richly blessed with natural and human resources, making it a destination for Foreign Direct Investments as one of the fastest growing economies. The African Continental Free Trade Area (AfCFTA) is a form of unification of the African Continent and sets a positive trajectory for Africa to thrive in all trade aspects, legal services, manufacturing, imports, exports and continental/regional registry systems (IP, land, court). According to statistics released in March 2021, Nigeria ranks first globally on the blockchain payment system (Cryptocurrency) adoption index, with actively participating citizens (Buchholz, 2021).

The Nigerian Bar, as in many jurisdictions, has faced turbulent times in light of the pandemic in 2020/2021. More than ever, the need arises for digitizing legal service delivery. Advancements such as digital seals can be hashed and personalized as embedded QR codes (identification tags) to replace the need of physical sealing. This research paper seeks to make a case for the liberalisation of legal service delivery for lawyers in Africa and the justice delivery systems in its various jurisdictions, by infusing disruptive technologies such as blockchain. Nigeria is a major case study in this research paper.

Our findings can be implemented and form part of the background architectural framework in the repositioning of the African legal system in line with the AfCFTA.



Introduction

The craft of rendering services by lawyers to clients is an age-long vocation that has developed its own laid down practices and also "unconscious" traditional processes (Rutter, 1961). The relevance of such practices in the context of the digital age is a key factor. Astonishing possibilities abound that can be adapted from the practices of this legal vocation and its proper infusion with technological solutions.

Bridging the gap between law and technology in Africa is a mission that requires open-mindedness of the Bar to the possibilities and practices that can align the 21st century lawyer with the realities of the present digital age or else it can risk becoming obsolete (OECD, 2016). In a country like Nigeria, all lawyers are admitted dually as Barristers and Solicitors of the Supreme Court of Nigeria. In the UK, unlike several African jurisdictions, Solicitors are distinctly awarded from Barristers. The conferment of these statuses highlights the various distinct roles lawyers can play in courtroom advocacy, arbitration and business law practices (Ekobi and Ekop, 2021).

This research seeks to address issues and possibilities in the effective digitisation of legal service delivery across various jurisdictions by bridging the gap between Law and Technology. Major examples of technological solutions to be considered in this paper are Kleros (an online arbitration protocol) and Hire The Law (an Enterprise/Practice Management Solution for lawyers designed by the author of this paper).



Decentralised Virtual Law Firms

Law firms can adopt decentralized structures which allow decisions to be made by junior employees in both management and tech-style operations (a business model adopted by Hire The Law for its virtual law firms). Organizations with a decentralized structure can assign decision-making prerogatives to staff and give autonomy to junior associates to take the necessary decisions in handling briefs. Law firms can also allow lawyers to autonomously work from any convenient location, take credit for delivered tasks, earn bonuses for extra work hours and prepare and send out client introductory service proposals on behalf of the law firm.

Types of Law Firms

The classification of Law firms in many jurisdictions such as Nigeria are of various types such as Sole practitioner or proprietorship, Associateship and Partnership (Okoye, 2015).

- A.** Sole practitioners or proprietorship: In this structure, a lawyer is the sole owner of the firm and operates legal practice alone. In some instances, he or she may employ other lawyers and staff to assist with work. Several small law firms are structured in this way in Nigeria.
- B.** Associateship: This type of law firm is set up by two or more lawyers. Each Associate has a separate office in the firm and maintains clients personally as a sole practitioner. However, they jointly contribute to the cost of running the firm, employing support staff and procuring equipment.
- C.** Partnership: This is similar to the common partnerships in the business world. It involves several partners who agree to contribute to operate a law firm collectively and share profits or losses. Each of the Partners must be lawyers in Nigeria as the Rules of Professional Conduct prohibits lawyers to practice law in partnership with a non-lawyer (Rule 5(1) RPC).

Some large law firms have several dozens of lawyers and employees including paralegals, administrative staff, human resource specialists and librarians - and office locations that can exist in multiple cities, states, and even countries. These firms tend to be less flexible with work hours than typical law firms. Tech-driven law firms generally record superior work output in terms of closing deals and/or client engagement yearly and the potential for scalability is huge.

For example, with virtual operation structures, any law firm in Nigeria can be able to remotely hire freelance lawyers or legal teams to work from any of the 36 states of



Nigeria or outsource work in any part of Africa, in a result-oriented manner. Lawyers are not limited by state territory and can practice in any state without restriction. Invariably, the law firm maintains a form of practice presence in each state and can easily take on clients in any state with a cost-effective management structure by leveraging on technology.

Key benefits of organizational decentralization include:

- i. Proper resource planning;
- ii. Enabling a type of 24/7 service operation;
- iii. Rapid responses to market dynamism and competition;
- iv. Better capacity and resources to handle multiple cases;
- v. Allows top management to focus on long-term goals rather than day-to-day problems;
- vi. Encourage accountability and taking ownership of the work;
- vii. Enable talent development and leadership skills in the workforce;
- viii. Improve the quality and speed of the decisions being made;
- ix. Foster innovation and open up the exchange of ideas;
- x. Improve the staff turnover and staff satisfaction;
- xi. Sense of importance, and making staff feel contributory to the direction and progress of the law firm.

These and many more can be beneficial to law firms with decentralized structure and practice management tools.

The African Continental Free Trade Area (AfCFTA) and Dispute Resolution

The Protocol on rules and procedures of the settlements of disputes applies to dispute resolution in AfCFTA. It establishes a Dispute Settlement Body (DSB) empowered to set up panels to determine trade disputes between member states. The panels are established if a party is unable to resolve through dispute settlement means such as arbitration, mediation, conciliation and good office. Which central body will then determine disputes between individuals and companies arising from the operations of the AfCFTA?

The DSB's jurisdiction can be expanded to the individual disputes or establishment of a



separate dispute resolution mechanism to determine arising disputes from AfCFTA, considering sovereign states rarely litigate against one another.

Kleros Court can also be explored as a dispute resolution mechanism of first resort in (after Consultation) arbitration, good offices, mediation and conciliation by the disputing member states, according to Articles 8 and 27 of the Protocol on rules and procedures of the settlements of disputes. However, this may require appointment of specially trained Arbitrators, Conciliators and Mediators as jurors, due to the special nature of State disputes.

The Kleros Court dispute resolution process is a decentralized arbitration resolution service of incentivized Jurors and will be further examined in this paper.

The operation of the protocol on rules and procedures of dispute settlements is similar to the Brussels regulation which applies in the European Union. The applicable protocol in AfCFTA only applies to disputes between state members while in EU, the regulation is directly applicable to state members without need for additional ratification (Bird and Bird LLP, 2013). However, in Nigeria, Treaties such as AfCFTA must be enacted into law by the National Assembly before they can be applicable in Nigerian courts. This is by virtue of Section 12 (1) of the Constitution of the Federal Republic of Nigeria, which states thus:

No treaty between the Federation and any other country shall have the force of law to the extent to which any such treaty has been enacted into law by the National Assembly.

Some legal experts have called for the expansion of the operation of the AfCFTA to function similarly to the Brussel Regulation of the EU by determining individual disputes. However, this will require the enactment of the AfCFTA by lawmakers in some jurisdictions such as Nigeria. An implication of this is that disputes between individuals arising from AfCFTA can be heard by courts of state members, particularly in civil and commercial matters. This will further deepen the operation of legal regimes and services that can be offered by lawyers.

What are Blockchain and Non-Fungible Tokens?

Blockchain is an open distributed ledger technology system that records data or transactions in an unchangeable and transparent manner. The blockchain achieves this through cryptographic hashing and offers benefits such as trustability, collaboration, organization, identification, credibility, and transparency. The potential of this technology has attracted the attention of other areas in recent years, leading to a vast number of new projects and investments especially in the area of cryptocurrencies.



The decentralization of the blockchain enables work teams to openly research data, communicate, participate, collaborate, and contribute. As of February 2021, Nigeria's trading volume kept growing and data had shown that Africa is the continent with the highest growth rate in bitcoin trading volume as of Q2 and early Q3 2021 (UsefulTulips, 2021).

Non Fungible Tokens (NFTs) represent a unit of data stored on the blockchain verifying a digital asset as unique and not interchangeable. These applications allow individuals to own, offer and sell their digital assets like art or data on the blockchain.

An NFT can be used to represent media files such as photos, documents, videos, audios and may also hypothetically be used to issue court judgments or evidence as a global use standard. These pieces of case evidence and final judgements can be minted on the blockchain as final decisions and as admitted evidence of the court, to remain authentic and unchangeable copies.

It also eliminates the risk of forgery and losing documents based on the nature of NFT technology. Special identifiable NFTs can be issued to the winning party in adjudicated matters and like many NFT projects, this can be achieved through blockchain protocols such as Ethereum, Binance Smart Chain, Despace etc.

Enterprise Management Systems

The Enterprise Management Systems (EMS) are business scale application softwares that address the different software needs of large organizations (Moller et al., 2006). EMS solutions usually include core business functions such as:

- i.** Financial management and budgeting;
- ii.** Operations and Human Resource management;
- iii.** Customer Relationship Management;
- iv.** Analytics, logistics and supply chain management.

Enterprise Management Systems are fit for large law firms and can also be designed to provide suitable tools for small or medium law firms to also function effectively within a similar operation ecosystem. Hire The Law provides the opportunity to tap into the potential of these outlined technologies to bridge the gap between tech and law. Kleros can be integrated at the cores of enterprise management softwares as a dispute resolution mechanism to resolve arbitration cases or disputes that may arise from contractual obligations.

Enterprise management system protocols can be implemented for law firms and in-house counsels to use as enterprise and legal practice management softwares to operate digitally and gain better visibility in the professional marketplace. These system



applications assist teams with support and manage large, complex and also, geographically-distributed projects.

EMS are also similar to Enterprise Resource Planning (ERP) solutions and can also encompass similar tools.

Gen-Z Lawyers and the Gig economy

The gig economy can be defined as a working economy that integrates independent contractors, online workers, contract staff, on-call and temporary workers into the work environment (Halliday, 2021). A major feature in this type of work economy in correlation to legal practice is the opportunity to earn by freelance lawyers and law firms, offering full time or part-time services, particularly suited to each client's requests and needs.

Law firms are unable to match the growing unemployment rate for law graduates and new lawyers being called to the Bar. The gig economy provides the opportunity for every lawyer to earn and learn effectively beyond full-time employment. Every lawyer and law firm can be given ample opportunity to showcase their services and quote professional fees on equitable grounds, based on value offered.

Gen Z Lawyers are new-age professionals that characteristically desire a new set of principles and motivating factors in a workplace. A study conducted during this research revealed that the duration of employment of lawyers with law firms is usually determined by some of these principles and values present in the work environment. Primarily, while employers are determined to obtain results on assigned tasks, the Gen Z Lawyer cares more about the following values:

- Flexibility in work style, schedule and environment (e.g. remote work culture).
- Adequate gratification and acknowledgement for work done.
- Deriving meaning, purpose and prestige from work done.

Conclusively, the newer generation of lawyers cares to contribute positively to the world in general, sufficient remuneration and to be acknowledged for their work.

Many of the tools required for legal practice management can be made available at the fingertips of lawyers to utilize for daily needs from an operational dashboard of available tools on smart devices. Some of the practice management tools are enumerated below.



Core Virtual Law Firms Tools

- 1. Virtual Law Firm with custom UI/UX design:** Law firms with online presence have proven to achieve more and attract more clients by making a name for themselves with online visibility, displayed experience, search engine optimization (SEO) and other tools.

The concept of virtual law firms involves a comprehensive online directory for law firms and individual lawyers to showcase their services in a manner that allows clients to make information-based decisions. Lawyers can showcase their qualifications, services, areas of expertise and more to inform clients of their expertise, with contact options.

Traditionally, finding a lawyer or a law firm is done through means such as referrals, adverts, agents, family and friends. This is a cheaper alternative and/or supplement for every law firm and lawyer, in opposition to building a full-scale website to use. They can showcase themselves in a well-structured and detailed legal website directory.

- 2. Team collaboration tools and workspace:** Collaboration tools for legal teams to work virtually and create the necessary workspace for teams are a necessity in the modern-day world and realities of the post COVID-19 pandemic.

Legal teams have had to work in varying dynamic conditions and much more lately during the pandemic from their homes. Teams have to fashion ways to work together collaboratively and also control access to confidential client documents on a need basis.

- 3. Secured central document archive for online cloud storage:** A central archive for law firms to store their client data securely on cloud servers and grant access to necessary team members. Adequate cloud encryption is necessary for data protection and privacy of sensitive files that are stored in the cloud. Restriction of access is necessary to protect sensitive information from the public glare of the blockchain and rather have them stored in secure Microsoft or AWS encrypted cloud servers.
- 4. Time scheduling and calendar management tool:** Tools to manage calendar and time schedule can be used by legal professionals to keep track of tasks, deadlines, schedules, meetings, emails etc. These tools are necessary to automate appointments and other to-dos to keep in touch with clients, which is a major priority for legal professionals. Keeping up with the various tidbits required in the client management process can be burdensome and overwhelming. A survey conducted has shown that Lawyers are more open to the idea of a legal assistant to keep up with daily requirements of their schedule and ultimately assist their goals in a positive manner.
- 5. Remote hiring:** Solutions to hire legal services online across various areas of law practice is a possibility. Lawyers and Law firms are profiled in a legal directory



based on areas of proficiency. Lawyers and clients can connect online to hold briefings and meetings on issues and transmit necessary instructions. Conventionally, meetings had to be held physically between Lawyers and Clients but technology has made this possible without the need to meet in person. Clients can make hiring decisions on a short term or long term basis, all in one click from the comfort of their offices and homes.

- 6. Escrow as a service:** It is a common vice in the legal industry for fees to be unpaid by clients upon completing instructions. Lawyers are left with the rigours of issuing demand claims or instituting an action for recovery of professional fees. These challenges can be addressed with decentralized finance and escrowed legal fees locked in a smart contract that unlocks the funds upon satisfactory delivery to the client. Protocols such as Hire The Law and Kleros Escrow offer features that solve these issues and protect legal fees via smart contracts.

This form of fund security is next to none for professionals and their fees, who are ultimately guaranteed payment of their fees either through fiat or tokens locked in smart contracts.

- 7. Video conferencing facility:** This facility gives clients the opportunity to meet up with Lawyers easily. Lawyers can hold virtual calls from any location using their smart devices to discuss issues with clients.
- 8. Automated document generation:** Templates, contracts and processes for legal documents can be automatically generated by infusing Artificial Intelligence capabilities which can create documents based on certain sets of predetermined factors.

Compliant documents for various transactions and jurisdictions can be created with these same technologies. However, this does not completely replace the need for human contribution for the creation of legal documents. Necessary inputs are required to create a wholesome output. Also, Lawyering skills and languages vary in drafting.

- 9. Electronic signature:** Secured signature service for law firms, lawyers and clients is a great tool to execute documents that require signing. The hassle of signing documents physically can be solved and unauthorized changes to signed documents will be detected with this tool.
- 10. Billing:** Various service billing types are available for lawyers and among the commonly adopted ones are the one-time payment, recurrent payment, hourly payment and alternative asset payment. Hourly billing can be adopted by African law firms, factoring the amount of work to be done and the rates.



Digital Seals and Stamps

The concept of a seal of authenticity has been explored in several jurisdictions, with legal practice professional bodies such as the Nigerian Bar Association (NBA) adopting pre ordered stamps. The timeline for ordering, processing and delivery of the NBA stamps is way too extensive and can be better structured through the use of digital stamps and seals. Usually, NBA stamps are ordered online or by a lawyer submitting a physical application for issuance in a chosen number of copies (Usually in packs of 24, 48 and 96 copies). Seals and stamps were recognized as a necessity in Nigeria, they have to affix the stamp and seal to any court process or legal document prepared to be deemed valid. This mandatory requirement was removed by the Rules of Professional Conduct for Legal Practitioners (Amendment) Rules 2020.

Digital seals can be hashed with secure encrypted names and keys in Quick Response (QR) codes making fake seals and stamps impossible to reproduce. This data can be hashed using SHA hashing algorithms such as SHA-1, SHA-2 and SHA-3, the hash value is encoded as QR codes (Hong and Sinha, 2018).

The digital stamp will involve uniquely created QR codes encoded with data (hash value) for each lawyer which can be easily verified across various jurisdictions with corresponding keys and can be reciprocated in other jurisdictions in Africa as verification means for lawyers, prepared documents and can also protect indigenous lawyer services. Unlicensed lawyers will find it extremely difficult to pose as lawyers and render services to unsuspecting clients.

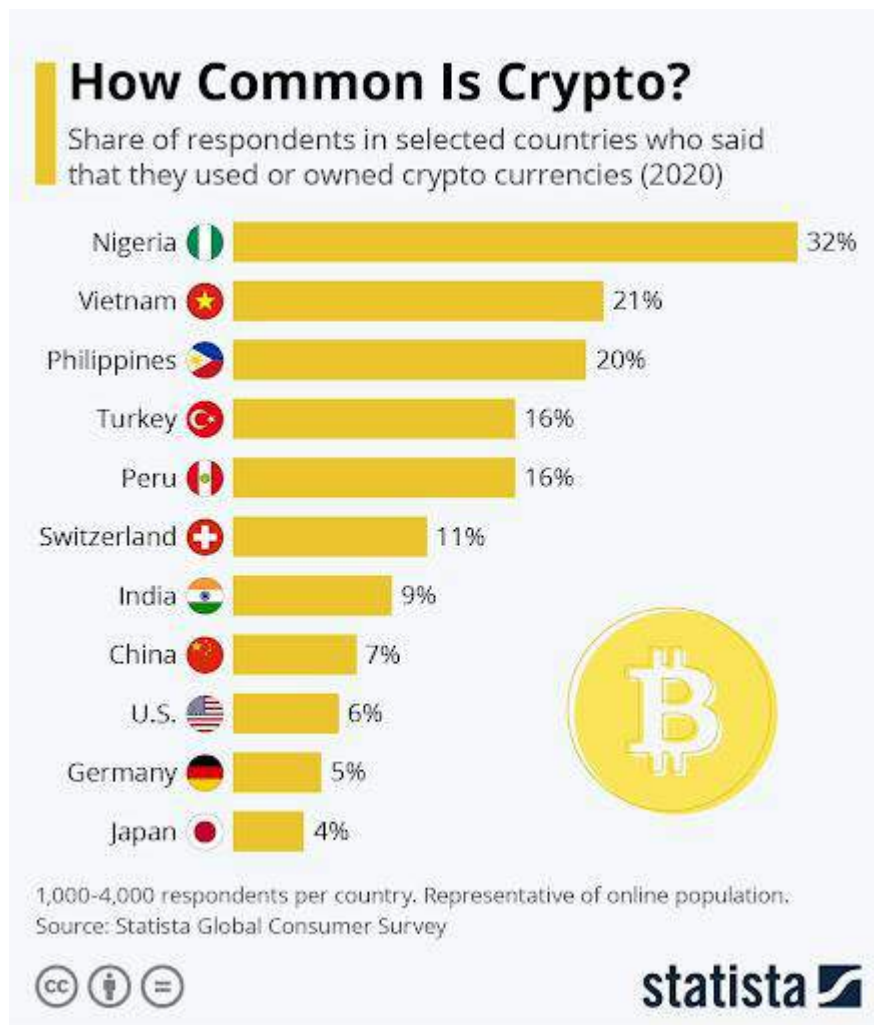
The NBA can cut down on contracting production fees with a shift to digital stamps and charge a fee for stamp verification annually. The hashed QR codes will embody unique names and will be verifiable anywhere and by anybody in the world. This QR code functionality can be programmed in Java and cryptography (blockchain) language.

The problems antecedent to franking of documents and verification of seals will become extinct with proper implementation and reciprocal recognition of the seals across jurisdictions.



Tokenizing Legal Services

Recent data in 2021 has shown that Nigeria has the highest adoption rate for cryptocurrencies at 32%, despite the restrictions put in place by the Government (Buchholz, 2021). With less stringent regulations, cryptocurrency tokens can be used to compensate lawyers for completed services enabled by smart contracts and earn bonus points as rewards for completing client tasks.



Source: Statista, 2021.

<https://www.statista.com/chart/18345/crypto-currency-adoption/>

Common token standards that can be used to create new tokens are ERC-20 (Ethereum) and BEP-20 (Binance Smart Chain). Tokens are implemented as smart contracts.



Utilitarian value of tokens to legal services:

- To submit proposals for legal service requests on decentralized platforms;
- To pay for user subscriptions and law reports;
- To pay user bonus for milestone achievements;
- To compensate hired staff and pay bonuses;
- P2P payment service among clients, lawyers and other professionals;
- Settlement of judgment sums and awards;
- Loans for law firm financing.

Escrow as a Service

Protocols such as Kleros' escrow can be used for any service rendering, transfer of goods or assets. On Kleros, parties must fulfill their agreements through smart contracts that hold funds securely (James, 2019). Hire The Law has a similar escrow payment feature.

Notably, Kleros can also resolve disputes arising from the use of online platforms, including services provided on Hire the law through the potential integration of the Kleros protocol as online dispute resolution partners.

In the event of a dispute, parties can offer to make a settlement before any Kleros jurors are brought in from the general Kleros Court. This operates as a form of prior "out of court" settlement. If settlement fails and parties desire proper justice, the dispute can be brought to Kleros' Court where both parties will have to deposit an arbitration fee (winning party is refunded) in order for the case to go to court. However, if a party fails to pay the arbitration fee in time, the other party automatically wins.

In the Kleros Court, cases are presented and resolved with attached evidence files, primary documents. Kleros can resolve disputes arising from the use of online platforms such as Hire The Law, through online dispute resolution or integrate the Kleros protocol on any feasible platform as online dispute resolution partners.



Arbitration and Kleros Court

In the event of disputes, parties can resolve disputes including employment matters via the Kleros Court. The service provides a decentralized arbitration resolution for individuals and corporate bodies. Disputing parties can select independent arbitrators or rather outsource their cases to Kleros court online to be adjudged by randomly selected Jurors.

In Kleros, the new case proceeds to the evidence submission stage where all interested parties are able to submit their evidence in the matter. After the evidence submission stage, the randomly selected jurors are able to vote and decide on the case. Jurors can vote to decide on cases or refrain from arbitrating. Jurors can refrain from arbitrating in the event of invalid submissions, illegal or morally unacceptable content or evidence.

The principle of plurality voting is adopted in reaching a final decision, in which the most voted outcomes are awarded as the ultimate decision of the jurors in Kleros Court cases. Final decisions can also be appealed.

The perfect justice system does not exist but the Kleros Court and Escrow voting system is the next best step towards perfection with the juror voting system in an incentivized manner.

Stages of Adjudication in Kleros Court are:

- a. Contract stage
- b. Securing Evidence
- c. Jury Selection
- d. Analysis
- e. Voting
- f. Appeal
- g. Token Redistribution.

Importance of Digitising Legal Services

1. Potential for cross border legal services;
2. Team collaboration effectiveness and tools;
3. Escrowed legal fees via smart contracts;
4. Seamless and unified payment systems;
5. Online, speedy and amicable resolution of disputes;
6. Billing types and services (hourly and one-off fees);



7. Creating a gig economy for freelance lawyers.

Major Challenges

1. Internet connectivity/speed;
2. Adoption rate for emerging technologies;
3. Creating balance between legal automation and traditional lawyer services;
4. Demographics of regulation application;



Conclusion

The perception of clients towards enforceability of contracts and legal processes should be further strengthened with adequate judicial orders and measures that may be needed from time to time. Rule of law must be respected for lawyers' contributions and services to be appreciated by clients and citizens.

There has to be mutual reciprocity of applicable regulations in legal regimes and adoption of technological aligned protocols for a smoother operation of AfCFTA. Also, digital seals for easy verification of licensed lawyers in every jurisdiction and protection of the lawyers' trade is recommended.



References

African Continental Free Trade Area (AfCFTA)- Agreement Establishing The African Continental Free Trade Area

Bird and Bird. (2013). Knowbriefs; The Brussels regulation at a glance. Retrieved from <https://www.twobirds.com/~media/pdfs/brochures/dispute-resolution/client-know-how/client-briefings---the-brussels-regulation.pdf?la=en>

Constitution of the Federal Republic of Nigeria (As amended)

Daniel, H. (2021). On the misclassification of paid labor: when should gig works have employee status. Retrieved from https://www.academia.edu/50120189/On_the_Mis_classification_of_Paid_Labor_When_Should_Gig_Workers_have_Employee_Status

Ekobi, N. and Ekop, N. (2021). Regulation of the legal profession in Nigeria: overview. Retrieved from [https://uk.practicallaw.thomsonreuters.com/w-016-5822?transitionType=Default&contextData=\(sc.Default\)&firstPage=true](https://uk.practicallaw.thomsonreuters.com/w-016-5822?transitionType=Default&contextData=(sc.Default)&firstPage=true)

Hong, G. K. and Sinha, S. (2018). Tracking Vulnerable People Using Body Worn QR Code. A final paper presented to IEEE Standards Association in Partial Fulfilment of the Requirements for the IEEE Standards University Student Grant Application.

James, S. (2019) Kleros Escrow Explainer - Secure Your Blockchain Transactions Today. Retrieved from [\(https://blog.kleros.io/kleros-escrow-secure-your-blockchain-transactions-today/](https://blog.kleros.io/kleros-escrow-secure-your-blockchain-transactions-today/)

Katharina Buchholz, (2021). How Common is Crypto? Retrieved from <https://www.statista.com/chart/18345/crypto-currency-adoption/>

Legal Practitioners Act, (Cap. 20 LFN 1990). Rules of Professional Conduct for Legal Practitioners (RPC)

Moller, C., Kræmmergaard, P. and Rikhardsson, P. (2006). The Emergence of Enterprise Systems Management- A Challenge to the IS Curriculum. International Journal of Information and Operations Management Education. 1(4).

OECD (2016). Innovating Education and Educating for Innovation: The Power of Digital Technologies and Skills, OECD Publishing, Paris.

Okoye A. O. (2015). Law Practice in Nigeria (Professional Ethics and Skills). 2nd edition,



Snaap Press Nigeria Ltd.

Rules of Professional Conduct for Legal Practitioners (Amendment) Rules 2020.

Rutter, I. C. (1961). A Jurisprudence of Lawyers' Operations. *Journal of Legal Education*. Vol. 13(3):301-399.

UsefulTulips. (2021). LocalBitcoins and Paxful Combined Worldwide (by Regions). Retrieved from https://www.usefultulips.org/Combined_World_Page.html