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QITMEER NETWORK ENHANCES ZAKAT TRACEABILITY IN NIGERIA

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ABSTRACT

Zakat is mandatory annual alms given from property which zakat is due from it when it reaches nisab. There are challenges facing Zakat management in Nigeria which includes unawareness of Zakat calculation, lack of transparency in collection and distribution of Zakat, lack of Zakat payers' confidence on their donation and lack of channeling Zakat to the eight groups of people on whom Zakat should be given. The challenges facing by Zakat management led to the failure of Zakat administrative to eradicate poverty and to uplift social welfare in the community. Qitmeer network is the first public chain serving the ecosystem of ethical finance, socially responsible investment and Islamic Finance for enhancing financial inclusion. Qitmeer network support Zakat management to gain the confidence of the public by ensuring transparency and disclosure of all Zakat activities in term of collection and distribution of Zakat. The traceability feature in Qitmeer network ensures that Zakat payers could select what project they would like to use their Zakat for, such as water irrigation, sanitation, poverty eradication and education. The objective of this paper is to analyze how Qitmeer network enhance Zakat traceability in Nigeria. Descriptive and analytical approach is exploited in this paper to analyze secondary and primary data on how Qitmeer Network enhance Zakat traceability in Nigeria. Finding in this paper reveals that the key need of transparency in Zakat

management in Nigeria is to enhance the confidence of general public to donate Zakat through verified channels instead of giving it to individual who might not eligible to receive Zakat. Qitmeer network ensures Zakat data integrity through out all Zakat activities using mathematical model which can not be altered. Findings also shows that Qitmeer network enhance Zakat traceability and transparency in collection and distribution of zakat in Nigeria to fulfil purpose of Zakat in eradicating poverty and uplifting social welfares of people.

Keywords: Zakat; Qitmeer Network; Block-chain; Traceability; Nigeria.

INTRODUCTION

Zakat is the annual obligatory duty upon Muslims to pay 2.5% of specified components of wealth, by those who have above a minimum specified level (Magda Ismail, 2013). The word Zakat originates from the verb Zaka, meaning to grow, increase and purify. Consequently, Zakat means blessing, growth, cleanliness and betterment. Zakat financially resources Islam, enabling it to flourish. It also enables individuals and the community to be faithful, successful and contribute to society for the benefit of all. Firstly, by taking a holistic approach to distributing Zakat across the eight categories of Zakat recipients (Qur'an 9: 60). This provides support for those most in need, builds up community institutions and enables advocacy. As the verse of the Qur'an (Q9:103) declares, clearly here is a command to those in authority, to Take! This suggests enforcement by authorities, which in our day and age means a legislation, which has been passed by parliament. To cleanse the wealth of the rich, would appear to project the moral dimension, in other words the rich are persuaded that for their wealth to be legitimately theirs, it has to first be relieved of the portion of the poor.

Zakat serves as religious tool for promoting economic inclusion in society (Ibrahim, S. M., & Shaharuddin, A., 2015). Zakat system was efficiently function during the colonial rule in Nigeria, whereby the Sa'i on the appointment of emir collect and distribute Zakat in some part of the North i.e. Sokoto and Kano (Oladimeji M., et. al, 2013). Payment of Zakat is voluntary during the colonial period although Zakat under principle of Islam is Muslim obligatory duty (Abubakar U. Farouk et. al, 2017). After the colonial rule, Nigeria citizen continue to pay Zakat voluntarily without any sanction for Zakat evasion, although there was no proper structure for Zakat administration in Nigeria until 2003 when Kano Zakat commission and Hubsi was established under Kano Zakat Commission and Hubsi Law 2003 (Zakat and Hubsi Commission, K. S., 2004).

Section 4 of Kano Zakat Commission and Hubsi Law 2003 contain the power of the commission to regulate all matters relating to Zakat and Hubsi including power to collect Zakat from eligible individuals and organizations; power to distribute Zakat to deserving asnaf appropriately; power to invest the funds according to the provisions of the Islamic

system upon a formal approval from the state governor; and power to act as a trustee of all resources entrusted to the commission (Section 4 of Kano Zakat Commission and Hubsi Law, 2003).

Zakat remains the most effective means of tackling poverty in Nigeria, where poverty rates stand at 61% of the nearly 180 million populations, calling on wealthy Muslims and middle class to cultivate the habit of paying Zakat. There is no way to sustain Zakat as a key tenet of Islam other than to practice it (Magda Ismail A. Mohsin, 2013). Technology now a day, in particular Qitmeer block-chain enhances collection and distribution of Zakat in Nigeria. Lack of transparency in term of collection and distribution of Zakat is a major obstacle to proper Zakat administration in Nigeria.

Qitmeer network provides confidence among Zakat payers by ensuring that their Zakat reaches the intended recipients and on the other hand fulfilling the purpose of Zakat. The key need of transparency in Zakat management in Nigeria is to enhance the confidence of general public to donate Zakat through verified channels instead of giving it to individual who might not eligible to receive Zakat. Therefore, this paper examines how Qitmeer network ensures Zakat data integrity through out all Zakat activities using mathematical model which can not be altered. It also discusses how Qitmeer network enhance Zakat traceability and transparency in collection and distribution of zakat in Nigeria to fulfil purpose of Zakat in eradicating poverty and uplifting social welfares of people.

FULFILMENT OF MUTUAL COOPERATION IN ZAKAT OBLIGATION

Observation of Zakat obligation by Muslims is compulsory religion duties on their wealth when it reaches Nisab. Payment of Zakat is responsibility of rich people toward less privilege Muslims, there is no doubt that such responsibility is considered mutual cooperation between Muslims (Adetona, L. M., 1999).

The objective of Zakat is to meet the basic needs of the poor, who come in different shapes and forms, as refugees, as peasants, as indigents, but also a redistribution of wealth, in the words of the Qur'an "so that it (wealth) does not circulate among the rich only" (Asyraf Wajdi Dusuki & Said Bouheraoua, 2011). This raises an issue of whether Zakat should be collected and distributed without any cognizance to the depth of poverty or the peculiar needs of the community or Zakat should be an instrument of providing social protection and creating a welfare provision that mitigates the gap between the rich and poor in society. It is only when the objective is clear that both the collection and distribution can be targeted and purposeful.

This argument needs restating, the objective is to raise the purposefulness and conscientiousness of the current collection and distribution of Zakat. Since Zakat is a definite portion, often percentage of the total Zakatable wealth, the first step in collection is to establish the value of the Zakatable wealth. Establishment of Zakatable property are not valued in

Nigeria, as far as data has been able to establish (Hadi, A. M., 2011). Equally important, there is no idea of either the level of poverty to be alleviated or the quantity of the poor in the community. In other words, there is no data on the basis of which collection is done or for distribution either. Reading the texts, one senses a clear objective but looking at the practice, one sees a clear disconnect. For if zakat on rain-fed farm produce is 10% it would mean that we have to establish the quantity of the produce for which 10% would be the zakat to be collected (Akintola, I. L., 2013).

CHALLENGES FACING ZAKAT ADMINISTRATION IN NIGERIA

In an efficient and effective system of Zakat administration, there must always be a consideration of the challenges which militate against the creation and maintenance of such a system. In Nigeria most of the issues faced cut across Zakat commissions (Okauru, I. O., 2011). These issues are without reference to which Zakat commissions are affected. Bad administration of Zakat in Nigeria (Hadacolarl, 2008), leads to lack of transparency in the management of Zakat system (Kiabel B. D. & Nwikpasi M. N., 2010). Zakat evasion characterizes the major problems of Zakat administration in a developing country including Nigeria (Modugu, K. P. & Omoye A. S., 2014). Payment of Zakat is voluntary in Nigeria, there is no federal law compelling Muslims to pay Zakat. More so, unavailability of database of all individuals that are zakatable, the tool use for assessing and collecting Zakat are inadequate and the absence of firm methods in place (Olabisi, J., 2010), are issues that should be addressed for an effective Zakat system (Nwosu M. Eze, Tondo E. Iorwuese and Wali B. Baba, 2016). There are no efforts to collate or analyse the limited data available let alone of storing the data, making it possible to be assessed or retrieved (Leyira, L. M., Chukwuma E. & Asian A. U., 2012). This suggests that the Nigerian Zakat system is inefficient and ineffective in its entirety (Edori Daniel Simeon, et. al, 2017). The major challenges faced by Zakat administration in Nigeria are discussed below:

Internal Challenges

The scarcity of specialized human tires in the jurisprudence of Zakat and its accounting, due to the lack of teaching Zakat accounting in Nigeria and the absence of local scientific references interested in how to calculate Zakat are the most important challenges facing the Zakat administration in Nigeria (Saheed A. A, 2014). It is noted that significant shortage of human resources at the level of related jurisprudence and accounting specialization with Zakat (Abd Al-Wahhab, A.I.A., 2019). This is what makes the Zakat administration lack a human balance that enables it to achieve its goals (Abdullahi, S., 2019).

In the absence of public and institutional funding for the Zakat commission's projects, Zakat commission's funding is currently focused on its subscribers and supporters who believe

in its lofty goals (Aliyu, S.U.R., 2018). This funding is limited and it cannot provide the Zakat commission with the necessary financial resources to reach its goals. Many activities within the Zakat commission are abandoned due to the lack of necessary financial funds (Ammani, S.A., Abba, S.A. and Dandago, K.I., 2014).

Zakat commission's dependence on volunteering in most of its projects does not enable it to obtain a good level of service for the work required of others. As the pressure on the budget makes the people in charge of the Zakat commission resort to their personal relationships to obtain many services free of charge or at cost. This inevitably leads to getting limited quality service. Restricting to narrow management of Zakat commission and doing the rest of the work by the volunteers, Zakat commission loses a lot of efficiency in the work and at the time of completion. Reliance on volunteer work is not materially costly, but it results in significant delays in the completion of work (Matthews, R., 2013).

Legal Challenges

The lack of law regulating Zakat in Nigeria represents a major impediment to regulate collection, disbursement and employment of Zakat funds according to Sharia standards and requirements to contribute to the development and advancement of poor groups. The absence of Zakat commission has led to the absence of this duty in the media, in the legal fields, studies and economic programs. Much of the activity of Zakat commission in Nigeria has focused on recalling the importance of Zakat funds and its social and developmental role.

Although some ministers, officials, and some deputies in the People's Assembly were convinced of the importance of creating Zakat commission, political polarization and partisan interests prevented them from thinking about sending this institution. The political rejection by many left-wing parties active in the decision-making power in Nigeria to pass a Zakat law that prevents progress in project of establishing this institution. Some officials and deputies hold that establishment of Zakat commission contradicts the secular state and the principle of secularism (Mahadi Ahmad, 2019).

Lack of a legal framework for collecting and distributing Zakat makes almost all Zakat fund spent to meet needs essential for the poor and needy. This eliminates the use of Zakat funds for economic development. Zakat today in Nigeria has no effect on employment, economic development, or fighting poverty by enriching the poor. This affects negatively on the development of Zakat funds in Nigeria.

Administrative Challenges

Nigerian government does not establish Federal Zakat commission in Nigeria due to its difficulty of facing the expenses of this institution in the early years, with the state not committing to salvage administrative expenses and equipment with the lack of compulsory

Zakat collection (Abubakar U., et. al., 2017). State government are in position to establish Zakat commission without receiving any budget from Federal authority. As at July 2020, Kano and Sokoto state has established Zakat commission, while NGOs operate Zakat activities in other states such as Lagos and Kwara state.

The government considers that the current tax system is trying to maintain the general balances of the state budget. The state's reliance on taxation makes the Nigerian government regard Zakat as a competitor for taxation, which results in the Nigerian government's fear of creating Federal Zakat Commission because it may reduce the amount of annual taxes that the state collects, because citizens can pay Zakat at the expense of paying taxes. Government should take initiative to balance between Muslim religion obligation which is Zakat and State civil duty which is payment of tax. In some country such as Saudi Arabia and Qatar, a Shariah compliance company will be paying Zakat while non-Shariah compliance company only subjected to pay tax. This is good example for Nigeria government to emulate for them to establish Federal Zakat Commission and State Zakat Commission.

Funding Zakat commission financially from its members only and not obtaining public or institutional funds makes the association's management weak because of its weak financial resources (Ibrahim, S. M., & Shaharuddin, A., 2015). The weakness of management is directly reflected in achieving all the desired goals because the Zakat's activity requires an administrative body and highly qualified human resources (Ahmad, N. N., et. al, 2014).

Account Challenges

The calculation of Zakat is based on the legal accounting of companies in the process of calculating Zakat (Bugaje, U., 2010). In view of the large number of Zakat in Nigeria, many Zakat adopt an accounting that does not record all the operations carried out by their company (David, F., & Gallego, I., 2009). The budgets submitted for calculating Zakat in many cases are not identical to the financial reality of the institution (Halliru, M., 2015). This affects the calculation of Zakat and adds new difficulties in that process. Considering that Zakat commission voluntarily calculates Zakat for upcoming companies, and in order to ensure that these institutions return to calculate Zakat in the years coming (Ammani, S. A., Abba, S. A., & Dandago, K. I., 2014).

However, the private media scene is controlled by channels that are not concerned with religious affairs, as it does not open the way for the association to present a media article through which viewers who do not regularly follow religious broadcasts can be reached.

The lack of awareness of the role of Zakat and the culture of Zakat as an essential pillar of the economic system requires the Zakat commission to be present on the media scene to inform people of their religious duties and to show the results of collecting Zakat funds to

spend it in their banks in a scientific way in order to perform its desired economic role of development, fighting poverty and employing youth (Hairunnizam, W., et. al, 2010).

WHAT IS QITMEER PUBLIC BLOCKCHAIN

Qitmeer is the first public-chain that is dedicated to serving the ecosystem of ethical finance, socially responsible investment, which aims to act as the overall financial infrastructure to seamlessly converge all these areas, thereby enhancing financial inclusion. The Qitmeer is the core network of HLC Foundation which supports R&D of Qitmeer since initiated the beginning of 2018 and then launched the open-source code through GitHub on June 30, 2019. Whereas presently, the name Qitmeer, Meer and Kahf have been newly selected to brand the public chain, coin and wallet respectively.

Qitmeer stands for the state of the art of distributed ledger technology up to present, which adopts an open and fault tolerant block DAG technology that is rooted in the typical chain data structure. Meanwhile, through the optimization of ledging, the fully decentralized, more efficient and truly fair collaborative model of mining is used to achieve a desirable balance of typical block-chain metrics among the security, openness, fairness and scalability (Abdullah, A., 2016). Qimeer supports the interoperation with all the mainstream block-chain network through cross-chain protocols, as well as to interact with standard APIs, such as value transfer based on atomic swap and smart contracts, thereby enabling Qitmeer to be a global and inclusive public chain (Ali, R., Barrdear, J., Clews, R., & Southgate, J., 2014).

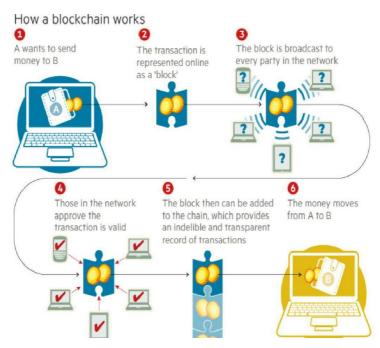


Diagram 1: Collection and Distribution of Zakat on Qitmeer Public Chain

Source: http://www.ft.com/intl/cms/s/2/eb1f8256-7b4b-11e5-a1fe-567b37f80b64.html#axzz3qe4rV5dH

Diagram 1 shows that when Muslim want to pay Zakat (send money to Zakat commission) the transaction is represented as a block, the system will broadcast the transaction to all the parties in the network (Zakat commission) for them to validate it and connect all the block created together containing transparent record of all transaction that takes place. After approval from all party in the network the money will be validly transfer from payer to the receiver (Zakat commission). When Zakat commission want to distribute Zakat, the same scenario will take place where Zakat commission transaction will be represented by block subject to the approval by eligible Muslim to receive Zakat which will be validly transfer to their account after their final approval. This simplify calculation of all forms of Zakat and adds new improvement in Zakat process. In view of the large number of Zakat in Nigeria with the support from Qitmeer Netork, Zakat will adopt an accounting that record all the operations carried out by Zakat commission. Qitmeer public chain will define definite Zakat portion according to Shariah, often percentage of the total Zakatable wealth, and value of the Zakatable wealth. Establishment of Zakatable property are not valued in Nigeria, as far as data has been able to establish (Abdullah Han and Abdussalam Ismail Onagun, 2019). Qitmeer public chain assists Zakat commission in Nigeria to determine Zakatable property and their percentage.

Features of Qitmeer Public Block-Chain

Qitmeer block-chain has the potential to eradicate mistakes and detect deceptive activity because of its ability to be a public ledger across multiple unknown parties (Babbitt, D., & Dietz, J., 2014). A distributed digital depot can autonomously confirm the legitimacy of Zakat payers, policies and transactions by presenting a comprehensive historical record. Validation and verification form the nucleus of the block-chain business case, which can improve many Zakat processes (Abdullah Han and Abdussalam Ismail Onagun, 2019).

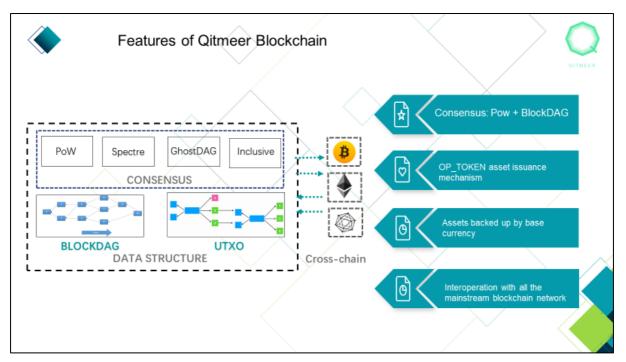


Diagram 2: Features of Qitmeer Blockchain

Source: HLC Technical White paper.

Qitmeer block-chain is essentially a distributed database of records or public ledger of all transactions or digital events that have been executed and shared among participating parties (Baxter, P., & Jack, S., 2008). Each transaction in the public ledger is verified by consensus of a majority of the participants in the system. Once information is entered, it can never be erased (Abdullah, A., 2013). The Qitmeer block-chain contains a certain and verifiable record of every single transaction ever made. In order to use a basic analogy, it is easy to steal a cookie from a cookie jar, kept in a secluded place than stealing the cookie from a cookie jar kept in a market place, being observed by thousands of people (Abdullah Han and Abdussalam Ismail Onagun, 2019). The Qitmeer block-chain technology facilitates the implementation of decentralized IoT platforms such as secured and trusted data exchange as well as record keeping (Danezis, G., & Meiklejohn, S., 2015). In such an architecture, the Qitmeer block-chain serves as the general ledger, keeping a trusted record of all the messages exchanged between smart devices in a decentralized IoT topology (Mainelli, M., & Smith, M., 2015).

Efficiency of Tax Administration through Qitmeer Public Block-chain

Qitmeer block-chain streamlines Zakat collection mechanism. It assists Zakat authorities to advance a solid base for Zakat payers; restructure the means and methods used for collection and end multiplicity of Zakat, which has been a reprieve to the Zakat administration and Islamic economy as a whole. Also, Qitmeer block-chain ensures that the approved Zakat and levies

streamlined and strictly followed by Zakat commission. Qitmeer block-chain ensure good, effective and efficient Zakat administration, whereby Zakat administration is handled by professionals and trained personnel. The personnel of Zakat authorities of Zakat commission need to be trained and retrained to bring the best from them and also Qitmeer block-chain will instils discipline on them (Michael Crosby et. al, 2015).

Qitmeer block-chain features of filling and payment online will reduce the time of compliance and cost associated to it and also accept Zakat technology in support of electronic remittances and filling of returns which will ease the burden on Zakat payers, ease human contact existing between the Zakat payers and the Zakat officials. This can assist in checking sharp practices and make doing business easier (Michael Crosby et. al, 2015). Qitmeer block-chain will simplify the Zakat regulation, make it certain and clear. Zakat regulation will be phrased to ensure that Zakat payers and Zakat officials understand it clearly. Cases of genuine losses declared by any company will be addressed as an issue that is separate by means of Zakat audit and transfer pricing instead of using the same brush to paint all companies with. Concerning the commencement and cessation rule, Qitmeer block-chain will ensure companies pay Zakat on the actual profit using the preceding year basis from the beginning to the end (if the business ceases to operate). Qitmeer block-chain also simplify Zakat administration with automated payment systems to tract payment made by Zakat payers, issue electronic receipts and withhold Zakat credit notes where applicable (Michael Crosby et al, 2015).

Qitmeer block-chain support Zakat authorities of Zakat commission to embark on refunding genuine overpayment Zakat. Zakat commission as a matter of urgency make funds available for refund. As this will boost the confidence of Zakat payers on Zakat commission. Qitmeer block-chain improved accountability and communication of uses to which Zakat revenue is put, this can be utilized to improve the ability of Zakat authorities to achieve efficiency in Zakat collection. Where Zakat commission is accountable for Zakat collected and Zakat payers have free and easy access to Zakat information, it improves voluntary compliance, as Zakat payers will see that they have a stake in Zakat system as the revenue collected is utilized on their behalf (Mainelli, M., & Smith, M., 2015).

Qitmeer block-chain increase inter-governmental and inter-agency collaboration, cooperation and co-ordination this entails collaboration by authorities on issues, which affect them collectively and individually. Qitmeer block-chain will establish Unique Zakat Identification Number (Z-TIN), which seeks to create an automated national database of all Zakat payers in Nigeria at all levels of Government. The Z-TIN system will allow for easier identification of Zakat payers across the country and resolve issues such as; paying Zakat to illegal agencies, conflicts over Zakat jurisdiction by different States or Local Governments and also allow Government to utilize the data for several other purposes (Danezis, G., &

Meiklejohn, S., 2015). Collaboration and co-operation will also help in area such as exchange of information, prompt remittance of Zakat collected on behalf of other agencies and payment of Zakat arrears and debts owed by one tier to another. In this way, the Z-TIN system can become an important instrument for audit.

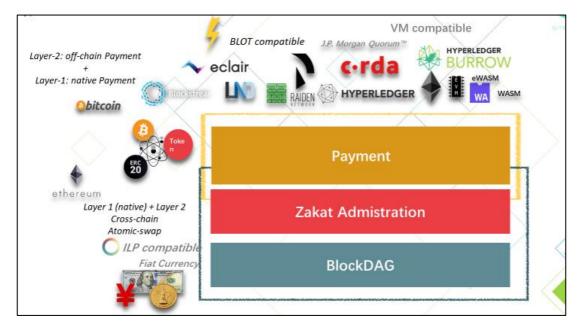


Diagram 3: Adoption of Qitmeer Public Block Chain for Zakat Administration
Source: HLC Technical White paper.

Qitmeer block-chain create reliable, comprehensive and inter related suite of data to increase the degree of capture of potential Zakat payer outside the Zakat net or track those within Zakat net but which have defaulted in complying significantly. Qitmeer block-chain create advance Zakat administration for robust database management system which at the minimum manage the details of companies and individuals including date of birth, health profile, work profile, educational profile etc. for both citizen and resident. Such database will be connected to different agencies such as immigration, customs, health, financial, security system which Zakat authorities can access for information when necessary.

CONCLUSION

Adoption of Qitmeer block-chain ensure that Zakat authorities have degree of accountability so that Zakat payers in Nigeria make connection between Zakat and services they receive in return. It will also improve Zakat payers' confidence in paying their Zakat willingly thereby safeguard efficient Zakat administration and powerful means for Zakat enforcement. Qitmeer block-chain assist in developing a major file system to assigns a unique number to each Zakat payer. This unique number directly helps in identifying assessing and collecting direct Zakat,

such as individual Zakat, company Zakat, and the property Zakat. In this way, the master file can become an important instrument for audit. If the Zakat payer identification number is connected to other means of identification, such as drivers' licenses or passport, it can be a potentially powerful means for Zakat enforcement.

The mutual relationship between Zakat and public expenditure is evident that Zakat payers are well disposed to pay their Zakat willingly when they see evidence of redistribution of wealth by Zakat commission in providing efficient public transportation, poverty eradication, efficient waste collection, availability of educational facilities and functional health services in the country. Qitmeer public-chain solves the challenges of Zakat administration in Nigeria both from Zakat authorities and the Zakat payers with a sustained sound Zakat system and constant Zakat reforms. Efficient Zakat administration safeguards the objectives of Zakat system, it prevents depending solely on oil revenues and increase revenue from other non oil sources for better economic development in Nigeria.

REFERENCES

- Abd Al-Wahhab, A.I.A. (2019), "Al-Maʿūnah ʿala madh.hab ʿĀlim al-Madīnah", in Abd al, H (Ed.), al- Maktabah al-Tij"ariyyah, Vol. 1, Makkah.
- Abdullah Han and Abdussalam Ismail Onagun, Applicable Cases of HLC Public Chain, 2019.
- Abdullah, A. (2013). The Gibson paradox: Real gold, interest rates and prices. International Business Research, 6(4), 32. https://doi.org/10.5539/ibr.v6n4 p 32.
- Abdullah, A. (2016). The Islamic Currency. Kuala Lumpur: International Council of Islamic Finance Educators.
- Abdullah, N., Mahyudi, M., Yusop, M., & Omar, C. Effectiveness Index (Zein). International Journal of Economics, Management and Accounting, 1(1), 75-86.
- Abdullahi, S. (2019), "How Waqf, Zakat Can Boost Infrastructural Needs of Nigeria", available at: https:// guardian.ng/features/friday-worship/how-waqf-zakat-can-boost-infrastructural-needs-of-nigeria/ (accessed 16 June 2020).
- Abubakar U, Farouk, Kamil B Md Idris, Ram Al Jaffri B Saad, (2017). The Challenges of Zakat Management: A Case of Kano State, Nigeria, Asian Journal of Multidisciplinary Studies, 5(7), p 144.
- Adetona, L. M., (1999) "The Administration of Zakah in a Non-Islamic State: A case Study of Nigeria" Journal of the Faculty of Arabic and Islamic studies(JOFISA), LASU, 5(2) 1-19.
- Ahmad, N. N., Tarmidi, M., Ridzwan, I. U., Hamid, M. A., & Roni, R. A. (2014). The Application of Unified Theory of Acceptance and Use of Technology (UTAUT) for Predicting the Usage of E-Zakat Online System. International Journal of Science and Research (IJSR), 3(4), 63-67.

- Akintola, I. L., (2013) "A General Introduction to Islam in Lagos" In A.O.K Noah (ed), Fundamentals of General Studies, Lagos, Olu-Akin Publisher.
- Ali, R., Barrdear, J., Clews, R., & Southgate, J. (2014). Innovations in Payment Technologies and the Emergence of Crypto Currencies, p 271-272.
- Aliyu, S.U.R. (2018), "A Treatise on Socioeconomic Roles of Waqf", MPRA Paper No. 91413.

 Germany, available at: https://mpra.ub.uni-muenchen.de/91413/1/MPRA_paper_91413.pdf (accessed 16 June 2020).
- Ammani, S. A., Abba, S. A., & Dandago, K. I. (2014). Zakah on Employment Income in Muslims Majority States of Nigeria: Any Cause for Alarm? Procedia Social and Behavioral Sciences, 164(August), 305-314. http://doi.org/10.1016/j.sbspro.2014.11.081
- Asyraf Wajdi Dusukih, Said Bouheraoua, (2011). The Framework of Maqasid Al-Shariah (Objectives of the Shariah) and its Implications for Islamic Finance, Research Paper (No: 22)
- Babbitt, D., & Dietz, J. (2014). Crypto-Economic Design: A Proposed Agent-Based Modeling Effort. In English. Conference Talk. University of Notre Dame, Notre Dame, USA.
- Baxter, P., & Jack, S. (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. The Qualitative Report, 13(4), 544-559.
- Blockchain: The Information Technology of the Future, available at https://www.slideshare.net/lablogga/blockchain-the-information-technology-of-the-future
- Bugaje, U. (2010). The Administration of Zakat in Colonial and Post Colonial Nigeria.
- Chairman of Jaiz Zakat and Waqf Trust Foundation, Imam Abdullahi Shuaib: Photos: Twitter.
- Danezis, G., & Meiklejohn, S. (2015). Centrally Banked Cryptocurrencies. arXiv preprint arXiv:1505.06895.
- David, F., & Gallego, I. (2009). The Interrelationship Between Corporate Income Tax and Corporate Social Responsibility. http://doi.org/10.1108/09675420911006415
- Magda Ismail, (2013). Re-distribution of Wealth and its Effect on Economic Development, Presentation INCEIF, p 55.
- Edori Daniel Simeon, Edori Iniviei Simeon, Idatoru Alapuberesika Roberts, (2017). Issues and Challenges Inherent in the Nigeria Tax System, American Journal of Management Science and Engineering. Vol 2, No. 4, p 52-57.
- Ethereum is a global, open-source platform for decentralized applications. hNps://www.ethereum.org.
- Hadacolarl (2008). The Importance of Income Tax in South-East Western Nigeria. Journal of Economic and Financial Mirror, 7 (10), 11-13.

- Hadi, A. M., (2011) "Zakat and poverty Alleviation: A Re-Appraisal of its Rules",, A Journal of Islamic Sciences and Muslim Development, (Department of Islamic Studies Usman Danfodiyo University, Sokoto) Series 7.
- Hairunnizam, W., Radiah, A. K., Wahid, H., & Kader, R. A. (2010). Localization of Malaysian Zakat Distribution: Perceptions of Amil and Zakat Recipients. In Seventh International Conference The Tawhidi Epistemology: Zakat and Waqf Economy, Bangi 2010 LOCALIZATION (pp. 461–484).
- Halliru, M. (2015). The Effect of Culture on the Development of Entrepreneurs Among the Hausa Ethnic Group in Northern Nigeria. Journal of Marketing and Management, 1(4), 59–73. http://doi.org/10.1017/CBO9781107415324.004

http://www.coindesk.com/blockchain-lottery-miners-rewarded/

http://www.ft.com/intl/cms/s/2/eb1f8256-7b4b-11e5-a1fe-567b37f80b64.html#axzz3qe4rV5dH

http://www.ft.com/intl/cms/s/2/eb1f8256-7b4b-11e5-a1fe-567b37f80b64.html#axzz3qe4rV5dH

http://www.islamicforum.ng.org

http://www.zakatandsadagat.org.ng

https://guardian.ng/features/friday-worship/how-waqf-zakat-can-boost-infrastructural-needs-of-nigeria/

https://gitmeer.io accessed on 20/10/2019

https://www.aa.com.tr/en/africa/zakat-funds-lift-hundreds-from-poverty-in-nigeria/709001

https://www.qitmeertalk.org accessed on 20/6/2020

- Ibrahim, S. M., & Shaharuddin, A. (2015). In Search of an Effective Zakat Institution Management in Kano State Nigeria. Journal for Studies in Management and Planning, 1(7), 242-258.
- Islamic Development Bank, Islamic Research and Training Institute, "Institutional Framework of Zakat: Dimensions and Implications" (Seminar Proceedings no. 23, Jeddah, Saudi Arabia, 1990), page 27.
- Kiabel B. D. & Nwikpasi M. N. (2010). Selected Aspects of Nigeria Taxes. Springfield Publishers, Owerri.
- Leyira, L. M., Chukwuma E. & Asian A. U. (2012). Tax System in Nigeria-Challenges and the Way Forward. Research Journal of Finance and Accounting, Vol. 3, No. 5, 9-15.
- Magda Ismail A. Mohsin, (2013). Potential of Zakah in Eliminating Riba and Eradicating Poverty in Muslim Countries, vol.5 no. 11, p 116
- Mahadi Ahmad, (2019). An Empirical Study of the Challenges Facing Zakat and Waqf Institutions in Northern Nigeria, ISRA International Journal of Islamic Finance, Vol. 11 No. 2, p 340

- Mainelli, M., & Smith, M. (2015). Sharing Ledgers for Sharing Economies: An Exploration of mutual distributed ledgers (aka Block-chain Technology). The Journal of Financial Perspectives, 3(3), 38-69.
- Matthews, R. (2013). Zakat and the Elimination of Poverty: New Perspectives. International Journal of Information Technology and Business Management, 9(1), 54-69.
- Michael Crosby et al, (2015). Block-chain Technology Beyond Bitcoin, Sutardja Center for Entrepreneurship and Technology, Berkeley University of California.
- Modugu, K. P. & Omoye A. S. (2014). An Appraisal of Personal Income Tax Evasion in Nigeria. Asian Economic and Financial Review, 4 (10), 33-40.
- Muhammad Jawwad Khan, http://www.ilmoamal.org/bms/q_unit_slide.php?slide_order=1&unit_id=500&login_required=no, (2014-04-03)
- Nwosu M. Eze, Tondo E. Iorwuese and Wali B. Baba, (2016). The Challenges and Imperative of Tax System Reform in Nigeria, International Journal of Economics and Finance; Vol. 8, No 3.
- Odusola, A. (2008). Tax Policy Reforms in Nigeria-Research Paper No 2006/3, United Nations University-World Institute for Development Economics Research.
- Okauru, I. O. (2011). Effective and Efficient Tax Collection and Administration in Nigerian in the Three Tiers of Government. Retrieved from http://www.rmafc.gov.ng/2011.
- Olabisi, J. (2010). An Assessment of Tax Evasion and Tax Avoidance in Lagos State. Journal of Research in National Development. Vol 8, No. 1.
- Omesi, Teerah and Nzor, (2014). Nigerian Tax System and Administration: Implications of Multiple Taxation on the Economy, European Journal of Business and Management, Vol. 6, No. 37.
- Oyedele T. (2015). How Nigeria's Tax System Discourages Investments. Retrieved from https://www.pwc.com/ng/en/assets/pdf/tax-watch-february-20 15. pdfA.
- Pay-to-Pubkey Hash. hNps://en.bitcoinwiki.org/wiki/Pay-to-Pubkey_Hash.
- Saheed A. A, (2014). The Administration of Zakat in Lagos and Ogun States, Research on Humanities and Social Sciences, Vol. 4, No. 21, p 75
- Sanni, Abiola (2012). Multiplicity of Taxes in Nigeria; Issues, Problems and Solutions. International Journal of Business and Social Science, Vol. 3 No. 17; 2012, 229-236.
- Tether: Fiat currencies on the Bitcoin Block-chain. hNps://tether.to/wp- content/uploads/2016/06/TetherWhitePaper.pdf.
- The Council of Islamic Organizations of Greater Chicago, the Institution of Zakat, 2005, page 10.
- The HLC developers. Cuckoo Cycle POW, a Programmatic Proof-of-Work. hNps://github.com/HalalChain/hips/blob/master/hips/hip-0005.asciidoc.

- The Qitmeer Commercial White Paper: The Core Network of HLC Foundation, version o.1, 2019.
- Yonatan Sompolinsky and Aviv Zohar, (2018). PHANTOM, GHOSTDAG: Two Scalable BlockDAG protocols. hNps://eprint.iacr.org/2018/104.pdf. Melanie Swan, Block-chain Consensus Protocols, available at https://www.slideshare.net/lablogga/blockchain-consensus-protocols
- Yonatan Sompolinsky and Aviv Zohar. (2018). PHANTOM, GHOSTDAG: Two Scalable BlockDAG protocols. hNps://eprint.iacr.org/2018/104.pdf.
- Yonatan Sompolinsky, Yoad Lewenberg, and Aviv Zohar. (2016). SPECTRE: Serialization of Proof- of-work Events: Confirming Transactions via Recursive Elections. hNps://eprint.iacr.org/ 2016/1159.pdf.
- Yusuf Al Qardawi, Fiqh al Zakah (volume 2) A Comparative Study of Zakah, Regulations and Philosophy in the Light of Qur'an and Sunnah, page 176.