

Towards Transforming Zakat Collection and Distribution Roles Using Digital Wallet in Support of Social Justice and Social Financing

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Abstract

Digitalisation is a new phenomenon in the beginning of the twenty first century as it connects and benefits a wider scope of humanity in a smart and elegant way. As most of the world's humanity are in poverty and refugees throughout the world are majority Muslims, zakat as a tool can play a role in bringing social justice and social financing to them. According to an expert, it is high time that the adoption of blockchain concept as in digital wallet would be the solution in dealing with Islamic matters for example zakat collection and distribution. The objectives of this paper is to study the potential adoption of blockchain as in digital wallet towards the transformation of zakat collection and distribution roles to those in need. The methodology is using previous studies by reviewing the literatures and utilising secondary data to analyse and interpret data. With the dynamic technological development especially the emergence of blockchain technology, zakat ecosystem could be further enhanced as blockchain offers an immutable, security, trustworthy, and transparent. However, before this can be realized, the Ulama (Islamic Scholars) need to accept and understand the concept of blockchain technology as in digital wallet in the perspective of Maqasid al-Shari'ah.

Keywords: *zakat roles; blockchain technology; digital wallet; social-justice; social financing*

1. Introduction

In this twenty first century, the advancement of technology influences our way of life, even payment method goes digital. Individuals need no longer to dig through their wallet to pay cash for payment, instead they use their credit and debit cards. Digital wallet helps individual to use their smartphone application as a payment method thus, addressing the potential pitfalls of using credit cards. The digital wallet is similar to a payment card except that it works out of an application. The individual loads funds into the virtual wallet to use it for payment of goods and services. The working mechanism differs from each types of digital wallet either by using QR code scanning for establishing connection, or, using internet transactions. With the advancement of technology, the payment landscape of zakat changes accordingly which means a payer need no longer pay at the counter but transaction can be conducted with convenience at home and with compliance to Shari'ah Law. Every year, each Muslim has a duty to pay zakat,

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compulsory alms as stipulated in the five pillars of Islam. The obligation of a Muslim to pay zakat contribution based on their wealth accordingly to specific conditions as well as requirement.

2. Growth of World Muslim Population

According to the “Pew Research Center’s Forum on Religion and Public Life”, population of Muslim around the world amount to 1.57 billion in 2009. An approximate increase of 35% is projected by the year 2030 amounting to 2.2 billion of Muslims comprising of all ages can be found all over the globe. Continued research entitled “The future of world religions: Population growth projections 2010-2050” indicate Muslims are the highest religious group to increase much faster than other religion in the world. The projected rise of Muslim population is expected to increase 73% of the global population from 2010 to 2015 [1] as seen in Figure 1.

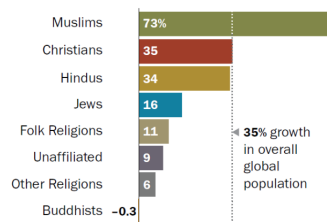


Figure 1. Approximate size of population between the year 2010 to 2050 (Source: “The Future of World Religions: Population Growth Projections 2010-2050, Pew Research Center”)

Additionally, the report states that the highest rate of fertility are among the Muslims averaging of 3.1 children for a woman which is above the replacement level of 2.1 children to sustain a population that is stable. The report highlighted the growing number of global total youths below 15 years of age amounts to 27% of the total global population. Out of the total number of youths worldwide, 34% consists of Muslim youths contributing to the highest compared to the rest of the youth from other religions as seen in Figure 2.

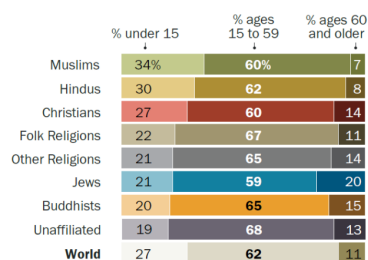


Figure 2. Distribution of age by religious groups in year 2010 (Source: “The Future of World Religions: Population Growth Projections 2010-2050, Pew Research Center”)

Analysis from the reports above indicate the highest rate of Muslim youths around the world contribute to the highest projection relative to the percentage of world population by the year 2050. Migration is a factor of concern that influence the proportion of religions in certain countries or regions. Many Muslims flow to Europe due to famine or economic reasons, politics and war which occur in their country of origins [1]. Some of them seek asylum in Europe due to conflicts especially in Syria and other Muslim countries as well. The Pew Research Center [2] estimate migration of Muslim population in Europe to rise continuously from 4.9% in 2015 to 7.4% in the year 2050 [2].

Table 1. Number of Muslim by countries by population in 2019

Country	Muslim population	Population in 2019	Muslim%	Worldmuslim%
Indonesia	229000000	270625.568	87.2	12.7
Pakistan	200400000	216565.318	96.5	11.1
India	195000000	1366417.754	14.2	10.9
Bangladesh	153700000	163046.161	90.4	9.2
Nigeria	99000000	200963.599	49.6	5.3
Egypt	87500000	100388.073	92.35	4.9
Iran	82500000	82913.906	99.4	4.6
Turkey	79850000	83429.615	99.2	4.6
Algeria	41240913	43053.054	99	2.7
Sudan	39585777	42813.238	97	1.9
Iraq	38465864	39309.783	95.7	1.9
Morocco	37930989	36471.769	99	2
Ethiopia	35600000	112078.73	33.9	1.8
Afghanistan	34836014	38041.754	99.6	1.8
Saudi Arabia	31878000	34268.528	97.1	1.6
China	28127500	1433783.686	1.725	1.6
Yemen	27784498	29161.922	99.1	1.5
Uzbekistan	26550000	32981.716	96.5	1.7
Niger	21101926	23310.715	98.3	1
Russia	20000000	145872.256	13.5	1
Tanzania	19426814	58005.463	35.2	0.8
Mali	17508398	19658.031	95	0.8
Syria	16700000	17070.135	93	1
Malaysia	16318355	31949.777	61.3	1.1
Senegal	15112721	16296.364	96.1	0.8
Kazakhstan	13158672	18551.427	70.2	0.5
Burkina Faso	12141769	20321.378	61.5	0.6
Tunisia	11190000	11694.719	99.8	0.6

(Source: (World Population Review, 2019)

Table 1 shows number of Muslims population by country and by the country's population in 2019 [3]. The most number of Muslims are from Indonesia with a number of Muslims amounting to 229,000,000 people (87.2%) out of the country's total population of 270,625,568 people. The Muslim population in Indonesia contribute to 12.7% of the world Muslim population. The second is Pakistan with a number of Muslims amounting to 200,400,000 people (96.5%) out of the country's total population of 216,565,318 people. The Muslim population in

Pakistan contribute to 11.1% of the world Muslim population. The third is India with a population of Muslim of about 195,000,000 people (14.2%) out of the total country population of 1,366,417,754 people contributing to 10.9% of the world Muslim population. From the data and statistic shown above, Muslim population is on the rise, however the “Organisation of Islamic Cooperation (OIC)” places one of contemporary challenges face by Muslims is poverty alleviation (Organization of Islamic Cooperation, 2016)[4]. Pew Research Center [2] reported the number of refugees had increased sharply since 2014 who landed in Europe due to conflicts in Syria, Iraq and Afghanistan. Besides 970,000 Muslim asylum seekers, the number is alarming that the Muslim world in particular need to help alleviate poverty using zakat as an Islamic tool. Reaching out to the needy for this group is very challenging due to time, geographical location, bureaucracy, accessibility and security. With technological advancement, intentions to help distribute zakat for the alleviation of poverty may be possible with the emergence of blockchain technology in digital wallet. The purpose of this study is to examine the roles of zakat in supporting social justice and as an enabler to social financing looks into the potential use of blockchain technology as in digital wallet to enhance the collection and distribution of zakat in systematic way that will benefit those in need. The methods to achieve the objective is by reviewing literatures and using secondary data for analysis.

3. Roles of Zakat in Al-Quran in Supporting Social Justice

The sources of economic knowledge in Islam are the Qur'an and the Hadith whereby the principles and guideline for zakat to support social justice is well explained. The teachings of Qur'an describe the objective of Shari'ah to for the purpose of poverty alleviation of the society as seen in the verse or surah Al Baqarah verses 185: “God desires to alleviate your burdens not hardship for you”. Another verse Al-Nahl requires Muslims to command justice: “Allah commands justice” (Al-Nahl). Therefore, it is expected that all Muslims' obligation to pay zakat to maintain the sustainability of the society as evidence in the verse of the Quran (al-Hashr:7) that: “Wealth should not only flow between rich”. It is clear from those Quranic verses Muslims are expected to fairly distribute wealth for social justice. The famous Muslim scholar, Al Ghazali states “that the very objective of the Shari'ah is to promote welfare of the people”. In the Qur'an, eight beneficiaries that are eligible as zakat recipients consist of those who are poor, those who are in need, new Muslim converts who are financially disadvantage, the slaves, the debtors, the spending in the cause of Allah, and the travelers.

Nisab is the minimum zakatable limit to be paid by every Muslim if their wealth is more than a certain threshold. This zakat payment is used in Islam to be utilised by the poor whose eligibility as a zakat recipient will receive money according to a calculated formula in compliance with Shari'ah principle [5]. Research by Naziruddin Abdullah, Alias Mat Derus & Husam-Aldin Nizar Al-Malkawi [6] investigate the formulation of new index to measure the deficiency and effectiveness of zakat in alleviating poverty and inequality in Pakistan using newly developed index, namely the Basic Needs Deficiency Index (BNDI). The researchers chose this index for the reasons (a) data availability and accessibility required for computing BNDI; (b) no index was developed previously to measure the poverty in Pakistan. Results of the developed BNDI able to explain the

effectiveness of zakat in alleviating poverty and inequality in Pakistan [6]. In another research, Hossain, Muhammad, Jibril, & Kaitibie (2019)[7] investigate the development of a scheme to improve poor small holder farmers' vulnerable financial situation through zakat in Bangladesh to improve poor smallholder farmer's vulnerable financial situation in developing Muslim-majority country following two Islamic instruments namely, "a) establishment of faith-based zakat fund; b) development of salam contract (an Islamic forward contract) and to show the effect of the scheme on food security by exploring existing traditional modes of financing available to poor smallholders, identify the challenges and propose an appropriate Islamic financing scheme" [7]. In this regard, the salam forward contract enable the zakat recipient to benefit from an interest free financing, fairness in pricing and eligible to access strategies of marketing as well as reducing uncertainty in to earn an income.

Hassan and Kayed [8]state that "The aim of Islam is to support social justice. The most salient values of the Islamic financial system are fairness and socio-economic justice". Clearly the importance of zakat for social justice is found in the Qur'an and the teachings of it is practice by Muslims all over the world. In other words, in terms of Islamic financial system, social justice is very important for the Islamic economy. Another study by Shafiu Ibrahim Abdullahi [9] investigate the role of zakat in social cause marketing. The research study the need to list the social cause in the zakat role to promote business in halal products. In addition, zakat also aims to alleviate poverty for the sustainable development of the country. The results conclude the enhancement of marketing role to promote halal products to benefit the people in terms of social justice and social financing. It shows how zakat affects consumption through marginal propensity of zakat recipients who spend zakat money on basic needs [9]. Previously, Haitham A. Al-Zoubi & Aktham Maghyereh [10] examine issuing government debt needed as a Ponzi scheme in Islamic finance to theoretically describe the role of zakat as a vital tool of fiscal policy in achieving pareto optimality. Their research sets a general equilibrium model that describes the long-run convergence to a pareto optimal allocation in a theoretical Islamic economy [10]. The model is based on Diamond criteria where the social planner maximizes the utility of all generations subject to the output of the economy. Theoretically, constructing a zakat fund can take the role of issuing debt in financial markets. Furthermore, their research shows that Islamic economy converges to pareto optimality by its nature without issuing debt in the financial market. Islam encourage socio-economic justice so zakat collection and distribution for the poor and underprivileged in the society will equally benefit them [11]. From such zakat activities, the country benefits in terms of alleviating poverty for the growth of the economy [11]. Only zakat institutions are able to conduct these activities of collection and distributions in accordance with the Qur'an. In Malaysian, Federal Territory and under the auspicious of MAIWP, Pusat Pungutan Zakat (PPZ) is established as a company is authorised to collect and distribute zakat in the Federal Territory.

4. Zakat Enabler to Social Financing

Zakat is an enabler to socio-economic prosperity and equitable distribution of wealth. Through a reduction in wealth concentration, social cohesion will be improved. At a time where income inequality threatens the social fabric of many countries (including Muslim countries) and impedes healthy economic growth,

establishing an efficient zakat system becomes more urgent. Embracing most recent developments in technology and the global acceptance of blockchain as a benchmark in maintaining secure, transparent and cost-effective transactions, are expected to create positive disruption in the zakat sector. However, the noise around blockchain may soon fade once it is clear that it is only an effective tool if it operates within a well-structured zakat ecosystem that includes strong governance, Shari'ah guidance and sincerity. Perhaps adapting the lessons in zakat effectiveness from Caliph Umar bin Abdul Aziz have not been more pertinent and applicable than today.

Research by Muhammad & Saad [12] examine the moderating effect of attitude toward zakat payment on the relationship between moral reasoning and intention to pay zakat in Kano Nigeria. The study distributed 780 questionnaires to all eligible Businessman in Kano, Nigeria; retrieved back 582 after rigorous data cleaning procedure, the study used 524 for the purpose of data analysis making the response rate of 67% which is acceptable for data analysis. Attitude and moral reasoning positively and significantly influence intention to pay zakat among Businessman in Kano Nigeria. Theoretically, new variable was tested in zakat environment [12]. Additionally, Ahmad & Ma'in (2014)[5] analyse the zakat management efficiency of "Lembaga Zakat Selangor" by utilising two stage linked Data Envelopment Analysis model. Two stage linked Data Envelopment Analysis model. First stage: zakat collection expenses and other collection effort variables is equals to input and the collection amount are output. Second stage: collection amount is added as input to the other distribution variables and the distribution amount is output. Results show lagging resources, especially in technical efficiency. DEA results shows a lower efficiency mean in distribution than in collection function [5]. The above shows the various research concerning zakat in finding solution to an efficient system. In order to adopt a new system such as blockchain technology, such studies by Muhammad & Saad [12], Ahmad & Ma'in [5] are useful to ascertain the factors related to zakat activities. Understanding the factors related to zakat activities deepen the knowledge and its relationship to the use of technology for zakat activities in particular the collection and distribution. Research relating zakat and technology has attracted researchers to look into the possibility of maximising the technology advancement in zakat management and dealing with factors as mention above. Research on "E-Zakat: Redesign the collection and distribution of zakat" looks into the opinion of Islam religious leaders to develop E-Zakat system in Indonesia [13]. The research conclude that in order to develop the E-Zakat system, the research findings results in (i) "E-Zakat system must be filled by the accountability, transparency and efficiency and most importantly should not violate the rules of Shari'ah"; (ii) "Amil should get proper training on understanding the criteria of a Mustahiq and the organisational skills as institutions for Zakat management"; (iii) "The Leader of the Mosque should be able to play an active role and keep harmony in stints as 'Amil Zakat so that the potential can be really be helpful to reduce the amount of poverty, especially in Danukusuman, Central Java".

Quinn [14] suggests zakat as an alternative funding solution to address 22.5 million refugees who are in need of assistance. It was reported the humanitarian funding deficits had reached USD\$16.7 billion and globally, collection of zakat is estimated at USD\$200 billion to USD\$1 trillion. Quinn [14] highlights that zakat as a tool is not well utilised but suggested to take the advantage of innovative

technology, financial governance and humanitarian advocacy in addressing funding of refugees. But, in terms of zakat distribution, best practice is to bind internationally the overall collection and distribution of zakat. The report proposed to create a unified zakat collection and tracking system across countries, religious institutions and non-governmental organisations. The potential use of blockchain technology and digital wallet would address the problem as it is transparent, can be access globally, enable to track the collection and distribution of zakat. However, in order this to happen, the first step is to introduce the blockchain technology to Islamic Scholars regarding the concept, knowledge and studying its perspective to Maqasid al-Shari'ah. The intention of adopting technology such as digital wallet for zakat collection and distribution have to be in accordance to preserving the Islam, life, intellect, progeny and wealth [15].

5. Potential of Enhancing Collection and Distribution with Zakat Digital Wallet

Digital wallet has shown a remarkable growth in Malaysia after experiencing cash crunch and demonetisation. As a result, the Malaysian Government find ways to encourage cash-based economy to a cashless economy thus enhancing the adoption of digital wallet for payment transactions. However, for zakat activities of collection and distribution, the use of digital wallet is not yet established. Studies need to be made on how the technology can be applied to manage zakat in accordance with Shari'ah principles. The Fourth Industrial Revolution give rise to the transformation of the global digital Islamic economy. This economic landscape of the Fourth Industrial Revolution bridge Muslims globally due to the availability of the digital Islamic economy aligned with the Islamic belief systems. The principles of Islamic belief system simplify and rationalizes the trade and finance according to the Shari'ah law. Digitalisation of the Islamic economic is growing and the demand for goods and services to meet the Halal standard is increasing as well. These trends influence payment methods to meet the global halal standard. Using digital wallet for zakat payment is a potential method that a zakat payer can use to fulfil their 'fardhu kifayah' or Muslim personal obligations. However, using digital wallet for the purpose of Islamic digital payment ecosystem especially for sadaqah and zakat in Malaysia is yet to be studied. Reliability and security of payments are issues that need to be addressed. The three main pillars on zakat collection and disbursement include transparency that can maintaining the trust, local distribution and utilise the zakat funds in a productive capacity [16]. With regard to the alleviation of poverty and addressing the refugee problem, zakat as a tool can be utilised and optimised by the potential use of blockchain technology as in digital wallet.

The function of digital wallet which is also known as cryptocurrency wallet facilitate financial transaction, to authenticate and store user's information such as loyalty card information, payment information, passwords and credentials. These are some of the vital information that need to be secured. In some, the functions of a digital wallets are created specifically to store, to trade and to be able to use the cryptocurrencies. However, some other digital wallet combines all the above factors with additional features. Digital wallet stores secret keys used to digitally sign transactions for blockchain distributed ledgers [17]. Digital wallet that adopt a blockchain technology will secure the authenticity of the transaction that will protect the forgery and counterfeiting in a cost-effective way. Technology have a

significant impact on many industries including zakat institution. Blockchain solution of digital wallet is a tool to improve the image and enhance partial efficiency of the zakat system.

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6. Conclusion

In conclusion, with the dynamic technological development especially the emergence of blockchain technology, the zakat collection and distribution would be more systematic and could be further enhanced as blockchain offers an immutable, security and transparent thus addressing the stabilisation of the Islamic non-bank financial system for zakat activities. The potential use of blockchain technology and digital wallet would address the world’s problem of alleviating poverty and achieving social-justice as it can be accessed globally, enable to track the collection and distribution of zakat. The blockchain technology is such that transaction cannot be altered. The technology will ensure that zakat donations and funding will reach directly to the zakat recipients. A clear financial and regulatory Maqasid al-Shari’ah (Islamic Law) guidelines at local, regional and international level would be ideal to optimize blockchain technology as in digital wallet to comply with. However, in order for this to happen, the first step is to introduce the blockchain technology to the Ulama (Islamic Scholars) regarding the concept, knowledge and characteristics of blockchain technology in the perspective of Maqasid al-Shari’ah for their acceptance in dealing with Islamic social financing purposes.

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