

Case for a Centralized Database for Waqf Administration in Malaysia

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Abstract

The aim of this paper is to evaluate the various existing models of Waqf in practice and determine their applicability within the context of Malaysia. This study was undertaken to investigate the practicality, feasibility, and potential success of implementing a centralized database for the administration of Waqf. The research process involved extensive desktop research and thorough benchmarking analyses. Additionally, the study delved into the identification of obstacles and challenges. To provide comprehensive insights, case studies were meticulously compared and contrasted. The findings of this study indicate that the establishment of a centralized national Waqf database would significantly enhance the efficiency and effectiveness of Waqf operations and administration. Furthermore, it would contribute to the enhancement of integrity and transparency within the system. Following this line of thought, the adoption of such a system aligns with the principles of maqasid al-shariah, ultimately safeguarding the reputation of Islam.

Keyword: Waqf, Centralised Database, Malaysia

1.0 Introduction

Waqf institutions have held a significant historical significance within the Muslim world ([Çizakça, 2000](#)). However, modern-day Waqf institutions have faced criticism for their ineffective management, insufficient governance, lack of transparency, deficient reporting, and compromised historical documentation ([Harun, Isa, & Ali, 2012](#); [Jalil, 2020](#); [Talib et al., 2018](#)). While various factors contribute to these inadequacies, the present study will specifically address two overarching categories of challenges: i. legislative concerns; and ii. administrative inefficiencies manifesting in improper recording, maintenance, and reporting of Waqf assets. Notably, there is currently no centralized repository for the documentation of Waqf assets in Malaysia. Within this study, we propose that the implementation of a centralized national Waqf database holds the potential to alleviate inefficiencies within the management of Waqf assets. Through the establishment of a comprehensive inventory that is made accessible, the administration and monitoring of assets can be significantly improved. Furthermore, the introduction of a centralized database is anticipated to foster public engagement, enabling contributions to incomplete Waqf assets via crowdfunding solutions, facilitated by increased transparency and disclosure. In conclusion, this study puts forth policy

recommendations aimed at creating a supportive framework for the effective management of Waqf assets in the future.

2.0 Waqf administration in Malaysia

In Malaysia, the jurisdiction over religious matters, including Waqf, is vested in the individual states, with the Sultans or the Yang di-Pertuan Agongs exercising complete authority. In accordance with legislative assemblies at the state level and the parliament at the federal territories level, each state in the country has established a State Islamic Religious Council (SIRC), commonly referred to as "Majilis Ugama". The primary duty of the individuals in question is to provide support and counsel to the Sultan in topics pertaining to Islam and the customs of the Malay community. Prior to the attainment of Malaysian independence in 1957, the British initiated a process of "centralization" of the Malaysian Waqf system. This process persisted even after the establishment of a unified Malaysian nation, as the British enacted a series of state laws aimed at effectively consolidating the state Waqf (for e.g., Perak in 1951 and 1965; Selangor in 1952; Terengganu in 1955; Malacca in 1959; and Johor in 1978). The primary provision under these laws designates State Islamic Religious Councils (SIRCs) as the only custodians of all Waqf properties ([Çizakça, 2000](#)). As stated by [Mahmood \(2006\)](#), the designation "sole trustee of an awqaaf asset" signifies that the State Islamic Religious Councils (SIRCs) of each state have been duly designated by their respective legislations to oversee all Awqaaf assets and assume accountability for their administration and advancement. No other entities or organisations possess the authority to exercise trusteeship power. The SIRCs were granted the authority to designate people or committees to assume the responsibilities associated with trusteeship. The establishment of the Department of Wakaf, Zakat, and Haji in 2004 aimed to effectively manage and improve the ongoing activities of the Social and Islamic Religious Council (SIRC), as noted by [Mahmood \(2006\)](#). The Malaysian approach has given rise to several challenges, which have been subject to criticism by researchers who have highlighted the inefficiencies of the system and the underdevelopment of Waqf land ([Jalil, 2020](#); [Talib et al., 2018](#)).

3.0 Issues in Waqf administration

3.1 Legal issues

3.1.1 Inadequate legislation

While the Malaysian States hold the authority to establish their own legislative framework for Waqf, as outlined in List II of the State List in the 9th Schedule of the Federal Constitution of Malaysia, it is noteworthy that only five states, namely Johor, Selangor, Negeri Sembilan, Terengganu, and Malacca, out of the total of 13 states and 3 federal territories, have enacted specific provisions or legislation pertaining to Waqf. Conversely, the remaining states have limited their treatment of Waqf to general legal administration, as elucidated by Ali and Ruzian Markom in December 2020. Despite the presence of current Waqf legislation, the necessity for change arises due to the evolving demands of society. For instance, the current legislation in the states of Johor, Negeri Sembilan, Malacca, and Terengganu lacks explicit provisions for cash Waqf. However, the introduction of this financial instrument has the potential to enhance flexibility and thereby maximise the advantages of Waqf assets (Kader & Dahlan, 2009).

In a study conducted by Mohamad, Kader, and Ali (2012), it was observed that the National Land Code (NLC) had a deficiency in terms of legislative provisions. The primary objective of the National Land Code 1965 in Malaysia was to establish a standardised framework for addressing land-related matters. However, it is worth noting that the specific inclusion of the term 'Waqf' was not explicitly stated within the code. Section 4(2)(e) of the National Land Code (NLC) effectively exempts Waqf land from the regulatory framework outlined in the code. Consequently, the absence of this provision results in a lack of adequate statutory safeguards for the preservation and security of Waqf land. Furthermore, it should be noted that Section 43 of the legislation pertains to the administration of land, although it does not address the administration of Waqf. It is worth mentioning that the requirements under Section 43 do not include any stipulations regarding the involvement of SIRC's, who serve as the exclusive trustees of the land. According to Section 64(1)(2), the powers mentioned therein are delegated to the State Authority, which is empowered to rescind the utilisation of any land designated for public purposes or to terminate any lease intended for the betterment of the general public.

3.1.2 Multi-layer Registration Process of Waqf Land

The process of registering land Waqf is intricate. Upon the declaration of a property as a Waqf, it becomes necessary for it to undergo registration in accordance with the Malaysian Land Law. According to a study conducted by [Ghazali, Raji, and Mohammad \(2019\)](#), a significant proportion of titles for Waqf assets, namely those pertaining to religious places of worship and cemeteries, were not awarded, reaching a staggering 93% in certain categories. The reasons provided encompass intricate bureaucratic procedures, protracted authorization timelines imposed by state agencies, objections raised by beneficiaries, and an extensive registration protocol.

As stated by [Ismail, Salim, and Hanafiah \(2015\)](#), the registration process for Waqf land is intricate and leads to a significant portion of the land remaining underdeveloped. The researchers' investigation revealed that the most significant obstacle encountered was the transfer of ownership from the original trustees to Special Purpose Acquisition Companies (SPACs) with Independent Directors (ID). Waqf land is officially registered under the ownership of people, religious centres, and community associations, although several parcels of Waqf land lack proper legal documents. In the latter scenario, it is not possible for SIRC to ascertain the individuals or entities that possess ownership titles. The situation is further intensified when legal disputes about registration are resolved through judicial proceedings, resulting in heirs prevailing over Special Interest Resource Companies (SIRCs). In conjunction with the payment of legal expenses, SIRCs are obligated to provide reimbursement to the heirs for any income derived from the Waqf assets.

In their study, [Ghazali et al. \(2021\)](#) discovered that the declarations made by both NLCs and SIRCs do not confer absolute indefeasibility to the land due to the presence of protracted and intricate procedures. Upon making a declaration of property at the SIRC (State Industrial Development Corporation), it is necessary to proceed with the registration process as outlined in various legal provisions. Specifically, the land must be registered under Section 215, which pertains to the transfer of title. This registration requires the completion

of Form 14A, as well as compliance with Section 195 of the NLC (National Land Code), which deals with state surrender and re-alienation. Additionally, the registration process involves the submission of Form 12A, Form 12B, and adherence to Section 416 of the NLC, which pertains to statutory vesting. Forms 30A and 30B are also required for this purpose. Following the aforementioned consent, the landowner is required to obtain further approval from the department of survey and mapping, the land and mining department, the state authority, and ultimately the municipal authorities. [Ghazali et al. \(2021\)](#) reported that a significant proportion of Waqf land, specifically 40.2%, remains unregistered as a result of the protracted and intricate registration procedure. The SIRCs, as the exclusive custodians of the Waqf land, are obligated to obtain authorization from the appropriate registration authorities. Failure to do so would result in the land not being recognised as indefeasible, legally binding, and valid according to Malaysian legislation.

3.2 Financial issues

3.2.1 Lack of Funds

A significant proportion of Waqf assets in Malaysia consist of non-revenue-generating projects that are immovable in nature and such projects necessitate financial resources for their day-to-day operations, maintenance, and further development ([Abd Mutalib & Maamor, 2018](#)). According to [Jalil \(2020\)](#), a number of variables contribute to the occurrence of fund shortages, one of which is the presence of low rental rates. The funds derived from Waqf institutions are thus inadequate to meet the necessary expenses.

The implementation of cash Waqf has the potential to address the problem at hand. However, it is important to note that donations made to a Waqf differ from voluntary acts of generosity (*sadaqah*) directed towards an established immovable Waqf. Moreover, there is a lack of public understanding regarding Cash Waqf. The cash Waqf funds raised in Malaysia from 2010 to 2019 are documented by [Hasan \(2008\)](#) and presented in [Table 1](#).

Table 1. Cash Waqf Collection in Malaysia, from 2010 to 2019

Year	Total collection of Cash Waqf (RM)	Total population of Muslims in Malaysia
2010	399,923.80	20,389,632
2011	396,318.17	20,490,061
2012	445,078.52	20,590,491
2013	988,651.74	20,690,920
2014	2,063,153.72	20,791,349
2015	2,034,494.72	20,891,779
2016	2,184,805.45	20,992,208
2017	2,667,079.56	21,092,637
2018	2,781,107.54	21,193,067
2019	2,850,942.82	21,293,496

Source: Hasan (2008)

It can be argued that an increased awareness of Cash Waqf would support fund raising.

3.2.2 Inadequate Tax incentives

Rizal and Amin (2017) assert that tax relief, deductions, and exemptions are crucial in promoting sustainability and facilitating the growth of Waqf management organisations or agencies (Rizal & Amin, 2017). Various research studies have provided empirical evidence supporting the benefits of tax incentives for philanthropic organisations (Bakija, 2013; Bowman, 2011; Fack & Landais, 2010).

According to Abdullah et al. (2021), tax incentives are not applicable to Waqf property as a result of the profits distributed to recipients. The Yayasan Wakaf Malaysia (YWM) and Perbadan Wakf Selangor (PWS), in collaboration with the SIRC's for the administration of Waqf assets, have observed that the government has provided limited or no tax incentives to these organisations due to their perceived profit-oriented nature. Paying assessment tax, quit rent, and income tax is a compulsory requirement for individuals classified as PWS. Nevertheless, it should be noted that YWN enjoys an exemption from income tax solely on the income derived from Waqf. With the exception of the aforementioned exemption, the agency remains ineligible for tax assessments or quit rent incentives (Abdullah et al., 2021).

In the view of [Ismon and Hingun \(2020\)](#), the classification of Waqf as a "religious norm" distinguishes it from being regarded as a form of charity. The report emphasised that tax reforms have not been applied to Waqf despite existing regulations. According to the aforementioned analysis, it was found that the Income Tax Act (ITA) of 1967 did not include any provisions pertaining to Waqf. In 2019, the Ministry of Finance provided tax exemptions to Cash Waqf. However, it should be noted that these exemptions are subject to the approval of the Inland Revenue Board, which, as of the conclusion of 2022, had not implemented any revisions.

3.3 Administrative issues

3.3.1 *Low level of knowledge & awareness*

The institution of Waqf in Malaysia dates back to the introduction of Islam, however, there has been a limited level of awareness and information within the population regarding Waqf activities ([Ismail et al., 2015](#)). The incorporation of Waqf education into higher education institution curricula in Malaysia has been limited. According to a study conducted by [Harun et al. \(2012\)](#), it was observed that there exists a deficiency in comprehending the concept of Waqf and its associated governance. The promotion of educational initiatives within the community regarding the concept of Waqf and its contribution to societal empowerment and advancement was advocated for.

According to the findings of [Hasan \(2008\)](#), it was determined that the level of awareness regarding Waqf among Malaysians was quite low, with a significant portion of the population remaining uninformed about the concept of cash Waqf. They state "that low awareness is caused by a variety of factors... such as a lack of understanding, a lack of promotion, and the influence of social culture."

3.3.2 *Improper utilization of Waqf assets*

The matter at hand has been of significant relevance to a majority of Waqf assets. It is noteworthy that governmental and regulatory entities have yet to enact any reforms or establish procedures aimed at protecting Waqf assets from unlawful use.

The collection of cash Waqf is restricted to a limited number of authorised entities. As an illustration, YWM and a number of banks were examined, namely Bank Islam Malaysia Berhad, Bank Muamalat Malaysia Berhad, and Maybank Islamic Berhad (Fauzi et al., 2019). Various technologies have been implemented to enhance the cash flow process, such as the partnership between Bank Muamalat Malaysia Berhad and Wakf Selector, which enables the collection of cash through many channels including the bank's counter, cheques, internet banking, and cash deposits via automatic teller machines (ATM). According to Mokhtar, Sidin, and Razak (2015), although there have been significant advancements, the implementation of Cash Waqf has become intricate due to the inclusion of multi-layer registration, documentation, and expensive documentation costs (Ali & Markom, 2020).

Similar to the situation pertaining to Waqf Land. The development of Waqf land is sometimes hindered by various constraints, including its structural limitations, non-geographical positioning, and inadequate infrastructure amenities. The references cited in the text include Abd Mutalib and Maamor (2018), Ibrahim and Ibrahim (2013), and Ab Hasan et al. (2015). Based on the study conducted by Abd Mutalib and Maamor (2018), The challenge in claiming rent for the Waqf property arises from its non-strategic placement, which deviates from prevailing market practises. Moreover, the constraints imposed by the property's location or limited size prohibit any modifications or expansions, leading to a reduction in revenue. In the words of Ibrahim and Ibrahim (2013), it has been observed that numerous Waqf properties are subject to unlawful possession. As a result of inadequate oversight in maintaining records. The importance of establishing a centralised Waqf database is emphasised in the research paper derived from the 5th Islamic Economic System Conference. This database would serve to maintain legal ownership titles and enhance recordkeeping procedures within the Waqf administration.

3.4 Reporting and accounting Issues

3.4.1 Poor record keeping and Reporting

Multiple studies have shed light on the various concerns and challenges encountered in the administration and management of Waqf. An area of interest for

researchers pertains to the inadequate documentation and reporting of Waqf assets by Waqf administrators, specifically the State Islamic Religious Councils (SIRCs) throughout various regions.

In their study, [Janom et al. \(2019\)](#) identified several concerns pertaining to the documentation of Waqf assets. These concerns encompass incomplete file information, a lack of transparency in Waqf documentation, insufficient details regarding Waqf assets, and the inability to promptly and adequately furnish pertinent information to relevant stakeholders.

In the context of Malaysia, it was observed that there existed an absence of a well-defined protocol for the establishment of Waqf, leading to suboptimal management of land and Waqf assets. In Malaysia, individuals desiring to establish a Waqf by the donation of their land traditionally conveyed their intentions verbally, with the presence of two witnesses. A Waqf administrator was designated to oversee and handle the management of the Waqf. The aforementioned individuals had positions of trust and esteem within their respective local communities, including local leaders, religious scholars, religious teachers, priests, village heads, and mosque committee members. However, it should be noted that a portion of these individuals faced challenges in effectively administering, managing, and fostering the honest development of Waqf land. This led to occurrences of malpractice, such as the action of transferring ownership of land titles to their own names. The administration and management of Waqf property persisted in this manner until the establishment of the state MAIN (Islamic Council) and the implementation of the state administration of Islamic law statute (administration of Islamic law) ([Janom et al., 2019](#)).

The Selangor Islamic Law Administration Enactment of 1952 established Selangor as the pioneering state to designate MAIN as a manager of Waqf properties. Subsequently, the state of Kelantan adopted this course of action in 1953, followed by Terengganu in 1955, Pahang in 1956, Melaka in 1959, Penang in 1959, Negeri Sembilan in 1960, Kedah in 1962, Perlis in 1963, Perak in 1965, the Federal Territory in 1974, Sabah in 1977, Johor in 1978, and Sarawak in 2001 ([Janom et al., 2019](#)).

MAIN was appointed as the exclusive trustee responsible for managing all properties under the Waqf system across all states in Malaysia. However, the

inadequate and irregular governance and oversight of Waqf in previous instances, particularly with the lack of documented records for Waqf land and the failure to register this land, gave rise to two significant challenges. Initially, there was a challenge in accurately determining the precise quantity, dimensions, and geographical positioning of the Waqf property. Furthermore, the primary challenges faced by the MAIN organisation in asserting its exclusive trusteeship over an unregistered Waqf are as follows. The difficulty of the matter escalated when the designated Waqf manager passed away, leading the heirs to assert that the property or land in question had not been officially designated as a Waqf by their parents or other family members. The inadequate documentation of Waqf assets emerged as a significant obstacle within the management of Waqf (Janom et al., 2019).

3.4.2 Issue with accounting Practices

In relation to accounting practises, several studies have brought attention to the issues associated with the reporting and accounting methodologies utilised by SIRC. According to the study conducted by Noordin, Haron, and Kassim (2017), there is currently a lack of a comprehensive reporting system for Waqf institutions. In the study by Masruki, Hussainey, and Aly (2018), the analysis and evaluation of yearly reports for Malaysian State Islamic Religious Councils (SIRC) necessitates consideration of both the amount and quality of Waqf reporting. In Daud's (2018) investigation, it is highlighted that there exists a significant dearth of adequate reporting on Waqf, which hampers the value enhancement for the Islamic Religious Councils entrusted with the responsibility of administering and controlling Waqf. Concerning Waqf councils, there exist significant concerns regarding the adequacy and thoroughness of the conducted reports, thereby indicating deficiencies in the governance efficacy of these councils. The present study investigated the determinants associated with the underreporting phenomenon observed among Islamic councils.

Inconsistencies in the documentation and reporting of Waqf assets in Malaysia have been identified by Talib et al. (2018). The current state of affairs reveals a deficiency in the establishment of an accounting system and the implementation of systematic management for Waqf assets. Furthermore, there is a notable absence of

documented processes for accurately recording financial transactions related to these assets. According to [Talib et al. \(2018\)](#), the individual in question has referenced [Mustafa \(2007\)](#) assertion that a majority of state Waqf organisations lack current audited financial statements. This absence of up-to-date financial records results in outdated documentation and disorganised data pertaining to Waqf properties.

As stated by [Hasan \(2008\)](#), the administration of Waqf institutions varies across different states due to their governance by distinct State Islamic Religious Councils (SIRCs) with varying rules and regulations. Consequently, this disparity in administrative practises might give rise to various administrative challenges. The variance in accounting practises among Shariah-compliant investment and real estate companies (SIRCs) has emerged as the primary factor contributing to the disparate handling of Waqf assets, such as land and buildings.

3.4.3 Poor information Management System

Despite notable advancements in the administration of Waqf, there remain noteworthy deficiencies that necessitate further enhancement, particularly in the realm of information management. According to the findings of [Harun et al. \(2012\)](#), notable deficiencies were identified in relation to documents pertaining to land purchase information. The entity responsible for overseeing the administration of the Waqf land fails to provide a comprehensive inventory of the entirety of the Waqf land subject to the acquisition process. Some of the contributing factors include an insufficient number of personnel and incomplete documentation. The study conducted by the researchers also highlights the issue of information management. The researchers observed an issue with the administration of Waqf in the states of Peninsular Malaysia, specifically related to the lack of openness in Waqf documents. In the interim, interviews conducted with specific personnel of the Malaysian Ministry of Islamic Affairs and National Trust (MAIN) similarly revealed a lack of comprehensive data pertaining to Waqf assets ([Masruki & Shafii, 2013](#)).

It is well acknowledged that a number of Waqf lands in Malaysia have remained undeveloped. [Jalil \(2020\)](#) identifies a significant impediment to land development as the presence of registration issues and insufficient information

pertaining to Waqf lands. In accordance with land law, as stipulated in the National Land Code 1965 (Act 56), the ownership of unregistered land is not granted to any individual or designated entity (Section 340, NLC). The study participants regularly engage in discussions regarding the disclosure issues pertaining to Waqf, zakat, and baitulmal activities. The SIRC lacks the capacity to register historical Waqf land that remains untransferred and unregistered under the SIRC's jurisdiction. The author argues that this assertion may be supported by the subsequent rationales.

- A. Waqif has died
- B. Grant, in the name of Penghulu³/Khadi
- C. Verbal oral without supporting documents
- D. Land on other stakeholders,
- E. Agriculture land less than 1 acre

Additionally, he noted that the lack of accounting standards in the context of Waqf has led to the production of inconsistent and diverse financial accounts. The issue is exacerbated in cases where a Waqf institution lacks a comprehensive report management system, resulting in the preparation of reports on an annual basis.

Un-systematic Record keeping of Waqf Assets- A Case study

The financial technology sector, commonly referred to as fintech, is undergoing rapid transformations that are significantly impacting the dynamics of the industry. Malaysia, in particular, has demonstrated a compelling inclination towards embracing these transformative developments. Nevertheless, the Waqf administration continues to encounter challenges related to the upgrading of Waqf reporting.

Based on a review of various researches, it became apparent that the reporting systems in several SIRCs lacked full digitalization and exhibited a lack of systematic organisation. The Majlis Islamic Negeri Johor (MIAJ) has had difficulties in recording information as a result of an insufficient database, as highlighted by [Jalil et al. \(2019\)](#). In their literature analysis, [Abas and Raji \(2018\)](#) highlighted a specific situation in MIAM, the state of Malacca, where the management exhibited a lack of awareness regarding the proclamation of Waqf land. According to [Aud's \(2018\)](#) study, factors

like as inadequate governance and bureaucratic processes within SIRC's have been identified as contributory factors that impact the systematic reporting of Waqf assets. The application of innovative technologies in places such as Selangor poses challenges that impede the efficacy of cash Waqf (Fauzi et al., 2019).

This section of the study will investigate the SIRC of the State of Negeri Sembilan as a case study.

Negeri Sembilan- A Case Study

Based on the 2021 global Islamic fintech study, Malaysia emerges as the primary centre for Islamic fintech, securing the top position in the Global Fintech Index (GIFT). Despite the considerable expansion experienced by many Islamic financial sectors, such as Waqf, there is a notable deficiency in the implementation of advanced computerised systems for the management and preservation of data. According to a study conducted by Siraj and Karbhari (2014), it was observed that the budgetary operations in various organisations such as SIRC and Baitulmal, including the state of Negeri Sembilan, primarily rely on manual recording methods. The author discovered that as a result of this mismatch, the accessibility of precise data and timely information is unverifiable. In the aforementioned study, the author referred to the observed setting as a "manual environment" wherein the process of documenting real-time monthly expenses saw a delay of nearly two months. In this particular circumstance, the act of aggregating real revenue or spending may be disconnected from the implementation of proactive measures.

In order to provide a rationale for the aforementioned discovery, an examination of a study conducted by Pyeman, Hasan, and Ahmad (2016) on the State Islamic Religious Council's (SIRC) practises in Negeri Sembilan will be undertaken to demonstrate a lack of progress in the implementation of systematic database management in the administration of Waqf assets. The utilisation of the data envelopment analysis (DEA)-based Malmquist Productivity Index (MPI) was employed by the author in order to assess the Waqf management efficiency index (WME). The Data Envelopment Analysis (DEA) is a non-parametric approach that utilises a range of input and output variables to assess efficiency and productivity in

diverse economic sectors such as agriculture, banking, and finance. Its purpose is to assist Decision Making Units (DMUs) inside an organisation in enhancing their performance based on their inherent capabilities.

The Data Envelopment Analysis (DEA)-based MPI is widely recognised as a prominent index for evaluating efficiency across many components, with a particular focus on technology-related aspects. These components include changes in technical efficiency, technological change, change in scale efficiency, and change in total factor productivity. The research conducted in Tanzania utilised a similar methodology, employing a DEA-based MPI technique to evaluate the proficiency of commercial banks ([Raphael, 2013](#)).

The author utilises the DEA-MPI approach to evaluate the efficiency of the Waqf Management Index (WMI). This evaluation is based on three key aspects, including changes in efficiency, technical efficiency, and overall factor productivity. The salient metric derived from the results of this investigation pertained to the alteration in technical efficiency, which was computed for each of the 14 states. In accordance with the Technological Change Score (TEC) during the period of 2007-2012 The states that exhibited a greater degree of variation in technical proficiency were the State of Selangor and the State of Penang. In contrast, the states of Sabah and Negeri Sembilan had negligible improvements and comparatively lower levels of increase in technical proficiency ([Pyeman et al., 2016](#)).

The aforementioned conclusions are additionally supported by the research conducted by [Salleh and Chowdhury \(2020\)](#), which posits that philanthropic groups in Malaysia are not effectively improving technology efficiency. The study revealed that historically, all data was manually recorded, resulting in challenges such as inaccurate recording and data loss. The author employed a qualitative methodology to substantiate its conclusions. The study was carried out in Peninsular Malaysia, specifically in the Social Impact Research Centre (SIRC) and Baytumul, encompassing 10 states. The studies' findings indicate that social finance organisations in several states, including Negeri Sembilan, face challenges in accessing suitable technology-based solutions for effective data administration and storage.

Based on the preceding considerations, it has been demonstrated that the utilisation of manual or unsystematic approaches to data administration might lead to a dearth of transparency. An illustrative case in Indonesia ([Iman, Santoso, & Kurniawan, 2020](#)) underscored the continued reliance on manual methods for Waqf data administration in 2020, with Nadir, the custodian of Waqf assets, assuming responsibility for this task. The author highlights a notable drawback of manual Waqf administration programmes, namely the absence of verifiable proof in cases where data is lost, indicating whether the record was indeed submitted to the Nadir. Without a centralised database, governmental or other authoritative entities are unable to obtain the pertinent information unless it is provided by Nadzir parties.

Malaysia is currently making rapid advancements in the adoption of Islamic fintech social finance solutions. However, certain challenges persist, particularly in the realm of Waqf data administration under specific State Islamic Religious Councils (SIRC), such as the State of Negeri Sembilan. By leveraging cutting-edge technologies such as smart contracts, blockchain, and Waqf Crowdfunding, it is possible to effectively administer a centralised database with the aim of augmenting the productivity of Waqf.

4.0 Waqf Administration Practices in Selected Countries

The administration of the Waqf institution is overseen by governmental authorities in various nations, whether at the state level (such as Malaysia, Nigeria, and India) or the federal level (such as Turkey, Kuwait, and Zanzibar). The assessment of information storage systems employed by various entities is challenging due to the limited availability of publicly accessible information. The subsequent discourse presents a concise examination of the regulatory frameworks governing Waqf in several nations with proven expertise in Waqf management. This analysis offers valuable insights into their methodologies for storing Waqf-related information. The theory posits that the existence of a singular governing body overseeing all Waqf within a nation necessitates the establishment of a centralised repository for Waqf-related information.

Waqf Administration in Zanzibar

The management of Waqf institutions in Zanzibar has been through many stages since 1905. During that particular year, the British authorities established the 'Commission of Waqf and Trust Property' with the intention of implementing laws that would effectively secure their authority and oversight over Waqf properties. From that period until 1963, the British enacted legislation that granted them complete authority over the Waqf Commission. This included the power to nominate commissioners, with the Sultan merely endorsing these appointments (Suleiman & Hamad, 2016).

Following the attainment of independence in 1964, the newly established government proceeded to promulgate a multitude of presidential decrees. In spite of the concerted efforts made by the government, the aforementioned period was characterised by the occurrence of mismanagement pertaining to Waqf assets. In addition, the government undertook the process of nationalising certain Waqf plantations, afterward allocating them to individuals in the form of three-acre plots. The re-establishment of the Waqf and Trust Property Commission in Zanzibar was mandated by the Revolutionary Council Decree No. 5 of 1980. The aforementioned edict also sought to address topics pertaining to Islamic affairs, which were similarly consolidated by the government, including issues linked to Waqf (Suleiman & Hamad, 2016).

In the year 2007, the implementation of Act No. 2 resulted in the placement of Waqf properties in Zanzibar under the jurisdiction of a government-regulated agency known as the "Waqf and Trust Commission" (WTC). Given that all Waqf assets are within the jurisdiction of the Waqf and Trustee Council (WTC), it is reasonable to infer that the WTC possesses comprehensive knowledge on the various Waqf assets located in Zanzibar. In the absence of readily accessible information, it is postulated that the World Tourism Council (WTC) maintains a central repository of Waqf-related data in Zanzibar.

Waqf Administration in Kuwait

The history of Waqf in Kuwait may be traced back to the year 1695, with significant advancements taking place throughout the 1920s and 1930s. The Directorate, created in 1921, was entrusted with the task of supervising and advancing

Waqf (Islamic endowment) in Kuwait. Following that, a governing body known as the "Board of Awqaf" was established, comprising individuals from the general public who were involved in the management of Waqf properties (Kamarubahrin & Ayedh, 2018).

The issuance of a royal ordinance (Marsum Amiri) pertaining to the management of Waqf took place on April 5th, 1951. According to the ordinance, it is required that the administration of awqaf adheres to the rulings that align with the principles of four Sunni legal schools. In cases where the Marsum Amiri does not address specific matters, the administration should rely on the Maliki School of Jurisprudence. In 1962, the Directorate of Awqaf underwent a significant transformation, evolving into a comprehensive ministry and assuming the title of 'The Ministry of Awqaf'. In the year 1965, the aforementioned ministry was bestowed with further duties pertaining to matters concerning the Islamic faith. Consequently, its nomenclature was altered to 'Ministry of Awqaf and Islamic Affairs'. Furthermore, the administration of Waqf has been divided into two sections, specifically the division responsible for Waqf administrative issues and the division dedicated to Waqf resource management (Kamarubahrin & Ayedh, 2018).

The establishment of the Kuwait Awqaf Public Foundation (KAPF) occurred in November 1993 by the issuance of a royal decree (no. 257). A legislative decision was made to move all Waqf matters from the Ministry of Waqf and Islamic Affairs to the KAPF, with the aim of establishing a somewhat autonomous administration. The primary duties of the KAPF encompassed the oversight and administration of Waqf funds and assets. Additionally, it is expected to engage in collaboration with both governmental and non-governmental entities in order to facilitate the development of novel Waqf initiatives. In summary, the Kuwait Awqaf Public Foundation (KAPF) functions as a centralised federal entity responsible for the supervision and management of the foreign Waqf administration in Kuwait (Kamarubahrin & Ayedh, 2018).

Similar to Zanzibar, the Waqf administration in Kuwait operates under a unified central authority, suggesting the existence of a centralised repository containing all the Waqf assets in Kuwait.

Waqf Administration in Indonesia

In the context of Indonesia, the legal framework governing Waqf matters is established by Law No. 41 of 2004 and Government Regulation.

The subject of discussion is the forty-second regulation enacted in the year 2006. The aforementioned legislation required the creation of a Waqf board with the purpose of facilitating the advancement and enhancement of Waqf land in Indonesia. In the year 2007, the President of Indonesia issued a decree pertaining to the establishment of the Indonesian Waqf Board (BWI) (Hasanah, 2014).

In Sunandar's (2020) study, the author discusses the content of Law No. 41/2004, which pertains to the concept of Waqf. The law covers several aspects such as general rules, fundamental principles of Waqf, procedures for registering and announcing Waqf properties, changes in the status of Waqf properties, as well as the maintenance and development of these properties.

The subject matter encompasses several aspects related to Waqf property, including the Indonesian Waqf Agency, resolution of settlement disputes, provision of guidance and supervision, imposition of criminal provisions and administrative sanctions, transitional provisions, as well as closing requirements. The aforementioned Waqf statute renders null and void all preceding legal provisions within the legislation.

In essence, Law No. 41 of 2004 serves as the regulatory framework governing and supervising the operations of Indonesia, namely at the national level.

Waqf Administration in Turkey

The institution of Waqf in Turkey has a lengthy historical background, experiencing significant growth and development, particularly during the era of the Ottoman Empire. Both immovable and monetary Waqf have made significant contributions to the betterment of society. Following the dissolution of the Ottoman Empire, significant revisions were implemented regarding the Waqf legislation.

In the study conducted by Dursun (2019), it was determined that the Republican reforms implemented the abolition of Islamic Waqf and introduced

"foundations" as a replacement. These foundations were modelled after the Swiss Civil Code, as they were considered more suitable for restructuring the previous system. The aforementioned reforms were implemented as constituents of the newly established civil code of the Turkish Republic, which was officially launched in the year 1926.

But things changed in 1967, as [Çizakça \(2016\)](#) put it "... as the country slowly democratized and an effective opposition emerged in the parliament, a reaction set in. Led by a powerful business tycoon, the late Vehbi Koç and a group of opposition MPs and academics, a new Waqf law was promulgated in 1967. This law is considered to be the rebirth of the Turkish Waqf system. Not only the property rights of Waqf were once again guaranteed, but also Waqf-company links were strengthened. Now, a Waqf could establish its own companies or a company could establish its own Waqf."

The Turkish Waqf system experienced a significant growth in the number of endowments as a result of the implementation of Law No. 903 in 1967. Between the years 1923 and 1967, a duration of 44 years, a mere 73 new Waqf entities were founded. In contrast, from 1967 to 1985, spanning a length of 18 years, a substantial increase was observed with the establishment of 1,877 new Waqf entities. Between the years 1986 and 1996, a yearly increase in the establishment of Waqf was observed, with the number surpassing one hundred per year. This trend continued to rise until it peaked at 439 new Waqf in the year 1996. According to [Cizakca \(2020\)](#), the cumulative count of newly established Waqf entities had reached 4,774 at the conclusion of 2013. The year 2008 witnessed the promotion of a novel Waqf law, notable for its inclusion of the 'Council of Waqf' as a key component. The council, with a total of fifteen members, has extensive authority, which encompassed the ability to designate trustees. These appointments are currently contingent to the approval of the council. Trustees who have been appointed can now be dismissed based on the proposal of the council, subject to a decision rendered by the local court ([Cizakca, 2020](#)).

At present, the management and regulation of Waqf in Turkey is centralised at the federal level, with the presumption that all pertinent information pertaining to Waqf is contained inside a centralised data repository.

Waqf Administration in Singapore

In the context of Singapore, the governance of Waqf is regulated by the 'Administration of Muslim Law Act' (AMLA), which was officially established in 1966. The regulatory provisions pertaining to Waqf are addressed in sections 58–66 and 73–75. According to the Anti-Money Laundering Act (AMLA), Waqf is legally defined as the enduring commitment made by a Muslim individual to allocate any form of tangible or intangible asset for a cause that is acknowledged under Muslim law as virtuous, religious, or philanthropic in nature. According to the provisions of the Administration of Muslim Law Act (AMLA), the responsibility of administering all Muslim endowments and monies entrusted to it by virtue of any written law or trust has been delegated to the Majlis Ugama Islam Singapura (MUIS). According to the legislation, this particular provision designates MUIS as the sole Waqf authority under the jurisdiction of Singapore. The entity was granted the power to formulate policies and render decisions pertaining to Waqf affairs. Additionally, it possesses the authority to designate and substitute mutawallis, sometimes known as trustees. Additionally, it has the capacity to assume control of relinquished Waqf properties from former trustees or mutawallis (Listiana & Alhabshi, 2020).

Prior to the implementation of the Anti-Money Laundering Act (AMLA), the administration of Waqf affairs was governed by the "Muhammaedan and Hindu Endowments Ordinance," which was officially enacted on September 8, 1905. Following that, the delegation of the Waqaf management authority to MUIS (Majlis Ugama Islamic Singapore) took place on July 1, 1968. To effectively carry out its managerial responsibilities pertaining to Waqf affairs, the Islamic Religious Council of Singapore (MUIS) established a subsidiary known as Wakaf Real Estate (Warees) Pte. Ltd. This entity is entrusted with the task of managing tenancy matters, maintenance activities, and disbursing payments to beneficiaries, among other responsibilities (Listiana & Alhabshi, 2020).

Before the implementation of the Administration of Muslim Law Act (AMLA), the registration and monitoring of Waqf assets were not comprehensive under the purview of the Majlis Ugama Islam Singapura (MUIS). According to Article 64 of the Administration of Muslim Law Act (AMLA), it is mandatory for all Waqfs in

Singapore, regardless of their establishment date, to undergo registration with the Assembly office. The responsibility of completing this registration lies with the Mutawwali of the Waqf. In the event that a Muttawali fails to properly register the Waqf, provides inaccurate information, or obstructs the inspection of Waqf properties, they may be subject to legal prosecution, resulting in potential penalties of fines up to \$5,000, imprisonment for a maximum duration of 12 months, or a combination of both (Pertiwi, Ryandono, & Rofiah, 2019).

As a result of the implementation of the Anti-Money Laundering and Countering the Financing of Terrorism Act (AMLA), all Waqf assets have been subjected to registration and oversight by the Majlis Ugama Islam Singapura (MUIS). The implementation of the Administration of Muslim Law Act (AMLA) led to the establishment of centralised administration for Waqf in Singapore. It can be reasonably inferred that, similar to other countries, MUIS likely maintains a centralised repository of Waqf information.

Waqf Administration in India

Despite being a nation with a Muslim minority, India possesses the highest quantity of Waqf. The reason behind the control of northern India by Muslim kings can be attributed to their dominance since the 13th century. The inception of the earliest recorded Waqf in India can be attributed to the final years of the twelfth century, during when Muhammad ibn-Sam, a notable Ghurid Sultan, instituted a Waqf under his own appellation. Following the formation of the Delhi Sultanate in 1206, a multitude of additional Waqf were subsequently established. One such example is the Waqf established for the purpose of preserving the mausoleum of Sultan Qutb Uddin. Sultan Muhammad bin Tuqlaq appointed Ibn Batuta, a renowned Arab traveller, as the trustee of a specific Waqf (Çizakça, 2000).

The time frame spanning from 1947 to 1954 held significant importance for the Waqf institution in India. Following the partition, a significant number of Waqf institutions were left devoid of a trustee due to the mass exodus and migration of individuals to Pakistan. Concurrently, a phenomenon of reverse migration from Pakistan led to the unlawful encroachment upon Waqf properties by individuals who

had been displaced. Numerous individuals took advantage of the tumultuous circumstances during that period in order to pursue personal gain, often at the expense of Waqf. Upon receiving a comprehensive report from the organised Muslim groups Anjuman Himayat-e-Islam and Jamiat al-Ulema-al-Hind, Prime Minister Nehru swiftly acknowledged the pressing necessity for taking action. The outcome materialised in the form of the Central Waqf Act of 1954. There has been a contention positing that the aforementioned Act represents a significant milestone in the development of Waqf in India. It has been suggested that this Act marked a significant development by establishing a comprehensive nationwide legislation pertaining to Waqf, which had not been seen since the Mughal era ([Ahmad et al., 2015](#)).

The Act established governing bodies with the authority to enforce specific obligations on trustees and mutawallis, with the violation of these obligations being subject to penalties. It also assigned supervisory responsibilities to state governments and granted the Central Government the power to determine the policies to be followed by the governing bodies. Through the implementation of this legislation, the state assumed jurisdiction over all religious and philanthropic endowments, regardless of their specific denomination. The “management and security of all endowed property is now included in the duties of government”. The legislation also mandated the registration of all religious and benevolent endowments in the official registry of endowments. The appointment of a director by the State Department of Endowments entailed the individual assuming responsibility to the respective state governments for the effective administration of the department. The responsibility of the directors of endowments encompassed the protection and maintenance of all endowed assets, as well as the assurance of their adherence to their initial intended purpose ([Ahmad et al., 2015](#)).

The legislation pertaining to the Waqf system in India that is currently in effect was enacted in 1995. In addition to various other provisions, this legislation introduced the establishment of an additional bureaucratic entity known as the Central Waqf Council. The primary objective of this council is to provide guidance and counsel to the government regarding the operational aspects of Waqf boards and the effective management of Waqf properties ([Ahmad et al., 2015](#)).

Based on the above discourse, it may be inferred that similar to Malaysia, the administration of Waqf in India is subject to the authority of the state. Despite the existence of a Central Waqf Council at the national level, the decentralised administration of Waqf properties in India suggests the absence of a centralised repository for Waqf information at the national level.

5.0 Centralized Database as a Solution

The management of Waqf in Malaysia is entrusted to the State Islamic Religious Councils (SIRCs) or "Majilis Ugama" of each respective state. However, as a consequence, the data pertaining to Waqf has become dispersed across a range of 12 to 14 states. Consequently, despite the availability of information at the state level, obtaining a comprehensive understanding of the national scenario proves to be exceedingly challenging, if not unattainable. Waqf administrators and policy makers at national level are constrained in generating meaningful reports about:

- Sources of funds and donor information
- Information about usage of Waqf services by beneficiaries
- Conversion of a beneficiary into a donor
- Amount spent on Waqf projects

The above-mentioned reports play a crucial role in facilitating effective Waqf management and fostering the principles of "share more," "use more," and "donate." The utilisation of these reports is crucial for the effective management of Waqf and the advancement of the concepts of "share more," "use more," and "donate more" within the Waqf ecosystem.

In the contemporary era of technology-driven society, data holds significant value as a crucial resource for organisations, regardless of their corporate or non-profit nature. According to the Stanford Centre for Philanthropy and Civil Society, non-governmental organisations (NGOs) are through a process of reconfiguration, evolving into purpose-driven establishments that are specifically structured to allocate and safeguard both digital and analogue assets for the betterment of the public. The level of efficiency in the operations of a non-profit organisation, particularly a Waqf, is positively correlated with the extent of knowledge it possesses

regarding its donors, recipients, and other stakeholders. Based on the provided information, it is possible to enhance the efficacy of Waqf fundraising efforts by designing them in a manner that efficiently targets a larger pool of potential contributors and encourages them to augment their donations. Therefore, there is a need for a more comprehensive and resilient national or central data management system for Waqf. The implementation of a centralised database for Waqf management in Malaysia is anticipated to provide a substantial contribution towards the establishment of more structured and expandable fundraising initiatives for Waqf, as well as the effective administration of current Waqf assets. The dissemination of Waqf information to stakeholders can be facilitated through the use of a centralised database, which allows for the generation of timely reports. This will lead to a heightened level of transparency and foster more trust. Providing comprehensive details about various Waqf initiatives to prospective donors will facilitate the mobilisation of funds and the effective dissemination of Waqf services to potential beneficiaries. Consequently, this can enhance the social impact of the Waqf.

According to [Kholid, Sukmana, and Hassan \(2009\)](#), the establishment of a Waqf information management system is necessary to provide support for projects aimed at sustaining the Waqf. In the words of [Hasan \(2008\)](#), the integration of Information and Communication Technology (ICT) within the administration of Waqf has the potential to enhance efficiency in management and planning processes. The utilisation of this information system provides a range of advantages in relation to data, records, and numbers, facilitating the effective management and administration of Waqf properties.

While the utilisation of modern computer technology in Waqf administration by the SIRC's may be lacking, it is important to note that there has been some improvement in this area. Penang, Selangor, and the Federal Territories are the states that have successfully integrated the information and communication technology system into their Waqf administration. The information system pertaining to the Waqf land under the jurisdiction of the Islamic Religious Council of Pulau Pinang encompasses four primary applications. These include the Waqf information management system, the comprehensive building information system, the geographic

information system (GIS)-based information system, and the Penang Geographic Information System (Hasan, 2008). The Selangor Waqf Corporation (PWS) in Selangor has undertaken the endeavour of establishing the Waqf Selangor Online platform, which was implemented in November 2016. The primary purpose of the system is to facilitate the acceptance of general Waqf through online payment, utilising the Financial Process Exchange (FPX) platform. Furthermore, this system allows for the registration of the Waqf as a user, facilitating the verification of transactions, changes, and various other functionalities (Janom et al., 2019).

Based on our study, it has been determined that Malaysia lacks a centralised database that encompasses comprehensive information pertaining to Waqf assets, donors, and beneficiaries. Furthermore, it is crucial to note that there is currently no centralised government database available for the storage and management of Waqf information. In the words of Talib et al. (2018), the presence of central management and authority at the federal level is crucial for the purpose of maintaining a well-organized, systematic, and efficient management and administration of Waqf properties.

6.0 Use of Blockchain and Blockchain Databases in Waqf Administration

The institution of Waqf has played a significant role in the domain of Islamic social finance. However, there have been criticisms regarding the management and governance of contemporary awqafs, particularly in relation to cash Waqf. These critics contend that there is a lack of effective management practises and transparency in this specific area. In a study conducted by Alharthi (2021), it was revealed that the primary challenges encompassing the subject at hand include a deficiency in transparency, inadequate auditing practises, and impaired integrity of historical documents in the event of the founders' demise. He has proposed a solution arguing that: "Through smart contracts on Blockchain, there is a surety of efficacy and effective performance of WAQF institution and the realization of the founders' objectives."

In addition to Bitcoin, blockchain technology is currently being employed in many applications. The utility of this technology becomes evident in situations when the importance of transparent transactions is emphasised. An exemplary illustration

can be found in the utilisation of blockchain technology by the United Kingdom government for the purpose of land register. The issuance of a news release titled "HM Land Registry to explore the benefits of blockchain" by the UK government's land registry took place on October 1, 2018. The HM Land Registry is entrusted with the custodianship of land and property ownership data with an estimated worth over £4 trillion. The Land Register has a vast collection of over 25 million titles, representing a substantial portion of the land area in England and Wales, exceeding 85% of the total land mass. According to Graham Farrant, CEO of HM Land Registry, "as we explore how new technologies like blockchain can help us to develop a faster, simpler and cheaper land registration process." According to David Rutter, CEO of R3 (company the Land Registry partnered with): "Blockchain holds the potential to transform land registry services by improving speed, simplicity and efficiency."

Based on a report, the countries of Ukraine, Georgia, and Sweden have implemented blockchain technology for the purpose of land registration. The Dubai Land Department has implemented blockchain technology for the purpose of documenting and storing real estate transactions, encompassing contracts and leasing agreements.

As previously stated, a significant challenge confronting Awqaaf is to the matter of trust. Enhancing confidence in Awqaafs necessitates the implementation of effective governance practises and transparent communication with stakeholders. The utilisation of blockchain technology presents a potential avenue for achieving these objectives. Finterra is a corporate entity situated in Kuala Lumpur, Malaysia, which has successfully devised a crowdfunding platform utilising blockchain technology. This platform facilitates the creation of intelligent contracts that are intrinsically linked to designated Waqf initiatives. This platform enables all participants to put out a proposal for a Waqf project. Upon completion of the due diligence process and satisfaction of all necessary criteria, the project proposal is thereafter published on the site, thereby enabling other individuals or business entities to make contributions towards the aforementioned Waqf initiative. The Waqf Chain platform developed by Finterra facilitates the generation of tokens, which are subsequently allocated to the donors who actively engage in the network (Harun et al., 2012).

Finetera's Waqf Chain represents a notable instance of blockchain implementation within the domain of Islamic finance. However, it is worth noting that several concept papers have been published, outlining the potential utilisation of blockchain in Islamic finance. For instance, [Abd Razak et al. \(2020\)](#) proposed a prototype of a Waqf blockchain specifically designed for the purpose of Islamic finance education, as they have put it, "the implementation of Waqf for higher education is to give a value added to the students by giving them a financial aid to enrol for the professional certificate".

[Vidiati et al. \(2021\)](#) conducted a comprehensive review of the strengths, weaknesses, opportunities, and threats (SWOT) associated with the utilisation of blockchain technology in the mobilisation of funds for cash Waqf. According to the aforementioned source, if blockchain technology is employed for the aforementioned purpose, it can offer several advantages. As elucidated earlier, these advantages primarily pertain to the technological aspects of blockchain. They include the elimination of intermediaries, expedited access, absence of bank transfer fees, and the absence of commissions or fees during the transaction process. This is due to the instantaneous transfer of cryptocurrency to the intended recipient. The utilisation of blockchain technology facilitates a significant degree of automation. Transparency is ensured due to the global accessibility of the blockchain. Moreover, because to the inclusivity of ledger writing capabilities for all individuals, blockchain technology can serve as a comprehensive store for vast quantities of data. This data can subsequently be utilised for analytical purposes across all industries and sectors (Waqf, other economies such as zakat, insurance, finance, medicine, education, etc). The fundamental cryptographic technique guarantees the integrity of data and prevents the rejection of transactions. In conclusion, the replication of blockchain across every network node serves as a safeguard against unanticipated circumstances or potential misuse, hence enhancing the security and integrity of the blockchain system.

The fundamental cryptographic technique guarantees the integrity of data and prevents the rejection of transactions. In conclusion, the replication of blockchain across every network node serves as a safeguard against unanticipated circumstances or potential misuse, hence enhancing the security and integrity of the blockchain system.

Traditional client-server databases often employ a centralised server architecture. Individuals that possess the necessary authorization are able to manipulate the data and, in accordance with database terminology, execute CRUD (Create, Read, Update, and Delete) activities on the information stored within the database. After a user modifies the data, the central server will record any changes made before updating the database for other users who are viewing it. One crucial characteristic of a distributed database is its great scalability, which enables organisations to efficiently store and retrieve vast quantities of data in real-time.

In contrast, a blockchain database exhibits complete decentralisation. Every node within the database possesses a comprehensive replica of the entire database. The execution of database transactions is facilitated through several agreements, including proof of work (PoW), proof of stake, or proof of authority. These agreements serve the purpose of providing compensation for the efforts expended in performing the work. This technology's enhanced security is attributed to the presence of a consensus mechanism, which necessitates the attainment of agreement from a majority of network nodes in order for any potential hacker to successfully breach the system.

From a perspective centred on security and transparency, it may be argued that databases built on blockchain technology provide a distinct edge. With that being stated, there are several obstacles to the implementation of a blockchain-based decentralised database.

One of the primary challenges encountered in the context of blockchain technology pertains to the issue of scalability within the database infrastructure. The processing speed of individual nodes in the blockchain imposes a limit on the number of transactions that can be executed concurrently. Consequently, traditional databases see a decrease in performance. However, the scalability of traditional databases allows for the straightforward addition of hardware resources as required. Making infrastructure improvements to a blockchain network or database in order to enhance its speed is a non-trivial task. The control of nodes is not centralised, and the owners of all nodes must reach a consensus on equipment upgrades, which may provide difficulties.

One other limitation of blockchain databases pertains to their inadequate querying functionality. The effectiveness of utilising a database is contingent upon the user's proficiency in querying the database. This capability is a prominent attribute of relational databases, although it is notably absent in blockchain technology, hence constituting a significant drawback.

In summary, the implementation of a blockchain database has a notable advantage in addressing the trust deficit within financial transactions. However, it is important to acknowledge the existence of technological hurdles that need to be overcome before widespread adoption can be achieved. Consequently, the utilisation of a blockchain database now poses a considerable barrier until the technology reaches a more advanced stage of development.

7.0 Conclusion

In Malaysia, the management of Waqf is under the jurisdiction of the religious councils, known as the State Islamic Religious Councils (SIRC), which operate at the state level. Consequently, the material pertaining to the Waqf is dispersed throughout around 12 to 14 different locations. The absence of a centralised repository of Waqf information at the national level poses challenges in devising a comprehensive national fundraising campaign and effectively disseminating information about Waqf activities to diverse stakeholder groups. There has been a contention that the establishment of a unified database including the entirety of Malaysia would significantly enhance the efficacy of Waqf endeavours on a nationwide scale. Simultaneously, this approach would aim to rectify certain shortcomings in the appreciation of Waqf by enhancing the transparency of Waqf institutions' operations.

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