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<input type="checkbox"/>	Licentiate's thesis
<input type="checkbox"/>	Doctoral dissertation

Subject	International Business	Date	14.08.2023
Author(s)	Chandrima Chowdhury	Number of pages	91
Title	Feasibility of Zakat-based Crowdfunding for Marginalized Farmers in Bangladesh.		
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Abstract

The arrangement of funds and financing for the agriculture sector in Bangladesh is still considered in crisis that is coupled with concurrent uncertain situations like population growth and natural disasters. Therefore, specific financial terms such as Zakat that are based on and practiced in Islam, the religious origination of the majority of Bangladeshi, at the same time highly appreciated and carried out by other countries are found well complementary to agricultural project financing. The purpose of this study is to explore the feasibility of using zakat-based crowdfunding as a means of supporting marginalized farmers in Bangladesh. This study employs a case study approach, using secondary data sources to conduct a thematic analysis of zakat-based crowdfunding for marginalized farmers. The findings of the study indicate that zakat-based crowdfunding can be a viable solution to support marginalized farmers in Bangladesh. The relevance of the study is in place due to the urgency to solve the problems of agricultural financing in Bangladesh. The study recommends the establishment of a zakat-based crowdfunding platform that caters specifically to the needs of marginalized farmers in Bangladesh. However, the study also identifies some limitations, such as the lack of primary data and the context of generalizability. Despite these limitations, the study concludes that zakat-based crowdfunding can effectively support marginalized farmers in Bangladesh, and further research in this area is warranted.

Keywords	Agricultural Finance, Zakat, Crowdfunding, Microfinance, Marginal Farmers, Thematic Analysis, Financial Inclusion
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**UNIVERSITY
OF TURKU**

Turku School of
Economics

**FEASIBILITY OF ZAKAT-BASED CROWDFUNDING
FOR MARGINALIZED FARMERS IN BANGLADESH**

Master's Thesis
in International Business

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14th August, 2023
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The originality of this thesis has been checked in accordance with the University of Turku quality assurance system using the Turnitin OriginalityCheck service.

TABLE OF CONTENTS

1	INTRODUCTION.....	7
1.1	Background	7
1.2	Research Gaps	9
1.3	Research Questions.....	10
1.4	Scope of the study.....	11
1.5	Significance of the Study	12
2	LITERATURE REVIEW.....	14
2.1	Agriculture Finance/Credit.....	14
2.2	The concept of Zakat in Islam	16
2.2.1	Zakat with the Pursuit of Social Equity	17
2.2.2	Issue with Circularity of Zakat	18
2.2.3	Zakat in Agricultural development.....	19
2.3	Crowdfunding	21
2.3.1	Global landscape of crowdfunding market.....	22
2.3.2	Classification of Crowdfunding.....	22
2.4	Islamic Crowdfunding & Zakat Based Crowdfunding.....	24
3	RESEARCH DESIGN	27
3.1	Research Philosophy	27
3.2	Research Strategy	28
3.3	Research approach.....	29
3.4	Sampling and Data collection	31
3.5	Data Analysis and Interpretation	33
3.6	Thematic analysis.....	34
3.7	Evaluation of the Study	36

4	FINDINGS	38
4.1	Current Status of marginalized farmer’s financing in Bangladesh	38
4.1.1	Marginalized farmers	38
4.1.2	State of Agricultural financing in Bangladesh	39
4.1.3	Formal sector of financing	41
4.1.4	Informal Sources of Financing	43
4.1.5	Comparison of formal and informal source of financing	44
4.1.6	factors limiting formal-informal finance utilization.	45
4.2	Zakat Management system in Bangladesh	47
4.2.1	Procedure and Activities of Zakat in Bangladesh	47
4.2.2	Zakat Scenario in Bangladesh as religious obligation	48
4.3	Crowdfunding in Bangladesh	49
4.4	Proposed zakat based crowdfunding Model.	51
4.4.1	Legislative Change - The Zakat Fund Management Bill-2023:	52
4.4.2	Integrating Modified model 1: Ekdesh	53
4.4.3	Integrating Modified model 2: iFarmer	55
5	DECIPHERING THE VIABILITY OF ZAKAT-BASED CROWDFUNDING BASED ON THEMATIC ANALYSIS	58
5.1	Aspects promoting Zakat-based crowdfunding platform.	58
5.1.1	Strong religious obligation	58
5.1.2	Growing interest in Islamic finance:	58
5.1.3	Efficient Fundraising:	59
5.2	Hindrance of Zakat Based Crowdfunding	60
5.2.1	Lack of Awareness and understanding	60
5.2.2	Lack of trust in online platforms and arising cyber threat	61
5.2.3	Limited Access to Technology and digital competency:	62
5.3	Harnessing the power of Zakat based Crowdfunding platform.	63
5.3.1	Addressing poverty and inequality	63

5.3.2	Fostering Community empowerment and involvement.....	65
5.3.3	Promoting financial inclusion.....	67
5.4	Challenges of Zakat Based Crowdfunding.....	68
5.4.1	Regulatory Challenge:	68
5.4.2	Competition with other form of zakat distribution.....	68
5.4.3	Economic and political instability:	69
6	CONCLUSION.....	71
6.1	Theoretical Implication	71
6.2	Practical Implication	73
6.3	Limitation and suggestion for future research.....	74
7	SUMMARY	76
	REFERENCE	78

LIST OF FIGURES

Figure 1. The role of zakat in the economy	18
Figure 2. Interaction of Zakat and Crowdfunding	26
Figure 3 Credit Disbursement performance by Banks (Bangladesh Bank 2022)	42
Figure 4 Modified Model 1	53
Figure 5 SOFOL Digital Application.....	56
Figure 6 Modified Model 2	57
Figure 7 Overall digital access (Source: BIGD Digital Literacy Survey 2019)	62
Figure 8 Overall Digital skill (Source: BIGD Digital Literacy Survey 2019).....	63

LIST OF TABLES

Table 1 key Themes and Sub-themes	34
Table 2 Themes Serving Research questions.....	36
Table 3 Farmers: Size classification, Farm Credit, Extension Services, Crop Value (Bangladesh Integrated Household Survey 2018-2019).....	39
Table 4 Agricultural Credit Disbursement May 2022(Bangladesh Bank 2022).....	41
Table 5 Latest Initiatives by the Bangladesh Bank to Improve Rural Financing	43

1 INTRODUCTION

1.1 Background

“Agriculture is our wisest pursuit, because it will in the end contribute most to real wealth, good morals, and happiness.”

This is how Thomas Jefferson quoted the importance of farming and agriculture in a letter towards George Washington (Thomas Jefferson 14.08.1987). World’s development goal achievement is positively correlated with a healthy, sustainable, and inclusive food system. Agriculture development is one of the best ways to slash severe poverty, promote shared wealth, and feed the expected 9.7 billion individuals by 2050 (World Bank 2023). The overview of World Bank also suggested that the agriculture sector's expansion is approximately two to four times more effective than other sectors at increasing the incomes of those with the lowest incomes. Agriculture has a significant role in economic development, contributing 4 percent to global GDP and more than 25 percent in some of the world's least developed countries (Food and Agriculture Organization (FAO) 2021). Food security and the growth of the agri-food sector have been challenged by the alarming pace of environmental issues, growth in population and changing food preferences, global pandemics, and hostilities. They put a great deal of pressure on authorities to focus on building a global agri-food ecosystem that is far more resilient and sustainable.

Based on recent studies, it is projected that there will be a significant increase in the demand for food, estimated to reach a 70% expansion. To meet this growing demand, an annual investment of approximately \$50 billion will be required (FAO 2009).

The abundant flow of finance is a prerequisite for agricultural development. Additionally, it is evident that there is a positive relationship between agricultural credit and agricultural production and enough supply of credit has an affirmative influence on agricultural growth and agricultural income (Miah et al. 2020,240). Moreover, International Finance Corporations also argued that agricultural credit is essential in emerging markets, and it is the key to production efficiency and the adoption of new technologies (IFC 2019). Nevertheless, the unmet need for smallholder financing is massive: the short- and long-term credit gap for developing-country farmers is estimated to be over \$170 billion each year (ISF Advisors 2019).

Agriculture Sector in Bangladesh is the crucial one as it is serving a positive role in terms of food security, employment, and livelihood. The sustainability of the agriculture sector in Bangladesh is constantly threatened every year by various challenges (Quddus

2020,50). Faroque et al. (2011) claimed that loss of Arable land, population growth, climate change, unfair pricing of production, etc. indulge this potential sector to sink into oblivion. The emergence of such a big jeopardy for Bangladesh is aggravated by the constraint of credit access from traditional sources (M. A. Islam et al. 2014,74). The access to credit for the farmers from the banking system is significantly low relative to their contribution to the GDP (Bangladesh Bank 2017). In Bangladesh, limited financial organizations providing agricultural credit such as state-owned banks, commercial banks, and NGOs and there is a shortage in the supply of agricultural funds (Mehedi et al. 2020,870). Thus, the Bangladesh Bank, the central bank of Bangladesh, has mandated that commercial banks allocate at least 2.5% of their total loans for agricultural credit. Yet, Islam, M. R. & Salimullah, M. (2016) mentioned that agricultural credit is less than the provision of the national agriculture credit policy, and the poor and marginal farmers have been suffering the most. In Bangladesh, the financially excluded sections of the population comprise different poor and marginal groups and most of them are small and marginal farmers and tenant farmers. Unaffordability to obtain loans from banks due to high-interest rates and lack of collateral assets makes the agro-sector financing scenario worst (Rahman et al. 2022,35).

Traditional financial institutions struggle to offer financing in emerging countries, often failing to create cost-effective methods for processing fairly small transactions while experiencing relatively high risks, and hence high credit costs (Cortina Lorente & Schmukler 2018,2).

Crowdfunding, a brand-new alternative financing method, has surfaced and has the ability to minimize the challenges associated with obtaining finance from traditional institutions (Taslim 2018,132). Crowdfunding has emerged as an alternative to traditional formal and governmental financing in part because traditional financing options have not always been accessible or available to certain individuals and businesses. Structure and establishment of this new capital during the financial crisis of 2008, crowdfunding is gaining popularity in many industrialized economies in less than a decade, including the United States, the United Kingdom, the Netherlands, Italy, and Australia (Mollick, E. 2014,5-8). This fascinating trend has already swept the developed world and is beginning to get attention in the developing world (World Bank 2013). After considering the stock market, banks, and non-profit organizations as potential sources of funding for new businesses, Bangladesh has settled on crowdsourcing as its preferred method of capital formation (B. Adhikary & Kutsuna 2016,12). In addition to international crowdfunding platforms including Kickstarter, LaunchGood, GlobalGiving, Indiegogo, and Kiva those featured a few Bangladesh-based

projects, goriseme.com, a donation platform founded in 2015, fundsme.com.bd, an equity platform founded in 2018, and Banglafunding, a reward platform slated to open in 2020, were the young local crowdfunding platforms in Bangladesh (Suresh et al. 2020,311).

In recent years, a new kind of crowdfunding platforms-Islamic crowdfunding platforms (ICFPs) has emerged. These platforms, which adhere to Islamic law (Sharia)¹, claim to inherently include the principles of social obligations and Sustainable development within their very foundation. To follow Fintech trends, the government of Bangladesh and other social and non-profit organizations have developed a crowdfunding website named 'Ekdesb' where people or organizations may give Zakat² or other relief payments for businesses and low-income communities whose income and livelihoods have been harmed by the coronavirus epidemic (First-ever crowdfunding—2020). The intended inauguration of such an attempt has considered the potential market of Zakat of around Tk 840 billion in 2022 and the present ineffectiveness of the collection and distribution of zakat (Sakib Najmus 2022).

In light of the foregoing, I can assure that Bangladesh has great potential to incorporate FinTech like the crowdfunding model as an intermediary between donors and the needy sectors, especially marginalized communities, and particularly has the potential of circulating Islamic charity donation fund, especially from zakat. There is furthermore confirmation of severe money problems experienced by poor and small holder farmers in Bangladesh, and no current practice of utilising zakat funds received through crowdfunding platforms for agricultural finance. As a result, the research is designed is to assess the feasibility and effectiveness of a zakat-based crowdfunding model in supporting marginalized farmers in Bangladesh. The study will focus on analysing the impact of the crowdfunding model in improving the socio-economic conditions of farmers. By examining the feasibility and effectiveness, the research aims to provide insights into the potential of zakat-based crowdfunding as a viable solution for empowering marginalized farmers in Bangladesh.

1.2 Research Gaps

The existing body of literature predominantly focuses on the topics of poverty alleviation, community development, and sustainable development through the utilization of Zakat-based crowdfunding. However, there is a notable research void in understanding the untapped po-

¹ Sharia, or Islamic law, is founded on four sources: Al-Quran (God "Allah" revelation to Prophet Muhammad), the Sunnah (Prophet Muhammad's recorded sayings, behavior, and approvals), agreement of scholars, and analogy (or analogical deduction, which implies the derivation of a judgment about a new scenario or problem based on similarity with a similar circumstance dealt with in Al-Quran and/or the Sunnah)

² Zakat- Islamic finance uses zakat. It's a religious obligation for Muslims to give some of their money to charity. (Source: <https://www.investopedia.com/terms/z/zakat.asp>) The concept will be further elaborated in the section 2.2

tential of zakat-based crowdfunding as a means of financing marginalized farmers (Ali & Sarker 2021,37; Firdaus et al. 2020, 312). Despite financial constraints being widely acknowledged as a significant challenge for marginalized farmers, there has been a surprising lack of emphasis on exploring and developing practical solutions to finance this group (Siddiqi & Hidayat 2017,3). While financial constraints have often been reported as a main challenge, until recently, little had been written about the solutions to finance marginalized farmers.

While there have been studies on zakat-based crowdfunding in various countries (Ali 2016,230; Naqvi et al. 2018,525) and discussions on the market for zakat and crowdfunding in Bangladesh (Kabir et al. 2019,45), there is a distinct research gap in terms of examining the practical implementation and impact of a dedicated zakat-based crowdfunding platform aimed at assisting marginalized farmers in Bangladesh's agriculture sector.

Another significant research gap lies in the limited recognition of zakat-based crowdfunding as an alternative financing tool. While previous studies (Saeed et al. 2019,433) have discussed the potential of zakat-based crowdfunding in various contexts, such as social entrepreneurship or humanitarian causes, its potential as a viable financing mechanism has not been fully explored. This gap highlights the need for further research to investigate and understand the unique features, challenges, and opportunities of zakat-based crowdfunding as an alternative financing model.

By addressing these research gaps, contribution to the development of sustainable and inclusive financial systems that support the economic empowerment of marginalized farmers is considered extension to research (Kabeer 2020; Rahman et al. 2021,209). This research is crucial for informing policy interventions and designing effective strategies to enhance access to finance and improve the livelihoods of marginalized farmers in Bangladesh.

1.3 Research Questions

The sectors of the population who are excluded from access to financial services in Bangladesh are made up of a variety of poor and marginalized groups, the vast majority of them are small and marginal farmers. In comparison to the amount, they contribute to the overall economy, the amount of credit available to farmers via the traditional sources is severely inadequate. In order to find a solution to this issue, one possible solution is to use an unconventional funding source. As a means of bridging the current knowledge gap, the purpose of this study is to investigate and provide responses to the following research question:

How can zakat-based crowdfunding be effectively utilized to finance operations of marginalized farmers?

Sub-question:

1. How (in)accessible are the current financing options to marginalized farmers?
2. how can zakat-based crowdfunding be used as an alternate financing model to finance operation of marginalized farmers?
3. what are the key benefits and barriers impacting the effective utilization of Zakat-based crowdfunding?

The three main sub-questions will serve the main research question by providing a comprehensive understanding of how zakat-based crowdfunding can be effectively utilized to finance marginalized farmers in Bangladesh. The first sub-question focuses on the current financing options available to marginalized farmers and their accessibility. This information will help to identify the gaps in the existing financing options and highlight the need for alternative sources of financing such as zakat-based crowdfunding. The second sub-question will examine the key features of zakat-based crowdfunding models and how they can be applied to the agricultural sector in Bangladesh. This sub-question will provide insights into the potential benefits of using zakat-based crowdfunding as a financing mechanism for marginalized farmers, such as greater transparency, accountability, and social impact. Finally, the third sub-question will explore the potential challenges and barriers that could prevent the effective utilization of zakat-based crowdfunding for marginalized farmers in Bangladesh. This sub-question will provide a deeper understanding of the cultural, social, and economic factors that could affect the implementation of such financing mechanisms. By addressing these three sub-questions, the study will provide a comprehensive understanding of the potential of zakat-based crowdfunding as a tool for financing marginalized farmers in Bangladesh. Ultimately, the study aims to contribute to the ongoing efforts to promote sustainable and inclusive agricultural development in Bangladesh by providing recommendations for policy and practice.

1.4 Scope of the study

The scope of this study is to comprehensively investigate the financing challenges faced by marginalized farmers in Bangladesh, with a specific focus on the agricultural industry. The study focuses on exploring the potential of zakat-based crowdfunding as an alternative financing model to address these challenges. The study takes into account the unique socio-

economic context of Bangladesh, where a significant majority of the population (90 percent) adheres to the Islamic faith. The primary emphasis of the study is on funding difficulties encountered by marginalized farmers, as these challenges are particularly evident in the agricultural sector. By examining the feasibility of zakat-based crowdfunding, the study seeks to uncover new possibilities for overcoming these financial constraints. A key factor in the scope of this study is the high level of familiarity and acceptance of Zakat Payment in Bangladesh. Over the past few decades, there has been remarkable growth in the level of knowledge and awareness regarding Zakat among the population. This increasing understanding of Zakat presents an opportunity to leverage its potential in addressing the financial needs of marginalized farmers.

Moreover, the study recognizes the significance of the internet penetration rate in Bangladesh. With approximately 47.61 million people having internet access as of January 2021, there has been a notable growth of 7.7 million users, reflecting a 19% increase in internet penetration between 2020 and 2021 (Kemp 2021). This indicates a growing readiness and awareness among the population regarding internet usage. The high internet penetration rate provides a favourable environment for exploring crowd financing models, including zakat-based crowdfunding, to support conventional cultivation practices of marginalized farmers. By delving into the detailed analysis of financing challenges, the potential of zakat-based crowdfunding, this study aims to provide a comprehensive understanding of the feasibility and effectiveness of utilizing crowdfunding mechanisms to finance marginalized farmers. The findings will contribute to the existing literature on alternative financing models for agricultural development and shed light on the specific context of Bangladesh.

1.5 Significance of the Study

Unlike Islamic banking and finance, there are few studies on the potential and feasibility of zakat-based crowdfunding for the growth of the agricultural sector in Bangladesh. This research aims to analyze and evaluate the viability and sustainability of donation-based crowdfunding with an emphasis on zakat as an alternative source of finance for agricultural development. The motivation fundamentally arises from the identification of current zakat distribution scenario in Bangladesh, at individual level. Additionally, this research has provided a number of results. Specifically, this study's findings may benefit (i) knowledge, (ii) the formalization of zakat, (iii) the economy, and (iv) policymakers.

The suggested approach contributes to the current body of literature in the fields of crowdsourcing and zakat fund creation. In the meanwhile, for agricultural access to capital, this research might aid farmers in establishing sustainable and cost-effective financing solutions. In addition, this research offers a new path for the efficient use of donation-based crowdfunding in the formulation of zakat, notably in Bangladesh. This is due to the fact that crowdfunding has played a big role in crowd-based, personal level decision decision-making, innovation funding, and the financing of particular initiatives. This paradigm is anticipated to alter stakeholders' perceptions of the dynamics and possibilities of crowd-based finance. This adds to the economy as well. Since zakat is one of the solutions to the lack of management of donation arrangements in an Islamic economic system, it contributes to a rise in wealth, consumption, and investment, which may then stimulate the economy. Furthermore, as this research supports crowdsourcing as the primary source of financing for the development of the agricultural sector, it would contribute to the efficient allocation of economic resources. Lastly, this research might be useful to policymakers by providing guidance on how to design and prioritize more effective measures that can increase the potential of zakat within their plans or strategies for rural development. In addition, it may act as a resource in the field of policy making for the various levels of government.

2 LITERATURE REVIEW

2.1 Agriculture Finance/Credit

Agriculture relies heavily on credit to increase agricultural and animal yields for human consumption (Akmal et al. 2012,580). Moreover, It is believed that agriculture financing is an essential component of sustainable agricultural sector development (W. Khan et al. 2017,6). It is argued that value chain development backed by appropriate policies, institutions, and services that constitute an enabling business environment can be pivotal in increasing access to financial services in agriculture in developing countries, as part of the agricultural value chain financing approach (Miller and Da Silva 2007,96). For both financial and social inclusiveness, the government should adopt aggressive measures to distribute credit to the agricultural sector, since agricultural credit relates to agricultural output, and agriculture has the potential to drive development in all sectors of the economy.

Emphasis has been given to the fact that farmers in developing countries mostly have low agricultural yields owing to a lack of cash; nevertheless, access to finance may help boost productivity (Akmal et al. 2012,583). There is an evaluation of research done in developing countries to better comprehend the connection between agricultural finance and agricultural production throughout the globe. Rahman (2011) analysed the efficiency of agricultural loan lending institutions, agricultural output and its connection to loans. This study showed a positive relationship between credit and productivity and that the efficiency of lending institutions has been boosted by several legislative changes and by the inclusion of private banks into agricultural loan operation. Saleem and Jan (2011) analysed the effect of agricultural loan on agricultural production in a particular district of Pakistan. The researchers drew the conclusion that increasing access to finance would enhance agricultural output.

The Nepal Rastra Bank conducted a study in 2014 (Bhatta 2014, 25) to explore the impact of agricultural loans on farm output in Nepal's Kailali District. The findings of the study revealed that agricultural credit had a positive effect on farmers' agricultural output in the research region. Similarly, Hussain and Taqi (2014) conducted a study at a single commercial bank in Pakistan, which also found a favourable relationship between agricultural loans and agricultural output. The rate of agricultural output has a strong correlation with the rate of poverty reduction. Unquestionably, the availability of credit has far-reaching social and economic effects, particularly in rural areas, where it has been shown to boost productivity and production, raise family income, and reduce poverty (Yadav and Sharma 2015,234).

Solow (1956, 1957) has included credit in his two-factor neoclassical growth model. The real economy is profoundly impacted by the availability of credit, both in terms of the total amount of credit and the quality of the credit extended to businesses. To put it another way, it will have a direct effect on reducing poverty by increasing poor people's incomes (Jalilian & Kirkpatrick 2001,103). Access to financing and productivity development are positively correlated among small-holder food crop producers in Nigeria (Olagunju 2007,177). The majority of poor farmers in Nigeria lacked access to financing to enhance their output, income, and well-being. Increases in productivity and income would improve the well-being of farmers, hence lowering poverty in rural economies. These studies emphasize the significance of access to financing for farmers and its positive correlation with agricultural productivity. These studies also demonstrate that when farmers have easier access to credit, it can lead to increased agricultural output, income generation, and poverty reduction. These findings align with the aim to explore how zakat-based crowdfunding can effectively finance marginalized farmers in Bangladesh, potentially contributing to their productivity and well-being.

Agricultural finance has been sourced and disbursed from two major sector: formal and informal and many scholars tried to prove the correlation between those sources and agriculture productivity. In regard to formal source, it has been evident by the study of D. Ahmad et al. (2018) that serious financial obstacles to credit, such as a difficult and time-consuming credit attainment method, improper use of farm credit, and bureaucratic and political influence, all have a detrimental effect on agricultural productivity as a whole. Chisasa and Makina (2015) in a study based on South Africa enlightened the establishment of informal sector as substitute of the formal one. Non-institutional sources of credit will step in to fill the void left by the absence of institutional funding. Finding out how easy it is for farmers in rural Ghana to get informal credit, the study looked at even though informal credit isn't a good replacement for formal credit, it helps ensure that rural agriculture grows and changes sustainably.

Access to credit is a transformative force for agriculture, as evidenced by the findings of numerous studies. These studies highlight the significant impact of credit availability on agricultural output, productivity, and poverty reduction in developing countries. Credit plays a crucial role in enhancing productivity, income generation, and overall economic development in farming communities. By empowering farmers with financial resources and support, credit can drive sustainable agricultural sector development, improve livelihoods, and contribute to the well-being of rural economies. However, challenges in accessing formal credit, such as bureaucratic hurdles and political influences, necessitate the exploration of alternative financ-

ing models. Zakat-based crowdfunding and other innovative approaches have the potential to address these limitations and fill the gaps in traditional formal channels.

2.2 The concept of Zakat in Islam

As a means of a mandatory act, Zakat is one of the five pillars of Islam that direct every eligible Muslim (Islam religion follower) towards giving charity. Zakat is given for fulfilling religious and philanthropic objectives. To help the poor and needy in society, Muslims are obligated to perform an act of devotion known as zakat.

Zakat is an Arabic word delineating the meaning of “purity” and “cleanliness”. According to the Islamic principle, “ Zakat is symbolically regarded to purify one’s wealth and income (all worldly possession) from all possible kinds of impurities the acquisition process might have” (Saad & Al Foori 2020,146). The term "Zakat" is stated thirty times in the Holy Quran, twenty-seven of which are in conjunction with prayers. Giving Zakat, as explained by Ibn Taymiyyah, cleans both one's soul and one's material possessions (Abdel-Baqi 2007).

Zakat has been defined in a variety of ways by modern and ancient academics in accordance with the Shariah. Zakat is described as "a due right on certain asset/property or items in precise quantities with regard to the item's passing of one year and fulfilment of Nisab status" by ancient scholars (Ahmed 2004, 39). According to Islamic law, if a Muslim is an adult, male or female, and is in good mental and physical health, they are required to pay zakat, which is a certain amount of money, to a designated group of individuals.

Zakatable assets are not restricted to those mentioned in the Quran and Sunnah. Qardawi defines zakatable wealth as wages, earnings due, profits, incentives, and everything that may be evaluated by sales, such as lease and profits (Dakhoir 2019,162). Zakat will be calculated if the Zakatable item's worth meets the amount of Nisab (zakat amount) as provided in Sunnah, including Hawl (one lunar year's ownership). Currency, gold, silver, and commercial products pay 2.5% Zakat. Zakat is 10% for rain-fed or spring-fed agricultural items. Nevertheless, the zakat rate is 5% if agricultural products are gathered using water pumped from dams by people, animals, or machines (Islahi 2005,29). Zakat is also mandated as a significant source of revenue for the Muslim economy as it impacts the lives of Zakat beneficiaries directly. Eight types of recipients are eligible to receive zakat (Al-Quran, 9:60). Five out of eight are meant to be for poverty eradication such as the needy, the poor, the debtors, the slaves (to free from captivity) and the travellers in need. The rest of them are the

head of the zakat administration, ‘whose hearts are devoted (to Islam)’, and in the way of Allah (Azeez 2003,34).

2.2.1 Zakat with the Pursuit of Social Equity

The core of Islamic economic thinking is the idea of social justice as it is conceptualized within an Islamic framework. The practice of zakat is crucial in this respect. Beyond the religious aspect, Zakat has a more justifiable acceptance due to its portrait of socioeconomic justice ruled by Shariah (Islam’s holy book). Several scholars have pointed to the importance of zakat in achieving and preserving economic justice and social peace as a means by which social justice might be established (Hassan & Khan 2007,23).

According to Mannan (1986), individuals with financial means are motivated to fulfill their societal obligations, concurrently establishing a mechanism that effectively addresses poverty. This dual approach not only benefits the well-off individuals but also yields a positive impact on the entirety of society. In terms of the economy, it performs the role of a wealth redistribution system that combats the unhealthy accumulation of ownership in a small number of hands (Dhar 2013,5). Because of this, Zakat has the capacity to accomplish social justice through redistributing wealth within society.

In the socioeconomic framework of Islam, zakat has a very significant dimension that it has been considered as one of the major mechanisms of Islam is to assist in combat poverty. Zakat is defined as ‘‘The main instrument to ensure social security for the poor, at the same time a discriminatory obligation to focus only on the rich as givers’’ (Azeez 2003,33). Comparing Zakat with modern taxation, it is also defined as ‘‘ a compulsory levy imposed on the well-to-do members of Muslim society to get a hold of their surplus money and wealth (Barizah et al. 2007,31).

Azam et al. (2014) found that zakat improves recipient family wellbeing in Pakistan. In another research from Pakistan, M Akram and Afzal (2014) reveals an inverse association between Zakat & poverty. Zakat also improves society's collective productivity by supporting development (Nabi et al. 2021,36). Most recent times, Sumai et al. (2019) discovered that zakat has a favorable effect in the setting of Indonesia on the decrease of poverty and the maintenance of food security. Research conducted by Sari et al. (2019), which focused on West Sumatra in Indonesia, came to the conclusion that zakat has the potential to alleviate poverty and enable those living in destitute conditions to go beyond the poverty line.

The fact of alignment of zakat to attain socioeconomic justice is accepted by many scholars, among them as noted by Yusoff (2011), the marginal propensity to spend of zakat recipients is greater than that of zakat payers as zakat has the ability to boost the parity of purchasing power of the poor, leading to an increase in consumption. Describe a cause-effect relationship zakat(independent) and purchasing power(dependent). Search for effect zakat

Consequently, it is also demanded (Zaim 1989,101) that Zakat influences the demand side economy. As theoretically, zakat is a catalyst for increasing purchasing power, which in turn escalates the demand curve through aggregated demand (Sakti & Abilawa 2007,308) . However, the zakat disbursement eventually causes a rise in price which aggravates the revenue for the producers. If the assumption is such that the information is known to all market participants, it will encourage more new participants. Ultimately it will correct the price, on the contrary, the production gets upsurged (Saripudin et al. 2020,7).

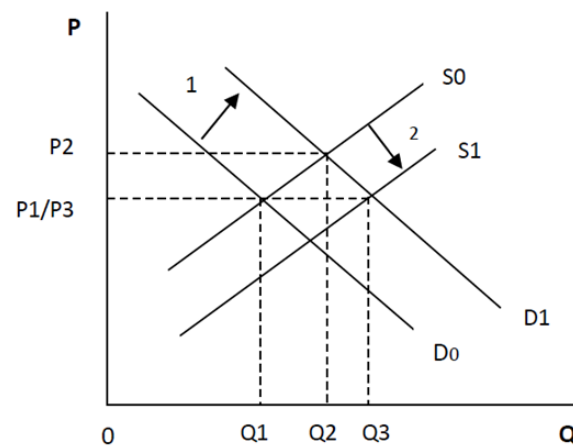


Figure 1. The role of zakat in the economy

There is a growing recognition of zakat disbursement in the form of income generation alongside other kinds of recommended distribution for living, shelter, medical, and other like (Ibrahim 2006, 11). Financial contribution to an individual may have instant relieving factors, but it won't help in the long run. It is required to equip people with the right kind of skills to open up the door of opportunities and a gradual shift from consumptive to productive disbursement of Zakat can change a merely personal giving to the development of a socio-economic system (AF et al. 2015, 358).

2.2.2 Issue with Circularity of Zakat

According to (Malik 2016), the issue of wealth accumulation on one side of the economy causes a split in the state in the shape of two classes, which are referred to as the "privileged

class" and the "deficient class." One of the greatest obstacles to achieving welfare and social justice in any society is the dominance of the "privileged class" over the "deficient class" due to the country's healthy financial health. This is because members of the "privileged class" are often better off than those in the "deficient class."

It is said that "re-institutionalizing" zakat is the best approach to offer social and economic security for those who would otherwise be forgotten. This would be done by re-establishing zakat as an official religious practice. As zakat allows for the "constructive channelization" of wealth from the "privileged class" to the "deprived class," it may be able to address problems like relative deprivation, poverty, illiteracy, and unemployment.

Daud Ali (1998) contends that If zakat is to be effective, it must be calculated and paid according to sharia, and zakat should be collected and redistributed by government and community groups that are jointly formed by the entire public. Lessy (2009) emphasized the problem of circularity and believability. The study discovered that zakat institutions are not open to the public and do not account for money received and dispersed. The population as a whole lost interest in contributing zakat as a result of this lack of accountability; while they knew who got their donation initially, they did not know who received it thereafter. The findings of the research also indicated that zakat is not successful in terms of improving the socio-economic situations of those who receive it, because of the fact that those individuals face a great deal of difficulty in obtaining the help.

It is of the utmost importance to have a clear knowledge of who should be the beneficiary of the zakat money. Because of this, it is essential to compile a prioritized list of Muslims who are really in need of zakat money; if we don't have a correct knowledge of the individuals who are in need, then the circulation of zakat is something that should be of worry to us. Moreover, from the zakat donor's standpoint, unless the zakat contributor does not recognize what quantity of zakat to be given, it will bring the inadequacy of zakat money and, eventually, provide a method to generate circuits difficulties. This is because the zakat donor is responsible for determining the amount of zakat to be paid.

2.2.3 Zakat in Agricultural development

In communities with a significant presence of Islam, mechanisms based on Islamic values may play a prominent role in advancing development and welfare concerns to guarantee more justice and equality. World Bank through its particular initiative 'World Faiths Development Dialogue' showed a greater interest in injecting religion into development procedures

(Mesbahuddin 2010, 231). Zakat organizations have been active in the restoration of Islamic civilization throughout the course of time. This is due to the fact that the fund may be employed creatively to have a good influence on the socio-economic growth of Muslims. Zakat Organizations have been in operation.

According to the least developed countries report of United nation 2021, the majority of Muslim countries are featured as having a low per capita income, high population rate, low agricultural productivity, high rate of employment, scarcity of skill and technology, low-level exploitation of natural resources, etc (UNCTAD 2021). Hence there is an urgency for new and innovative financing approaches to incur further development.

Agriculture continues to be a primary and basic sector that compels sustainable and retaining development toward poverty eradication. In low-income but resource-rich nations, agriculture is 3.2 times more successful than any other sector in lowering the per capita poverty rate of \$1 per day (Christiaensen et al. 2011,242). The role of agriculture is in debate currently due to the shift of global attention toward feeding the 9 billion population in the world by 2050 (Alexandratos & Burisma 2012,15). Moreover, A larger proportion of rural poor in developing countries merely rely on smallholder agriculture as a source of income and food security (Gollin 2014,42). Derived from the Islamic point of view of poverty eradication, the Zakat fund can be a potential source of financing for agriculture as a zakat-based financing facility have the capability to empower particularly the smallholder farmers whose livelihood in poverty is constant. In addition, zakat is a kind of unique social financing system without any interest rate that could support the extremely needy community (Jahangir & Bulut, 2022,139).

The Badan Amil Zakat Nasional (BAZNAS) has funded several sustainable agricultural projects since 2018 and a study has been conducted to measure the impact of zakat on agricultural productivity and farmers' welfare of those projects. The result showed that program implementation by BAZNAS has decided three interventions named capital assistance, production enhancement, and market access enlargement for agricultural products. It has also conducted the practice of organic agriculture to add more value propositions to farmer's livelihood and long-term preservation of nature at the same time (Swandaru et al. 2021,9).

Zakat's involvement in agricultural growth is based on Islamic concepts of social justice, poverty elimination, and resource sharing. As required philanthropy, zakat stresses wealthy people and organizations' duty to help the needy. Zakat funding may alleviate poverty, food security, and smallholder farmer livelihoods through developing agriculture. This promotes inclusive growth and Muslim social and economic justice.

2.3 Crowdfunding

Crowdfunding is a kind of financial technology (FinTech) that makes it easier to raise money using cutting-edge, digital ways (Haddad & Hornuf 2019,88). Crowdfunding was first developed as a commercial tool to generate money for certain kinds of creative endeavors, such as concert tours, artistic ventures, and films, which are often not financially successful. Throughout time, this technique was modified to provide funding for various kinds of business and entrepreneurial endeavors (Mollick 2014,9). Instead than generating big sums of money from a small group of individuals, crowdfunding allows business owners to raise money from a wide range of individuals by having each individual contribute a relatively modest sum (Belleflamme et al. 2014,589). The internet allows this contribution bundling without middlemen. So, crowdfunding is a participation activity that takes place online via an open call that brings together various organizations and individuals who participate willingly (Alonso 2015,85). According to Lutfi and Ismail (2016), most crowd funders typically contribute smaller sums, prompting crowdfunding to engage a large number of investors to provide support to entrepreneurs and small enterprises.

It simply combines crowdsourcing concepts with fundraising tactics and adds a fintech factor (Schwienbacher & Larralde 2010,9). Crowdsourcing is a sort of umbrella phrase that refers to the online collaboration of a large number of persons towards a common goal (Ryan & Van Wingerden 2011,37). According to Shneor and Flåten (2015), Crowdfunding platforms operate as a gateway between project creators and prospective investors, enabling transactions between them. According to the European Securities and Markets Authority (2014), Crowdfunding platforms allow "crowds of investors" to connect with the owners of projects seeking finance. Since crowdfunding has gained in popularity over the last decade, a wide variety of crowdsourcing platforms have emerged. ArtistShare was one of the original crowdfunding services. Located in the United States, ArtistShare³ began operations in 2003. Kickstarter⁴ and Indiegogo⁵ are the most popular crowdsourcing sites on a global scale nowadays.

Crowdfunding platforms get commissions. Platforms usually take a portion of funds raised as commission (Alonso 2015,87). Hence, crowdfunding platforms act as a marketing

³ <https://www.artistshare.com>

⁴ <https://www.kickstarter.com>

⁵ <https://www.indiegogo.com>

tool that allows users to promote new initiatives, goods, and services and provide feedback to project creators.

2.3.1 Global landscape of crowdfunding market

Both the fast expansion of technology-driven innovation and the rise in the use of the internet have been major contributors to the massive shifts that have taken place in the sector of the financial services business that they both serve (Kotarva 2016,73). Crowdfunding may be thought of as an alternative method of obtaining financial backing, and it is now gaining growing attention and relevance all around the world. What was once a collection of unrelated separate fundraising activities has now evolved into an industry worth several billions of dollars. Crowdfunding aligns with principles of participatory economics, community engagement, and social innovation. It allows individuals to contribute to causes and projects they believe in, empowering both donors and recipients. Crowdfunding platforms provide a mechanism for direct engagement and accountability, as donors can track the progress and impact of their contributions (Belleflamme et al. 2014,590)

According to a report by Research and Markets, the global crowdfunding market size was valued at \$13.9 billion in 2020 and is projected to reach \$28.8 billion by 2026, growing at a CAGR of 12.9% during the forecast period (Research & Market 2023). Donation-based crowdfunding is rapidly expanding as one of the most significant trends in the crowdfunding business. This kind of crowdfunding makes it possible for people and groups to generate funds for personal projects or charitable causes. In 2020, donation-based crowdfunding platforms brought in more than \$5 billion in donations for charity organizations (Nonprofit Sources 2022). The study also ensured that the amount is comprised by only 41 percent of total world population. There are still numerous growing and developing economies that have great potential with regard to of crowdfunding, despite the fact that the pace of development in more developed countries is beginning to show symptoms of saturation. One of the regions that is regarded to be a rising market for crowdfunding is South Asia.

2.3.2 Classification of Crowdfunding

According to studies Lutfi and Ismail (2016); Mollick (2014), there are four primary kinds of crowdfunding: crowd-lending, also known as debt-based crowdfunding, equity-based crowdfunding, reward-based crowdfunding, and donation-based crowdfunding.

Crowdfunding via issuing of debt instruments is the first and most established model. Social lending, peer-to-peer lending, P2P lending, debt crowdfunding, and crowdlending are all terms that have been used to describe this phenomenon (Everett 2019,2). In debt-based crowdfunding, borrowers borrow money from a large number of small investors (lenders), who are promised repayment of their principal plus interest over a certain length of time (Dutch Caribbean Security Exchange 2020).

As a relatively new phenomena, equity crowdfunding encourages business financing to make use of cutting-edge digital infrastructure (Cumming et al. 2019,257). ECF is part of the Fintech ecosystem and makes use of digital platforms that may help business owners deal with cash flow issues, which are most pressing in the early stages of a company's development (Block, Hornuf and Moritz 2018,10) In its real sense, ECF is a "alternative" to other typical financial structures that include venture capitalists, banks, or other specialized institutions (business angels, incubators, etc.). Its purpose is to raise a predefined amount of cash within a certain period, which means that the project must attract and convince an appropriate number of crowd-investors in order to receive the targeted funds (Mazzocchini and Lucarelli 2023,801).

Investors donate to initiatives without any financial benefits under a crowdfunding style known as reward-based crowdfunding (Mollick 2014,8). According to Colombo et al. (2015) and Thürridl & Kamleitner (2016), reward-based crowdfunding campaigns commonly utilize three types of incentives: pre-orders, services, and recognition. Campaign developers sell their items via a pre-order option, allowing funders advance availability of the products. Contributors review the goods in the course of the procedure and may provide creators important suggestions on how to improve the products' ability to meet their requirements. Immaterial benefits include recognition and services. Entry-level supporters (those who provide a little amount of money) are eligible for recognition as a prize. To appreciate their generosity, authors may send thank-you emails to such backers or publish the identities on the website. As a gift for supporters, creators may also deliver distinctive services rather than actual things. Private concerts and screenings, instructional and learning opportunities, free use of commercial services in development, and so on are examples of these.

According to Gerber et al. (2012), the concept of crowdfunding provides a new paradigm for the practice of online philanthropy. According to observations made by Belleflamme et al. (2013), crowdfunding has made it much easier to collect money for important causes by combining the processes of transaction, communication, and information gathering into a single, straightforward procedure. Because of this, there has been a significant innovation in

the field of gift financing. Several people have observed that by fusing traditional charitable giving with information technology, donation-based crowdfunding has, in a sense, changed the concept of charity itself (Gleasure & Feller 2016,726).

Crowdfunding via monetary donations has a number of benefits over more conventional methods of charity fundraising. It enables prospective contributors to bypass the barriers that distance creates by putting them in direct contact with those in need of help (Tanaka & Voids 2016,4555). Also, it considerably lowers the expenses associated with transactions and coordination (Choy & Schlagwein 2016,236).

2.4 Islamic Crowdfunding & Zakat Based Crowdfunding

Islamic crowdfunding is a fast-growing idea that uses technology and online platforms to get money from a large number of people to fund social projects and businesses that follow Islamic principles (Achsiem & Purnamasari 2016,4). Several studies have looked into the possibility of Islamic crowdfunding as an alternative way to raise money and have pointed out its pros and cons. Crowdfunding and Islamic crowdfunding work pretty much the same way, with the exception that Islamic crowdfunding helps to raise money through online platforms that follow Shariah law. In an Islamic kind of crowdfunding, there are four different types of participants: (i) the project initiator/fundraiser, (ii) the funders/investors, (iii) the crowdfunding operator, and (iv) the Shariah board (Wahjono et al. 2017,28).

According to Biancone and Radwan (2018), Conventional crowdfunding has several limits, which Islamic crowdfunding may help overcome by placing a greater emphasis on societal welfare and ethical principles. The authors contend that Islamic crowdfunding is compatible with Islamic principles and values and has the potential to be an appropriate source of finance for social initiatives and enterprises that work for the betterment of society. In the same way, Sulaeman (2020) looked into how Islamic crowdfunding could work in Malaysia. The authors found that Islamic crowdfunding can be a reliable and moral way for small and medium-sized businesses to get money, which helps the economy grow and develop. But the authors also pointed out a number of problems, such as the necessity of greater inclusivity and guidelines.

Islam is the second largest religion of the world and given that there are more than 1.6 billion Muslims in the globe (World Population Review 2023), there are many reasons to believe that Islamic crowdfunding will become a popular new source of funding in the future. There are, however, just 80 Islamic-focused crowdfunding platforms worldwide, according to

the Islamic Financial Services Board's (IFSB) 2017 report on the stability of the Islamic financial services industry. This statistic demonstrates that Islamic crowdsourcing is still in its early stages, which is further supported by the little amount of study that has been done in this field.

Zakat-based crowdfunding is a type of Islamic crowdfunding that is gaining popularity among Muslims worldwide. Zakat-based crowdfunding is an unconventional fundraising instrument that has attracted significant attention in recent years as a way to promote social welfare and financial inclusion (Abdeldayem & Aldulaimi 2022,53) . Zakat-based crowdfunding lies in its ability to leverage the concept of zakat, an Islamic obligation to provide financial assistance to those in need, to address social welfare issues and promote financial inclusion.

The fact that zakat-based crowdfunding could well be utilized to support a variety of projects, including those related to education, healthcare, and economic activity, is one of its main advantages. It works well for providing humanitarian help and disaster relief. As evidenced by Bin-Nashwan et al. (2023), zakat-based crowdfunding was effectively employed during the COVID-19 epidemic to provide assistance to frontline personnel, furnish medical supplies and equipment, and offer support to vulnerable communities. Unlike traditional crowdfunding, which is primarily concerned with profitability, zakat-based crowdfunding aims to create social effect, which may be difficult to define and assess (Khan & Servinc 2021,168).

The review demonstrates that marginalized farmers face significant challenges in accessing current financing options, including limited collateral and exclusion from formal banking systems. Traditional financing methods, such as bank loans, have stringent eligibility criteria and lengthy approval processes, further impeding access for marginalized farmers. In contrast, Zakat-based crowdfunding emerges as an alternative financing model that offers several advantages. It provides greater accessibility to marginalized farmers by eliminating the need for collateral, aligns with Islamic principles, promotes financial inclusion, and empowers farmers to actively participate in financing their agricultural operations. However, challenges related to awareness, trust, transparency, and guidelines need to be addressed for the effective utilization of Zakat-based crowdfunding.

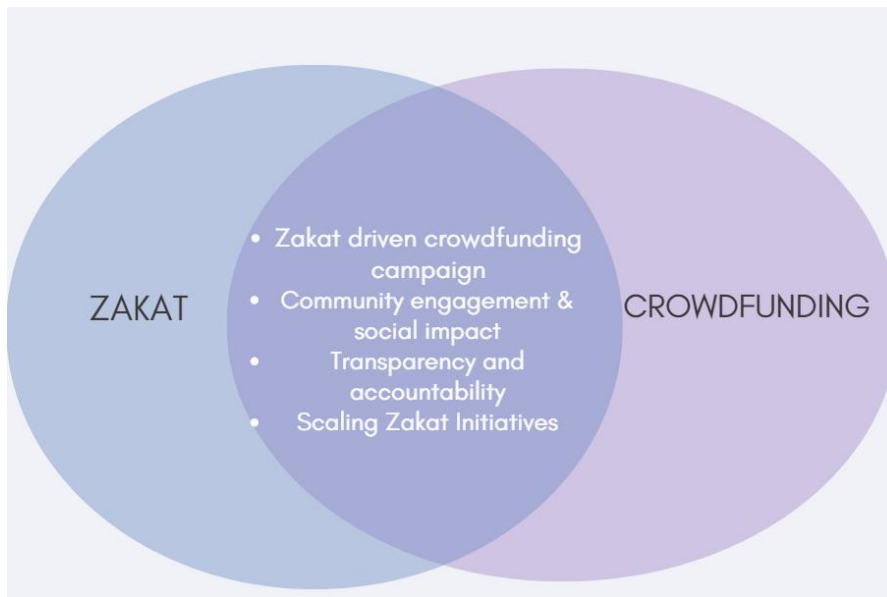


Figure 2. Interaction of Zakat and Crowdfunding

The framework is built upon the visual projection of how zakat, an Islamic charitable obligation, interact with crowdfunding, an online fundraising method, to create a cohesive approach for addressing social and humanitarian challenges. The primary goal is to alleviate poverty, promote social welfare, and foster community development. By identifying zakat-eligible projects and utilizing a dedicated crowdfunding platform, engaging campaigns are designed to mobilize the community and encourage collective contributions. The incorporation of zakat principles ensures transparency, adherence to Islamic values, and proper fund utilization, while the intersection of zakat and crowdfunding introduces inventive solutions and scalability. With a focus on measuring impact, ethical considerations, legal compliance, and continuous improvement, the framework aims to foster unity and collaborative efforts towards achieving meaningful and sustainable outcomes.

3 RESEARCH DESIGN

Creswell (2014) defines research design as "the plan or blueprint for a study that describes the procedures necessary to collect and analyze data in order to answer research questions or test hypotheses". This chapter begins to discuss the reasons behind the selected research philosophy, strategy, and method for data collecting and analysis. The purpose of this chapter is to provide readers with a complete grasp of the research choices linked to this study prior to the presentation of fresh empirical discoveries in the next chapter.

3.1 Research Philosophy

Research philosophy refers to the set of beliefs, principles, and assumptions that guide the research process (Hürlimann et al. 2019,78). It shapes the way researchers approach research questions, collect, and analyze data, and interpret their findings. There are several different research philosophies, including positivism, interpretivism, and critical theory, among others.

Regarding the study, interpretivism is the most suitable one. The study philosophy known as interpretivism places a strong emphasis on the significance of comprehending and correctly interpreting human behavior as well as experience and the surrounding social environment (Creswell & Poth 2016,18). It operates on the premise that individual experience is objectively genuine, and that people generate their own interpretations of the world around them. Instead of attempting to apply the results of a study to a larger group of people, the interpretivism methodology focuses on developing a comprehensive knowledge of the social phenomena that is the subject of the investigation (Creswell & Poth 2016,20). By adopting this philosophical stance, the study seeks to delve into the underlying meanings, interpretations, and complexities related to the feasibility of zakat-based crowdfunding for marginalized farmers in Bangladesh.

Even though the research does not directly focus on the personal experiences of farmers, the interpretative approach enables a comprehensive exploration of the broader social, cultural, economic, and historical factors that could influence the dynamics of zakat-based crowdfunding in Bangladesh. By analyzing these broader contextual elements, the study aims to develop a deeper understanding of the societal attitudes towards zakat, crowdfunding practices, and agricultural support mechanisms. This analysis contributes to the identification of potential challenges and opportunities for introducing zakat-based crowdfunding for marginalized farmers.

Furthermore, the interpretative approach facilitates an investigation of the historical context and religious perspectives related to zakat and charitable practices in the country. By delving into the historical background and cultural norms, the research can gain valuable insights into the potential receptivity and challenges associated with introducing zakat-based crowdfunding.

The interpretative approach is chosen as the research philosophy for its ability to provide a holistic understanding of zakat-based crowdfunding in the context of marginalized farmers in Bangladesh. The interpretative approach's emphasis on understanding meanings and social constructions aligns with the objective of exploring the feasibility of zakat-based crowdfunding in a comprehensive and insightful manner.

3.2 Research Strategy

The term "research strategy" is used to describe the organized way in which a researcher goes about gathering data for a study. It includes organizing, conducting, and assessing studies to answer research questions (Malhotra 2017,174).

Among the prevalent research strategies, 'Case Study' is presumed to be appropriate strategy to formulate the study in qualitative nature. A case study is a kind of empirical research that looks at a relatively recent phenomenon by examining it in its actual setting, in particular when the distinctions between phenomena and context are ambiguous (Verschuren 2003,131). Case studies can be classified as Exploratory, Explanatory, and Descriptive. The research strategy employed in this study is a descriptive case study, focusing on two selected cases: Ekdesh and iFarmer. The relevance of the chosen research strategy lies in its ability to provide a comprehensive understanding of the feasibility of zakat-based crowdfunding for marginalized farmers in Bangladesh, specifically by adjusting Ekdesh and iFarmer in the modified model of zakat-based crowdfunding based on the proposed model of Adnan et al. (2022). By conducting a descriptive case study, the study will be able to address the research question and sub-questions effectively, while considering the unique characteristics and experiences of these cases. In case of Descriptive case study, few essential features need to be understood (Tellis 1997,7).

1. **Problem Description:** The problem in the real world is the lack of zakat-based crowdfunding in Bangladesh specifically tailored for marginalized farmers as an alternative financing option. Important facts include the existence of a zakat and crowdfunding market in Bangladesh, the absence of zakat-based crowdfunding for farmers, and the

potential benefits it can bring to marginalized farmers in terms of financing their operations.

2. **Important People and Groups:** The key actors involved in this problem are the marginalized farmers themselves, the existing fintech platforms for farmers in Bangladesh (such as "Ekdesb" and "iFarmer"), the crowdfunding platform introduced for pandemic sufferers, and the zakat donors or contributors. Each group may have their own thoughts, opinions, and motivations related to the issue, such as the farmers' struggle for access to financing, the fintech platforms' desire to support farmers, and the zakat donors' intention to make an impact through their contributions.
3. **Plot of the Story:** The plot of the story revolves around the journey of marginalized farmers in Bangladesh and their struggle to access financing. It highlights the introduction of a crowdfunding platform that collects funds, including zakat, for pandemic sufferers, which sparks the idea of leveraging zakat-based crowdfunding for marginalized farmers. The thesis develops two modified zakat-based crowdfunding models and explores their potential impact on financing operations for marginalized farmers.
4. **Analysis and Evaluation of the Solution:** The thesis evaluates the chosen solution of zakat-based crowdfunding for marginalized farmers by examining its effectiveness in providing financing options to farmers by incorporating themes. It assesses factors such as accessibility, hindrance, opportunity, challenges related to marginalized farmers' livelihoods.
5. **Lessons Learned and Applicability:** The thesis concludes by providing lessons learned from the case study, which can be applied not only to the problem of financing marginalized farmers in Bangladesh but also to similar problems in other contexts. It identifies the benefits and barriers of zakat-based crowdfunding and highlights recommendations for its effective implementation.

By aligning the features of a case study with the elements of the thesis, a comprehensive analysis of the feasibility of zakat-based crowdfunding for marginalized farmers in Bangladesh can be conducted, leading to valuable insights and recommendations.

3.3 Research approach

Qualitative research is often linked to an interpretive philosophy because it tries to understand and explain the subjective and socially constructed meanings of the thing being studied (Denzin 2017,10).

Two cases have been selected in this regard: `Ekdesh` and `iFarmer`. The selection of cases for the study involves considering their relevance and contribution to addressing the research questions on the feasibility of zakat-based crowdfunding for marginalized farmers in Bangladesh.

Ekdesh was chosen as a case because it is the first crowdfunding platform introduced in Bangladesh to collect funds, including zakat, to assist pandemic sufferers. Although Ekdesh does not specifically focus on marginalized farmers, it provides insights into the broader context of zakat collection and distribution in Bangladesh. By integrating Ekdesh into a zakat-based crowdfunding paradigm, it may be possible to learn more about the state of crowdfunding and its potential use for underserved farmers.

iFarmer, a fintech platform that assists and finances farmers in Bangladesh, has been selected as a case due to its relevance to the research topic. Although iFarmer is not specifically based on zakat-based crowdfunding, it offers valuable perspectives on the utilization of alternative financing models in the agricultural sector. By incorporating iFarmer, exploration of how a fintech platform supports farmers and identify potential areas where zakat-based crowdfunding could be integrated to finance the operations of marginalized farmers could be fulfilled.

The selection of these cases is based on their potential to provide insights into the feasibility of zakat-based crowdfunding for marginalized farmers, even though they may not be directly focused on this specific aspect. Through the inclusion of Ekdesh and iFarmer, examination of the strengths, weaknesses, opportunities, and threats in the context of financing marginalized farmers using zakat-based crowdfunding has been done.

The qualitative approach chosen for the descriptive case study is well-suited for several reasons. Firstly, qualitative research makes it possible to get a full and insightful picture of the thing being studied. This is especially helpful for a descriptive case study, which looks at the details of a specific instance (Creswell and Creswell, 2017,5). By using a qualitative research approach and conducting a descriptive case study will allow comprehensive understanding of how zakat-based crowdfunding could be utilized in Bangladesh and its potential application for financing marginalized farmers.

Secondly, the contextualization provided by qualitative research is crucial for a case study. This is especially important for a descriptive case study, which looks at the details of a single case in its own unique setting (Patton 2014,5). Case studies provide the opportunity to examine a phenomenon within its real-world context. Ekdesh and iFarmer are actual platforms operating in Bangladesh, albeit with different focuses. Ekdesh collects funds, including zakat,

to assist pandemic sufferers, while iFarmer is a fintech platform that supports and finances farmers. By studying these cases, analysis of the practicality and effectiveness of zakat-based crowdfunding in a real-world setting, considering the specific challenges and opportunities faced by marginalized farmers has been done.

Qualitative research methods also offer the advantage of generating rich and detailed data, such as transcripts, field notes, and images. This is especially helpful for a descriptive case study, where the researcher may need to collect and analyze different kinds of data to fully understand the case.(Merriam and Tisdell 2015,29). This is advantageous for addressing the research questions, as it enables us to collect data related to various stakeholders such as marginalized farmers, zakat donors, platform administrators, and experts in the field. This diverse range of perspectives and experiences allows for a comprehensive analysis of the benefits and barriers of zakat-based crowdfunding for marginalized farmers.

Moreover, the research questions involve understanding the accessibility of current financing options, exploring the use of zakat-based crowdfunding as an alternate financing model, and identifying key benefits and barriers. A case study approach enables to examine these multifaceted aspects in detail, considering the specific characteristics of Ekdesh and iFarmer, the stakeholders involved, and the broader socio-economic context. This allows for a nuanced analysis of the complexities surrounding zakat-based crowdfunding for marginalized farmers.

3.4 Sampling and Data collection

As the purpose of the study is to analyse the feasibility of zakat-based crowdfunding to finance marginalised farmers based on descriptive case study research analysis, the use of secondary data is a valid option. Data that has already been gathered and is accessible to the general public is known as secondary data. Examples of secondary data include government publications, research projects, and web sources. Hence, sampling and the gathering of data requires locating and choosing the relevant sources of secondary data (Bazeley 2020,68). The challenge in secondary research lies in identifying the most appropriate sources of secondary data that can provide valuable insights and address the research questions effectively.

In this case purposive research sampling might be find more applicable. In case study research, researchers often use a sampling method called "purposive sampling," in which they choose participants or cases based on certain criteria that are relevant to the research question. This method lets researchers focus on the cases that are most likely to give them useful

information about their research problem and collect rich, detailed data (Yin 2014,300). In the case of this study on the feasibility of zakat-based crowdfunding for financing marginalized farmers, the use of purposive sampling in secondary research means that the researcher will selectively choose secondary data sources such as academic journals, government reports, news articles, and websites that specifically address the concepts of zakat-based crowdfunding, agricultural financing, Islamic finance, and related topics. The selection of these sources will be guided by their relevance to the research questions and their potential to provide comprehensive and reliable information. This approach allows for a targeted and focused analysis of the chosen cases (Ekdes and iFarmer) within the framework of zakat-based crowdfunding for agricultural finance, leading to a more thorough understanding of the feasibility and implications of this financing model for marginalized farmers.

If the sampling method for a descriptive case study is purposive, then the data collection process would involve selecting and collecting data from the relevant sources based on specific criteria that are relevant to the research question (Morse, 2015). In the case of analyzing the feasibility of zakat-based crowdfunding for marginalized farmers, secondary data has been explored including academic repositories such as JSTOR, Scopus, and Google Scholar, Volter as well as chosen from a variety of sources, such as academic journals, government reports, news articles, and websites that are relevant to the topic.

To conduct a comprehensive search, a set of specific keywords and search terms are utilized. These keywords are carefully selected to encompass the relevant concepts and themes of the study. Some example keywords may include "zakat-based crowdfunding," "finance for marginalized farmers," "agricultural financing," "Islamic finance," "crowdfunding platforms," "social impact finance," and other related terms. The selection of keywords will be refined and adapted based on the research questions and objectives, ensuring a comprehensive search of the available literature. The data collected also include information regarding existing options of financing for farmers, problem related to this, concept of zakat, crowdfunding, potential and implications of zakat-based crowdfunding in various context etc.

In terms of inclusion/exclusion criteria, a set of criteria will be established to ensure the selection of high-quality and relevant secondary sources. The inclusion criteria may involve factors such as the publication date (20 years approximate), the credibility and reputation of the source, the focus on zakat-based crowdfunding and marginalized farmers, and the availability of comprehensive and reliable information. On the other hand, sources that do not meet these criteria or are deemed irrelevant to the research questions will be excluded from the analysis.

3.5 Data Analysis and Interpretation

Rk (2018) outlines a research strategy termed as a descriptive case study, which relies on secondary data sources. In this approach, the data analysis and interpretation process involves a comprehensive review of the gathered documents through document review. The objective of this analysis is to identify and elucidate the pivotal themes, patterns, and meanings that are intricately linked to the research question.

I employed Gioia's thematic analysis approach to analyze the collected data and derive meaningful themes. The Gioia approach is a data-informed, inductive strategy for qualitative research. It presents a method for doing reliable and rigorous qualitative data analysis, one that leaves room for imaginative play and steady iterative development of conceptual ideas. The approach prioritizes the use of rigorous qualitative methods in inductive studies (Gioia, D., Corley, K. G., & Hamilton, A. L. 2012,20). Gioia's thematic analysis framework provided a structured and systematic method for identifying patterns, concepts, and ideas within the data.

Firstly, I thoroughly reviewed and familiarized myself with the content of the collected documents. This initial step allowed me to gain a comprehensive understanding of the information and concepts presented in the data.

Next, I engaged in the coding phase by assigning descriptive codes to relevant sections or excerpts of the data. This coding process involved identifying patterns, concepts, or ideas within the data and assigning appropriate labels to capture them. The coding was driven by the research questions and focused on capturing information directly related to the feasibility of zakat-based crowdfunding for financing marginalized farmers. Here's an example to illustrate the steps involved; during the data analysis, I came across a section discussing the "Lack of Awareness and Understanding" among farmers regarding zakat-based crowdfunding. I assigned the initial code "Lack of Awareness" to this excerpt, capturing the concept of limited knowledge and understanding among farmers. In another section, I encountered information about the "Limited Access to Technology and Digital Competency" as a challenge for farmers to engage with zakat-based crowdfunding. I assigned the initial code "Limited Access to Technology" to capture this barrier.

As I progressed with the coding, I compared and examined the coded sections to identify similarities, differences, and connections between different codes. By grouping together similar codes, I identified a preliminary theme called "Challenges and Barriers", which encom-

passed the codes "Lack of Awareness" and "Limited Access to Technology". This theme highlighted the obstacles faced by farmers in adopting zakat-based crowdfunding.

Once the preliminary themes were identified, I engaged in theme refinement. I reviewed the grouped codes and further examined the relationships and meanings within and between them. This process allowed me to refine and consolidate the themes by ensuring they accurately represented the content of the data.

Throughout the analysis process, I constantly reviewed the themes in relation to the original data to validate and refine them further, if necessary. This iterative process ensured the themes were grounded in the data and accurately reflected the information provided in the collected documents.

3.6 Thematic analysis

The application of Gioia's thematic analysis approach enabled the study to meticulously examine the data, discern crucial themes, and attain valuable insights regarding the viability of utilizing zakat-based crowdfunding to financially support marginalized farmers. This approach facilitated a comprehensive exploration of the data and provided a robust foundation for interpreting and discussing the findings in the research study. The following themes are.

Table 1 key Themes and Sub-themes

Theme 1: key Enabler	Sub theme 1: Strong Religious Obligation	Zakat-based crowdfunding is strengthened by this sub-theme's emphasis on zakat's religious responsibility.
	Sub theme 2: Growing interest in Islamic Finance	Islamic financial concepts, especially zakat, are becoming more widely known and accepted.
	Sub theme 3: Efficient Fundraising	This sub-theme shows the efficiency of zakat-based crowdfunding platforms to pool money from numerous donors
Theme 2:	Sub-theme 1: Lack of Awareness and	Zakat-based crowdfunding's

Hindrances	Understanding	low awareness among contributors and stakeholders is addressed in this sub-theme.
	Sub-theme 2: Trust and Cybersecurity Concerns	
	Sub-theme 3: Limited Access to Technology and Digital Competency	Marginalized farmers' lack of technology and digital literacy prevents them from participating in zakat-based crowdfunding.
Theme 3: Opportunities for Impact	Sub-theme 1: Addressing Poverty and Inequality	This sub-theme highlights the opportunity presented by zakat-based crowdfunding to address poverty and reduce income inequality among marginalized farmers.
	Sub-theme 2: Fostering Community Empowerment and Involvement	This sub-theme emphasizes the potential for zakat-based crowdfunding initiatives to engage communities, encourage collective action, and promote a sense of ownership and responsibility in supporting marginalized farmers.
	Sub-theme 3: Promoting Financial Inclusion	Zakat-based crowdfunding may help poor farmers who lack access to regular finance.
Theme 4: Challenges	Sub-theme 1: Regulatory Challenges	This sub-theme addresses the regulatory challenges associated with zakat-based crowdfunding.

	Sub-theme 2: Competition with Other Forms of Zakat Distribution	Competition with other forms of zakat distribution is an external factor that affects the implementation of zakat-based crowdfunding.
	Sub-theme 3: Economic and Political Instability	Economic downturns, political uncertainty, and regulatory changes affect the profitability and sustainability of zakat-based crowdfunding for marginalised farmers.

Table 2 Themes Serving Research questions.

Theme 1 and 2	Sub question: How can Zakat-based crowdfunding be used as an alternate financing model to finance the operations of marginalized farmers? Sub question: what are the key benefits and barriers impacting the effective utilization of Zakat-based crowdfunding?
Theme 3 and 4	Sub question: what are the key benefits and barriers impacting the effective utilization of Zakat-based crowdfunding?

The themes selected, along with their respective sub-themes, have been chosen based on their relevance to the research questions and their ability to provide insights into the effective utilization of zakat-based crowdfunding as alternative financing model to finance marginalized farmers.

3.7 Evaluation of the Study

The study's methodological rigor and trustworthiness adhere to the criteria established by Lincoln and Guba (Guba, E. G., & Lincoln, Y. S. 1994,114). These criteria, namely credibility, transferability, dependability, and confirmability, serve as the cornerstone for evaluating the quality and validity of qualitative research. By consciously incorporating these principles,

the study ensures a robust and comprehensive assessment of the feasibility of zakat-based crowdfunding for marginalized farmers.

The dependability of the study is supported by its well-designed research approach and the use of reliable secondary data sources. The study adopts a descriptive case study design, allowing for a systematic and organized investigation into the feasibility of zakat-based crowdfunding for marginalized farmers. The research strategy is clearly outlined, and the selection of relevant cases (Ekdesb and iFarmer) ensures the applicability of the findings. By employing a qualitative approach and purposive sampling, the study seeks to provide a comprehensive understanding of the context and nuances surrounding the topic.

The study demonstrates credibility through its rigorous research design and the systematic approach to thematic analysis. The researchers ensure the credibility of the study by employing established guidelines for conducting thematic analysis and providing a clear and transparent description of the analytical process. The inclusion of a comprehensive literature review and the use of diverse and reliable sources of information also contribute to the credibility of the study by establishing a solid theoretical foundation.

While the study may be specific to the case of zakat-based crowdfunding for marginalized farmers, the transferability of the findings can still be considered. The researcher provides detailed descriptions of the research methods, including the process of thematic analysis, which allows other researchers to assess the applicability of the findings to their own contexts. The study's comprehensive exploration of the themes and their underlying meanings enhances the potential transferability of the findings by providing insights and perspectives that may resonate with similar situations.

Although independent validation or verification would be ideal, the presentation of findings in a logical, comprehensible manner that establishes a clear link between empirical findings and the conceptual framework. Visual elements such as diagrams, figures, and tables are used to enhance clarity and storytelling. The research findings are based on scientific evidence and avoid pure imagination or researcher bias.

Finally, authenticity in a study based on secondary sources can be established through responsible and rigorous handling of the data, selecting reliable sources, conducting an unbiased analysis, acknowledging limitations transparently, and providing an accurate interpretation of the findings. Despite relying on secondary data, maintenance of authenticity by adhering to research ethics, ensuring transparency, and maintaining an objective and unbiased approach throughout the study is done.

4 FINDINGS

4.1 Current Status of marginalized farmer's financing in Bangladesh

4.1.1 Marginalized farmers

Farmers who fall under the category of "marginalized" are individuals who face significant barriers to full participation in society owing to issues such as low socioeconomic status, lack of education, gender, ethnicity, geography, and/or handicap (Shi, Y., & Linderman, K. 2018, 2760). According to the Food and Agriculture Organization of the United Nations (FAO), marginalized farmers are typically smallholders who farm on less than two hectares of land and often have limited access to credit, technology, and markets (FAO 2019). As noted by Ahmad (2017), marginalized farmers in Bangladesh align with the stipulated definition, constituting 76 percent of the overall agricultural labor force. In Bangladesh, agricultural families are referred to be smallholders if they own or operate farms with sizes ranging from 5 decimals⁶ to 249 decimals (Smallholders Need-- 2020). Due to patriarchal societal institutions that restrict women's access to land, financing, and education, women farmers in Bangladesh are especially marginalised (Sultana and Thompson 2017,160). In the forthcoming decades, significant transformations are imperative within global agriculture to effectively address the escalating food requirements of an expanding population, characterized by growing affluence and urbanization (Fan, S., & Rue, C. 2020,3). Notably, smallholder farmers in developing nations assume a pivotal position on the global stage in relation to food security. Impressively, over 80% (amounting to 475 million) of the world's farms operate within an area of less than two hectares. Although these farms constitute merely 12% of the total global farmland, they contribute a substantial 80% of the food production in both Asia and sub-Saharan Africa (SSA) (Lowder et al. 2014,12). Although smallholder farms hold a significant position in realizing worldwide food security and nutritional goals, they remain a susceptible demographic frequently overlooked by developmental policies. Remarkably, they constitute the majority of the impoverished and undernourished population globally (Lowder et al. 2014,13).

⁶ Decimals are a numeric data type that is used to represent numbers with a fractional component. Source: <https://www.britannica.com/science/decimal> (retrieved 17.05.2023)

Table 3 Farmers: Size classification, Farm Credit, Extension Services, Crop Value (Bangladesh Integrated Household Survey 2018-2019)

<i>Type of Farmers</i>	<i>Access to farm credit</i>	<i>Access to Agri extension service</i>	<i>The gross value of crops produced per hectare</i>
<i>Small & marginal (76.6% of total)</i>	7.15 %	10 %	Tk. 94,679
<i>Big & medium (23.4% of total)</i>	13.35 %	21.5 %	Tk. 79,793

As seen in the above table, there is a significant disparity in access to farm credit between small & marginal farmers and big & medium farmers, with the latter having a higher percentage of access. This discrepancy in access to financial resources could potentially impact the ability of small & marginal farmers to invest in their agricultural activities and improve productivity. Interestingly, despite having lower access to farm credit and agricultural extension services, small & marginal farmers are able to achieve a higher gross value of crops per hectare compared to big & medium farmers. This suggests that small & marginal farmers might be employing efficient farming practices, utilizing their available resources effectively.

4.1.2 State of Agricultural financing in Bangladesh

Enhancing agricultural productivity is a linchpin of developmental aspirations in economies like Bangladesh, particularly given its significance in ensuring robust food security. The findings of the Integrated Food Security Phase Classification (IPC) report for the years 2019–2024 cast a revealing light on the nation's food insecurity landscape. This report highlights that a substantial 7% of Bangladesh's total population, equivalent to 11.7 million individuals, grapple with severe chronic food insecurity. A further 14% of the population, accounting for 23.1 million people, confronts moderate chronic food insecurity (IPC Global Forum 2022). Notably, a staggering 21% of the total populace, approximately 35 million individuals, endure a combination of both moderate and severe chronic food insecurity, underscoring the pressing need for interventions to bolster agricultural productivity.

The role of credit within the agricultural sector emerges as paramount, driving the cultivation of crops and livestock destined for human consumption (D. Ahmad et al. 2018,645). Access to credit is a critical factor that can catalyze transformative changes in small-scale

farming operations. It empowers farmers, especially those from marginalized backgrounds, to invest in improved seeds, fertilizers, modern machinery, and other inputs that can significantly boost productivity. In this context, the provision of agricultural loans to small, marginal, and landless farmers from formal financial avenues becomes a strategic move. This not only simplifies their access to timely and adequate agricultural inputs but also accelerates food production and elevates their overall quality of life. By addressing the financial constraints that often impede farmers' ability to adopt modern agricultural practices, access to credit can be a pivotal step toward breaking the cycle of poverty and ensuring food security.

Catering to farmers' diverse financial requisites across different crop cycles, encompassing short, intermediate, and long terms, is imperative for effective agricultural loan disbursement. Short-term loans predominantly serve seasonal agricultural production objectives, enabling farmers to secure resources for planting, cultivating, and harvesting their crops. On the other hand, long-term financial assistance aids in acquiring capital-intensive assets such as irrigation equipment and agricultural machinery. Additionally, it supports the initiation of agro-based enterprises that can diversify income sources and enhance the overall economic well-being of farming communities (M. M. Rahman et al. 2021,3).

The Bangladeshi government's sustained commitment to the growth of the agricultural sector is evident in various policy frameworks and development plans. Aligned with Vision 2041, the 8th Five Year Plan, the National Agricultural Policy 2018, Sustainable Development Goals, Delta-plan-2100, and other planning instruments, the government diligently endeavours to invigorate comprehensive advancements within the agriculture sector. These initiatives not only emphasize technological and infrastructural improvements but also recognize the paramount importance of financial inclusion and access to credit for smallholder farmers.

The nexus between agricultural financing, food security, and economic development is of paramount importance for emerging economies like Bangladesh. Accessible and targeted agricultural credit has the potential to act as a catalyst, propelling smallholder farmers toward increased productivity, improved livelihoods, and ultimately, greater food security. The concerted efforts of the Bangladeshi government in nurturing the agriculture sector underscore its commitment to addressing these crucial dimensions of development.

4.1.3 Formal sector of financing

In Bangladesh, the formal sector of finance refers to the regulated financial institutions and procedures that offer financial services to people, enterprises, and sectors of the economy. The country's central bank and other regulatory organizations oversee and regulate these institutions. Bangladesh's formal financial sector comprises several institutions, including traditional banks, non-bank financial institutions, microfinance organizations, and development banks. 61 designated banks⁷ provide access to institutional financing for rural areas under the supervision of Bangladesh bank⁸. Scheduled Banks are divided into the following categories: There are six **State Owned Commercial Banks (SOCBs)** that are wholly or mostly owned by the government of Bangladesh.

Specialty Banks (SDBs) There are now three specialized banks that were founded for purposes, such as agricultural or industrial development. These banks are likewise wholly or mostly controlled by the Bangladeshi government.

Private Commercial Banks (PCBs) There are 43 private commercial banks that are mostly owned by private persons or businesses. PCBs may be divided into two categories: 33 conventional PCBs are now in operation in the industry. They conduct normal banking tasks, i.e., operations based on interest. There are 10 Islamic Shariah-based PCBs in Bangladesh, and they conduct banking operations in accordance with the Profit-Loss Sharing (PLS) paradigm.

Foreign Commercial Banks (FCBs) There are 9 FCBs functioning in Bangladesh as branches of foreign-incorporated banks.

Additionally, there are five non-schedule bank and more than 700 Microfinance institutions working for the financial inclusion of agriculture sector.

Table 4 Agricultural Credit Disbursement May 2022(Bangladesh Bank 2022)

year	Disbursement Target	Disbursement Actual
2020	24124.00	21800.00
2021	26292.00	25511.25
2022	28391.00	28834

⁷ Banks & FIs. Bangladesh bank. Bb.org.bd

⁸ Bangladesh Bank Order, 1972 and Bank Company Act, 1991

The data in the table reflects a positive trend in agricultural credit disbursement in Bangladesh, with both target and actual disbursements increasing over the years. This indicates the government's commitment to supporting farmers and the agricultural sector, which is crucial for sustainable development and economic prosperity in the country. Bangladesh Bank (BB) has increased the farm and rural loan disbursement goal for the current fiscal year by 8.88% to Tk 0.30 trillion for fiscal year 2023 (Bangladesh Bank 2022).

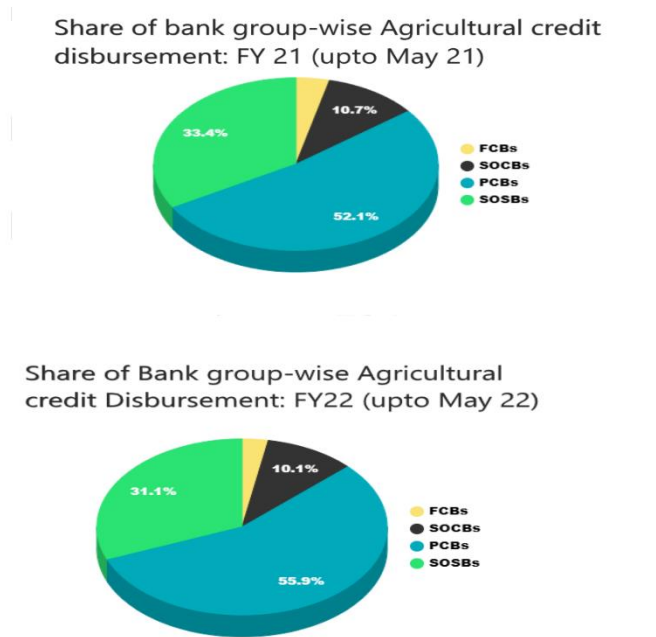


Figure 3 Credit Disbursement performance by Banks (Bangladesh Bank 2022)

The data indicates that in the fiscal year 2022, up until May 2022, the majority of agriculture credit disbursement was channeled through Private Commercial Banks (PCBs), accounting for the largest share at 55.9 percent. State-owned Specialized Banks (SOSBs) followed with 31.1 percent, State-Owned Commercial Banks (SOCBs) with 10.1 percent, and Foreign Commercial Banks (FCBs) with the smallest share at 2.9 percent. This distribution pattern remained consistent compared to the same period in the previous year. It signifies the significant role of PCBs in disbursing agricultural credit, with SOSBs and SOCBs also contributing substantially. FCBs had a relatively smaller role in agriculture credit disbursement. Additionally, microcredit of TK 10665.43 crores was distributed in May 2022 by Grameen Bank and eight other significant non-governmental organizations (NGOs).

Table 5 Latest Initiatives by the Bangladesh Bank to Improve Rural Financing

<p>Bangladesh Bank issued Agriculture and Rural Credit Policy and Program for Fiscal Year 2021-22.</p>	<p>The paper outlines major provisions and initiatives for crop production, animal husbandry, fisheries, and agro processing. Inclusive funding for small and vulnerable farmers promotes financial inclusion and rural poverty reduction.</p>	<p>https://www.bb.org.bd/pub/annual/acfid/agri_credit_policy2021-2022.pdf</p>
<p>Regarding Refinance Scheme of Taka 3000 Crore for Agriculture Sector to Combat Financial Crisis due to Covid-19 Pandemic (ACD Circular No. 02)</p>	<p>The scheme aims to address the financial difficulties faced by farmers, agricultural entrepreneurs, and related stakeholders due to the disruptions caused by the pandemic. It provides a financial lifeline to ensure the continuity of agricultural activities and safeguard the livelihoods of those engaged in the sector.</p>	<p>https://www.krishibank.org.bd/wp-content/uploads/2021/09/Credit-466.pdf</p>
<p>Special agricultural Credit program at 4% Concessional interest Rate</p>	<p>The provision of financing at a reduced interest rate is intended to incentivize farmers and agricultural entrepreneurs to engage in the production of these commodities. By offering a lower cost of borrowing, the Bangladesh Bank aims to facilitate increased investment in the agricultural sector, particularly in crops that have the potential to reduce the country's reliance on imports.</p>	<p>https://www.bb.org.bd/pub/research/sp_research_work/srw2001.pdf</p>

4.1.4 Informal Sources of Financing

Nonetheless, such tremendous efforts made by the government of Bangladesh, the credit markets, like those in other developing nations, are somewhat inadequate in terms of both coverage and loan size (ESCAP 2021). The lack of banks in rural places and the minimal amount of credit that private commercial banks distribute to agriculture have made it difficult

for smallholder farmers to get adequate financing in the rural credit market (Rahman 2011,6445). Anowar (2021) highlighted that under such circumstances, credit-constrained farmers and financially disadvantaged households are compelled to resort to borrowing funds from informal sources, often subjected to exorbitant interest rates and perilous terms.

According to Rahman (2021), sources of informal rural finance in Bangladesh encompass a range of entities, including professional moneylenders, agricultural lenders or payers, business agents, friends and family, various self-employed professional associations and service groups, benevolent wealthy individuals, shopkeepers, market-mediators, and institution owners. Sixty percent to seventy percent of them borrow from people they know, such as family and friends, neighbours, local wealthy individuals or families, business owners, brokers, traders, storekeepers, moneylenders, and organizations representing a wide range of demographics (such as youth groups, women's groups, and professional networks). Family and friends account for 26%, neighbours for 21%, the local wealthy for 18%, professional (investment) moneylenders for 15%, goldsmiths for 1%, store owners/intermediaries (traders, foremen, stockists, etc.) for 14%, and sharecroppers for 7% of rural non-performing loans.

4.1.5 Comparison of formal and informal source of financing

There is significant evidence of increment in government budget, effort, and approach to finance particularly marginal and small-holder farmers⁹ in Bangladesh for agricultural development. But a study that was conducted in 2019 by the International Food Policy Research Institute (IFPRI)¹⁰ discovered that farmers in Bangladesh typically obtain more than 81 percent of their loans from a variety of private sources. These private sources include non-governmental organizations (NGOs), relatives, private banks, and moneylenders (IFPRI 2019). These loans come with an interest rate ranging from 19 to 63 percent, but the interest rate at Krishi Bank is just nine percent. Yet, for reasons that are not quite clear, Krishi Bank is only responsible for providing 6% of the total loan.

⁹ A smallholder farmer is a producer who operates on a smaller scale, often raising animals, seafood, or crops. <https://www.heifer.org/blog/what-is-a-smallholder-farmer.html>

¹⁰ <https://www.ifpri.org/country/bangladesh>

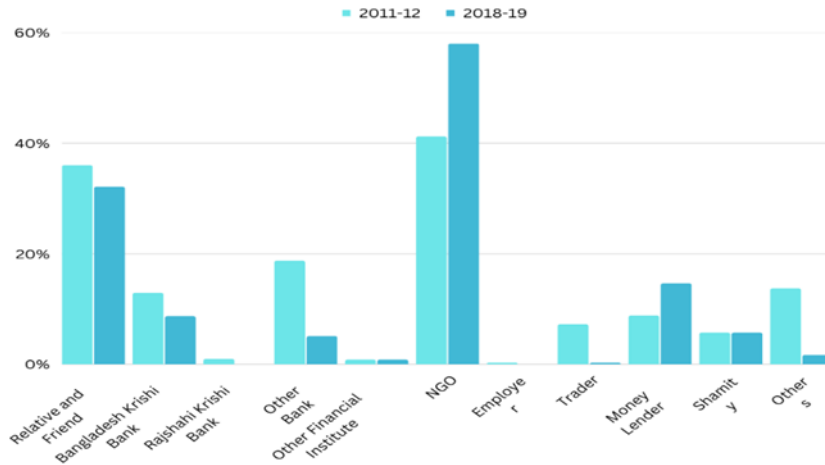


Figure 3 Percentage of Farm Households Borrowing Loans from Various Sources (Bangladesh Integrated Household Survey 2011-12 and 2018-19 (IFPRI))

According to the findings of the study conducted by IFPRI, 36.4% of the total loans were obtained through NGOs; nevertheless, the interest rate on these loans was much higher than 20%. The study also that 19 percent of farmers borrow money from friends and family. 15% of the total comes from the landowner, 11.4 % from moneylenders, and 3.6 % through a variety of groups and cooperatives. The Krishi Bank provides the greatest portion of the loan, which is around 15 percent, to the agricultural community. Farmers classified as marginal get around 5 percent of the overall loan, while large, medium, and small farmers collectively receive 36 percent. The overall proportion of the loan that each of the farmers receives is a total of 36 percent. This loan is not available to sharecroppers, who are farmers who grow other people's property on lease from the landowner. Because of this, they are forced to seek financing from a variety of different sources, including non-governmental organizations (NGOs).

4.1.6 factors limiting formal-informal finance utilization.

In delving into the complex issue of disparate access to agricultural loans from formal and informal sources, it becomes imperative to unravel the multifaceted factors that contribute to the lower access of formal credit. This examination reveals a range of key issues that collectively shape this disparity and hinder farmers from accessing the financial resources they need.

A significant stumbling block encountered by farmers seeking agricultural loans from formal banks is the intricate and time-consuming institutional process. As emphasized by Deb et al. (2020), the process of obtaining credit involves navigating a bureaucratic maze, often involving extensive paperwork and administrative steps. This ordeal can be particularly overwhelming for farmers who lack familiarity with such administrative intricacies (Islam et al. 2017,157). The layers of bureaucracy and the multitude of paperwork often lead to delays, which can breed frustration and discourage farmers from pursuing formal credit channels.

Another substantial obstacle is the demand for collateral. According to a study conducted by Ullah et al. (2018), collateral security is a major obstacle for farmers in Bangladesh in obtaining agricultural credit from formal financial institutions. The study found that farmers often lack the necessary collateral to secure loans from banks, as they may not own property or have other valuable assets to use as collateral. Because of their low credit scores and lack of collateral, commercial banks in Bangladesh refuse to provide loans to more than 80% of the country's smallholder farmers (IFAD 2019).

The way agriculture works in Bangladesh, with its reliance on different seasons and crop cycles, poses unique challenges when it comes to dealing with formal banks. According to Hossain et al. (2021), formal financial institutions often ask for a lot of documents and collateral, which can make the loan approval process take even longer. This is particularly difficult for small farmers who may not have all the necessary paperwork or collateral. As a result, they struggle to meet the requirements set by formal financial institutions and end up without the timely financial assistance they need.

A nuanced dimension contributing to credit disparities lies in the political influence that shapes the allocation of institutional credit. Rather than being rooted in the productivity of farmers, credit allocation is often swayed by economic and political considerations. Islam (2017) highlighted this practice as transforming agricultural loans into political tools, hampering efficient credit recovery and exacerbating challenges in loan distribution.

In conjunction with the primary factors, studies by Z. Rahman et al. (2022) and Khatun (2019) highlight supplementary barriers to rural credit access. These encompass the absence of a credible guarantor, inflexible repayment timelines, and concealed costs like bribes and interest. Beyond these financial challenges, factors like non-cooperation, information gaps, and knowledge disparities further obstruct rural farmers from accessing credit.

4.2 Zakat Management system in Bangladesh

The collection and distribution of Zakat, a required form of Islamic charity, plays a critical role in promoting the well-being of the poor and relieving their financial burdens in Bangladesh. In line with Islamic law, the system coordinates the collecting of Zakat from qualified persons and organizations and its equitable distribution to worthy beneficiaries.

4.2.1 Procedure and Activities of Zakat in Bangladesh

There is neither a legislation nor a body in Bangladesh that is adequately constituted for the purpose of collecting and distributing zakat (Ali & Hatta 2011,471). Bangladesh operates in a two-fold system to manage zakat distribution considering no obligation. It means, in Bangladesh, zakat fund collection by the government is not executed mandatorily following the obligation of Islam, rather zakat is an absolute non-compulsory act that may be collected by the Zakat Board of Islamic Foundation, Ministry of religious affairs on behalf of the government, private entities- Center for Zakat Management (CZM), Islami Bank Bangladesh Limited, and even individuals. All related activities of zakat and organizations are abided by the Zakat fund ordinance 1982¹¹. According to the Zakat fund Ordinance 1982, 50% of the total collected zakat has been distributed under the supervision of the “District Zakat Committee” in 64 districts of Bangladesh. Receivers must apply for zakat assistance from the main office of the Zakat Board from various districts to prove their eligibility to get the zakat money. Self-employment programs, tree plantation programs, sewing training, and hospital establishment have been conducted so far with the money distributed by Zakat Board. In addition, a poverty reduction strategy in the form of zakat allowance, and non-workable person’s rehabilitation has also been done (Jahangir & Bulut 2022,140).

Center For Zakat Management is in activities of collecting and distributing zakat since 2008 is responsible to operate few sustainable program named like Jeebika, Mudareeb, Ferdousi, Gulbagicha, Genius Scholarship program etc (Uddin et al. 2021,63). Jeebika, in particular, has been run to ensure sustainable community development with the proper use of zakat fund. The program is aligned with the objectives of improving living condition, economic and marketing access to deprived one (Mohammad Osmani & Al Masud 2021,287). Other programs for example, Ferdousi is designed to provide health care and pre-primary

¹¹ bdlaws.minlaw.gov.bd

education for women and child welfare and Mudareeb is for microentreprize development program (Mohammad Osmani and Al Masud 2021,290).

Nevertheless, the administration, collection, and distribution of zakat by the Bangladesh Government Zakat board do not under any structured process. There is a general perception regarding zakat board management is that it is not followed by a true Shariah-based method of zakat management, and it is because of the absence of proper distribution networks (M. K. Islam et al. 2022,368). This belief is backed by the fact of not reaching the remote dwellers, particularly the rural population. The common practice of zakat distribution at an individual level in Bangladesh is practiced informally as such selecting one's poorer relatives and neighbors as zakat takers. The payee then used the zakat allotted money to buy clothing (Sharee, lungi), mosquito nets, food, and other generous items and distribute the stuff among the poor portions. In rural, some givers try to help poor people by purchasing rickshaws, carts, and agriculture or fishing instruments with the mentioned amount of zakat. Zakat is also widely used for the establishment, and renovation of mosques, orphanages, and other religious structures. The formation of rural schools and libraries or even providing scholarships to poor students are also well-known forms of zakat distribution in Bangladesh.

4.2.2 Zakat Scenario in Bangladesh as religious obligation

For the purpose of ensuring and eliminating disparity between the affluent and the poor and a fair distribution of wealth in society, Islam offers zakat as one of the social financings. In terms of the percentage of the population that identifies as Muslim, Bangladesh is second only to Indonesia. Since Muslims make up 91.04% (Bangladesh bureau of statistics 2022) of the population in Bangladesh, the government is tasked with collecting and distributing zakat. Fahad Qazi (2022) estimates the zakat industry to be worth more than Tk 30,000 billion, but the government only collects a fraction of that amount. In a decade-long analysis of Kabir Hassan, reveals that the country's potential for collecting zakat is close to 4% of GDP(Noyon 2021). The World Bank estimates that zakat could contribute 1.63 percent of Bangladesh's GDP if implemented fully, currently the second among Muslim nations (Aziz and Moniruz-zaman 2023,54).

According to Gamboa et al. (2020), zakat alone has the potential to generate around three billion dollars that might be used toward alleviating poverty. Unfortunately, in Bangladesh, there has not been sufficient investigation into the possibilities of using zakat in order to assist the needy. Despite the fact that the government of Bangladesh is dedicated to alleviat-

ing poverty, Zakat has never been fully considered as a strategy for alleviating poverty at the national level (Hassan and Khan 2007,2).

Since the Zakat fund is not yet recognized by the government of Bangladesh as a significant economic instrument, the Zakat program in Bangladesh still has a lot of room for growth and improvement. The absence of an institution and a lack of concerted effort has led to a rise in practices where the distribution of zakat consists of nothing more than distributing a certain sum of money among the needy and donating clothing or other items to charity organizations (Islam and Bhuiyan 2019,6).

In terms of the zakat collection and disbursement process in Bangladesh, (Mohammad Osmani and Al Masud 2021) identified the following issues: a lack of awareness of the concept of zakat; a dearth of adequate knowledge about zakat calculation; an inefficient governance strategy; utilization of zakat in unproductive sectors; and mismanagement of the zakat institution. Many of the people who give zakat are oblivious to the process of determining how much zakat to give. The vast majority of these contributors ultimately give sums that are a great deal less than the whole zakat obligation. Many also give money to the same person every year, who is often a relative or someone who helps them at home. It is plausible to assume, given the inefficiency with which zakat is used for socio-economic aims, that zakat fund collecting, and distribution need alternative innovative procedures that might increase its socio-economic effect.

4.3 Crowdfunding in Bangladesh

Crowdfunding is a relatively new financial mechanism, and it has great potential for expansion in Bangladesh. In Bangladesh, a crowdfunding-like method of donating and collecting funds has a long history. Dr. Muhammad Yunus, a Nobel laureate from Bangladesh, is widely credited with pioneering the idea of microfinance, or the practice of making several small loans to individuals (Kickul et al. 2012,458). The so-called Somity idea is yet another example of an informal co-operative in which a group of individuals (often women) pool their resources in order to save and invest a certain percentage of their income (Scheyvens 2002,333). In the Indian culture, the notion of Somity is equivalent to the Chit Fund¹². The Muslim population of the nation also gives generously to those in need twice a year, during

¹² In nations throughout Asia, including India, Bangladesh, Sri Lanka, and Pakistan, people use a savings and credit system called chit funds.

(Source: <https://www.forbes.com/advisor/in/investing/a-guide-to-investing-in-chit-funds/>)

the two Eid celebrations. Crowdfunding websites nowadays often use the idea of Muslim contributions (e.g., www.launchgood.com). Many instances of informal crowdsourcing have emerged in Bangladesh. All inhabitants of Bangladesh were encouraged to contribute financially in 2012 when the government of Bangladesh opted to fund the Padma Bridge project (budget USD 6.7 billion) from domestic means (Raihan & Khondker 2010,18). As another example, the Rohingya refugee crisis of 2017 saw many people from all around the globe donate modest amounts of money to aid those fleeing Myanmar (Cole 2021,58). Another typical use for crowdsourcing funds is to pay for emergency medical care, or to help those living in rural regions during the yearly occurrences of natural disasters like floods and cyclones. These collections are used by both people and NGOs. Fundraising efforts like this are now mostly conducted online, with the support of platforms like Facebook and other social media (Castillo et al., 2014,32). Some examples of local Facebook groups that accomplish fundraising are Mastul Foundation, Donate Bangladesh, and Biddanondo. Certain of these Facebook communities want to transition their current efforts to crowdfunding sites that rely on monetary contributions in the near term. Funds are solicited on a special contribution website (donate.jaago.com.bd) by the JAAGO Foundation, a civil society group working to improve schooling opportunities for children from low-income backgrounds in Bangladesh. In the meanwhile, in 2015, Projekt.co was established as the first crowdfunding site in Bangladesh.

Compared to other South Asian nations, the crowdfunding landscape in Bangladesh is quite restricted. Crowdfunding's potential is still largely untapped in Bangladesh, despite the fact that the country has more than 160 million people in its population and a deep-seated tradition of giving to charity and assisting others (Suresh et al. 2020,305). Most individuals have a favorable outlook on utilizing crowdfunding, despite their minimal familiarity with the concept. The authors' (Suresh et al.2020) survey on 253 respondents found that the majority of respondents wanted to utilize a crowdfunding platform based in Bangladesh.

4.4 Proposed zakat based crowdfunding Model.

The concept of zakat-based crowdfunding has emerged as a potential solution to enhance the impact of zakat distribution in Bangladesh. Adnan et al. (2022) proposed a comprehensive model that integrates the principles of zakat with donation-based crowdfunding to create a platform connecting donors and recipients. This study seeks to elaborate on the characteristics of the proposed model and subsequently outline a modified versions that incorporates the 'Ekdesh' as platform, thereafter 'iFarmer' as cause creator focusing on addressing the challenges faced by Muslim smallholder farmers in Bangladesh.

1. **Platform:** The core proposition of the proposed model lies in the creation of an innovative crowdfunding platform that acts as a conduit between Zakat contributors and beneficiaries. This platform is designed to be technologically accessible through both mobile devices and PCs, offering the convenience of contributing or receiving Zakat funds from any location. Transparency is a key tenet, and the platform is equipped with data storage capabilities that facilitate predictive analysis to devise novel approaches for enhancing Zakat collection.
2. **Cause Creator:** The model envisions a diverse array of entities – individuals, charities, NGOs, and institutions – as potential cause creators. These creators are empowered to establish "causes" on the platform, subject to rigorous Shariah compliance checks. The scope of these causes is wide, spanning education, healthcare, sustenance, and livelihood support. Beneficiaries encompass any Muslim in need, and this model emphasizes the elimination of potential humiliation by removing the need for direct contact between benefactors and beneficiaries.
3. **Donor:** Donors, including those contributing Zakat, are encouraged to register on the platform. A built-in Zakat calculator aids donors in accurately determining their contributions. The platform offers donors flexibility in choosing causes and charities for their contributions, without imposing a mandatory sign-up requirement. A unique feature is the ability to locate charities based on geographical location.
4. **Shariah Advisory Council:** To ensure adherence to Islamic financial principles, a council comprising experts and scholars in Islamic finance is responsible for overseeing the collection and distribution of Zakat funds. This council also plays a crucial role in validating the eligibility of recipients according to Shariah guidelines.

5. **Zakat Council:** A diverse Zakat Council composed of experts from various domains assumes the responsibility of executing due diligence tasks and managing daily operations associated with the distribution of Zakat funds.

The purpose of the proposed model is to leverage the redistributive power of zakat and address the social justice challenges exacerbated by the COVID-19 pandemic in Bangladesh. By integrating zakat into a donation-based crowdfunding framework, the model aims to efficiently connect those in need with those who can contribute, effectively mitigating wealth inequality, uplifting the impoverished, and fostering social welfare to enhance overall living standards and promote a more just society.

4.4.1 Legislative Change - The Zakat Fund Management Bill-2023:

In tandem with the proposed model, a notable legislative development has emerged in the form of The Zakat Fund Management Bill-2023. This bill, successfully passed by voice vote in the parliament of Bangladesh, is set to introduce transformative changes aimed at enhancing the effectiveness of zakat fund collection and distribution (The Daily Star 2023). The forthcoming Zakat Fund Administration Act of 2023 is poised to supersede the existing Zakat Fund Ordinance of 1982, signifying a comprehensive overhaul of the regulatory framework governing zakat management in Bangladesh. Several pivotal features are outlined within this act, each designed to modernize and optimize the collection and distribution processes:

1. A fundamental alteration lies in the composition of the Zakat Board. This thirteen-member body will be chaired by either the minister of religious affairs or the state minister of the ministry. The prominence of ministerial leadership underscores the government's commitment to overseeing an efficient and accountable zakat system.
2. The term of office for members of the Zakat Board is set at three years, ensuring continuity and stability in governance. The Board is mandated to convene at least twice a year, promoting regular oversight and proactive decision-making.
3. A significant shift towards shariah-compliant financial practices is witnessed in the requirement that all deposits to the Zakat Fund must be held in non-interest-bearing accounts at Scheduled Financial Institutions. This alignment with Islamic principles mitigates concerns related to usury and ensures the purity of the zakat funds collected.

- One of the most far-reaching implications of the enacted act is its allowance for the Muslim community, both within Bangladesh and abroad, to contribute their zakat directly to Government scheduled banks. This provision streamlines the process for individuals across geographical locations to participate in the zakat fund, enhancing the reach and impact of the initiative.

4.4.2 Integrating Modified model 1: Ekdesh¹³

The modified model takes inspiration from the proposed zakat-based crowdfunding model by Adnan et al. (2022) and integrates the Ekdesh platform while accounting for the legislative changes introduced by The Zakat Fund Management Bill-2023. The study tries to figure out the fit of current rule and regulation and will identify and combine existing the key role players to facilitate zakat for marginalized farmer via crowdfunding platform.

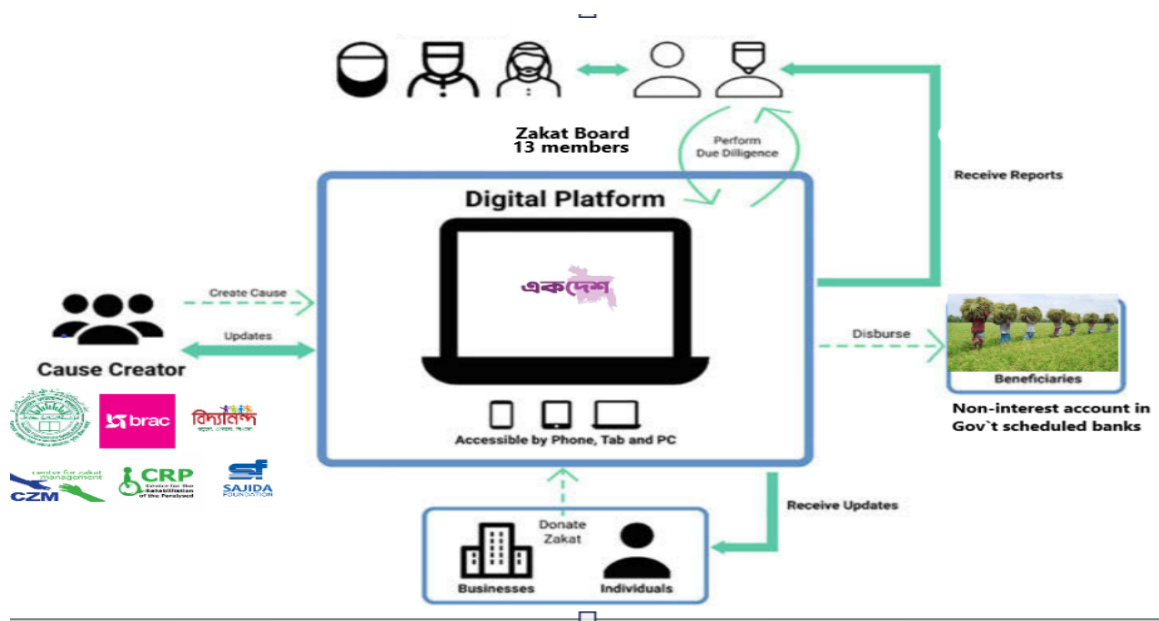


Figure 4 Modified Model 1

- Platform:** Ekdesh, the first crowdfunding platform in the country under the flagship program of Digital Bangladesh; Access to Information (a2i), has been created by the Government of Bangladesh under the umbrella of the ICT division in 2020 during Covid pandemic. Its purpose is to make it easier for individuals to provide zakat and contributions promptly from anywhere in the world and at any time using traditional banking methods. The Ekdesh platform, which is based on technology, has been es-

¹³ <https://ekdesh.gov.bd/>

tablished in order to provide economically disadvantaged individuals and small companies that have been impacted by the Current crisis with financial aid and social security.

2. **Cause Creator:** A variety of government and non-government organizations using the Ekdesb platform as cause creator. These organizations include.
 - the Prime Minister's Relief Fund and the Islamic Foundation.
 - Bangladesh Rural Advancement Committee (BRAC)
 - Bidyanondo Foundation
 - Center for Zakat Management
 - Centre for Rehabilitation of the Paralysed (CRP)
 - Sajida Foundation
3. **Doner:** Ekdesb aims to foster a sense of unity and collective responsibility among individuals across Bangladesh. The platform serves as a channel through which citizens from various walks of life can contribute to the welfare of irrespective of any marginalized groups including smallholder farmers. The legislative change, introduced by The Zakat Fund Management Bill-2023, facilitates the donation process by allowing Muslims both domestically and internationally to contribute their zakat directly to Government scheduled banks. This provision further enhances donor participation and widens the impact.
4. **Shariah Advisory Council & Zakat Council:** Building on the legislative changes, the model introduces a transformation in governance through the establishment of the Zakat Board. This entity, composed of experts and chaired by a government official, ensures the efficient allocation and disbursement of zakat contributions to the intended beneficiaries: Muslim smallholder farmers. The term of office lasting three years, along with biannual meetings, ensures consistent oversight and strategic decision-making.

While the purpose of the modified integration of Ekdesb and the zakat-based crowdfunding model provides a robust approach to supporting marginalized farmers, it's essential to recognize that Ekdesb's purpose, rooted in technology, extends to providing assistance to economically disadvantaged individuals and small businesses impacted by the covid pandemic. Designed to offer a streamlined way for individuals to make zakat contributions from anywhere in the world using traditional banking methods, Ekdesb addresses various economic challenges arising from crises. However, it's important to note that the intricacies of agricul-

tural financing for smallholder farmers might require a more specialized approach. As the purpose of the study to facilitate the poor and small holder farmers agricultural financial constraints, a better modification of model could be possible by adding more specified farmer's financing objective-oriented organization in the line with other institutions or particularly affiliating the institute with current regulation practice.

4.4.3 Integrating Modified model 2: iFarmer

Introducing iFarmer into the modified model brings forth a specialized approach to address the limitations of Ekdesh. iFarmer's objective-oriented financing, expertise in agricultural funding, and strategic partnerships align perfectly with the financial needs of smallholder farmers. This targeted focus ensures that zakat funds are directed towards initiatives that can truly uplift the agricultural sector and improve the lives of farmers.

iFarmer¹⁴ is an Agri-fintech firm that provides farmers with funding, agricultural inputs, consultancy services, insurance, and market access in Bangladesh. iFarmer extends assistance to smallholder farmers, enabling them to compete effectively in the dynamic marketplace. The platform offers financial solutions to bridge existing gaps and facilitates the establishment of a high-quality production chain. Through expert guidance, local farmers gain insights into making well-informed decisions concerning market dynamics, production techniques, and optimal utilization of agricultural resources like seeds, fertilizers, and nutrients. This approach enhances both agricultural output and the farmers' personal well-being. Given agriculture's significant contribution to Bangladesh's GDP, iFarmer's invaluable support plays a pivotal role in advancing the country's Micro, Small, and Medium Enterprises (MSMEs) sector. In case of agricultural financing, the organization basically link financial institutions like bank, MFIs, Investment groups, non-bank institutions etc with the farmers, traders, input retailers and other agri businesses. The financing partners have given their approval on the applications, and the funds have been sent in the shortest amount of time feasible.

¹⁴ <https://ifarmer.asia>

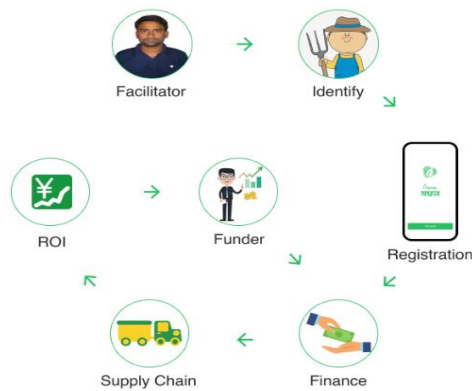


Figure 5 SOFOL Digital Application

The application, Sofol, constitutes a crucial element within iFarmer's strategic approach. It integrates human agents, mobile technology, and remote sensing to simplify the complexities and costs associated with collaborating with smallholder farmers. Sofol was designed with farmers as its primary users. However, given the limited internet and smartphone adoption among farmers, iFarmer adopted an assisted model. Presently, iFarmer's field facilitators employ the Sofol app for a range of functions, including farmer onboarding, gathering farmers' financing requirements, distributing agricultural inputs, tracking financing progress, delivering weather updates and advice, and addressing relevant concerns. Sofol effectively addresses multiple challenges for iFarmer. It streamlines the overall management of farmer relationships, enhancing efficiency for the company. Field agents can swiftly bring farmers into the fold and maintain consistent communication as needed. The app simplifies data collection and resolves issues related to proper documentation and assessing farmers' creditworthiness.

Notably, Sofol stands as a pivotal component of iFarmer's ecosystem strategy, seamlessly connecting different facets of iFarmer's operations through a robust data and monitoring framework. Leveraging Sofol empowers iFarmer to develop a more profound comprehension of farmers, their agricultural practices, and crops. This insight allows iFarmer to offer enhanced advice to farmers, utilizing the platform's remote sensing capabilities to boost yield and profitability. Sofol also facilitates the integration of iFarmer's supply chain operations with its data, enabling improved supply chain and marketing planning. It has the potential to establish an internal marketplace within Sofol, directly connecting farmers for product transactions, foster a dependable credit scoring model, and eventually introduce additional financial partners, including financial institutions. Furthermore, Sofol can provide real-time farm

data insights to retail investors, enhancing their understanding of investments based on information.

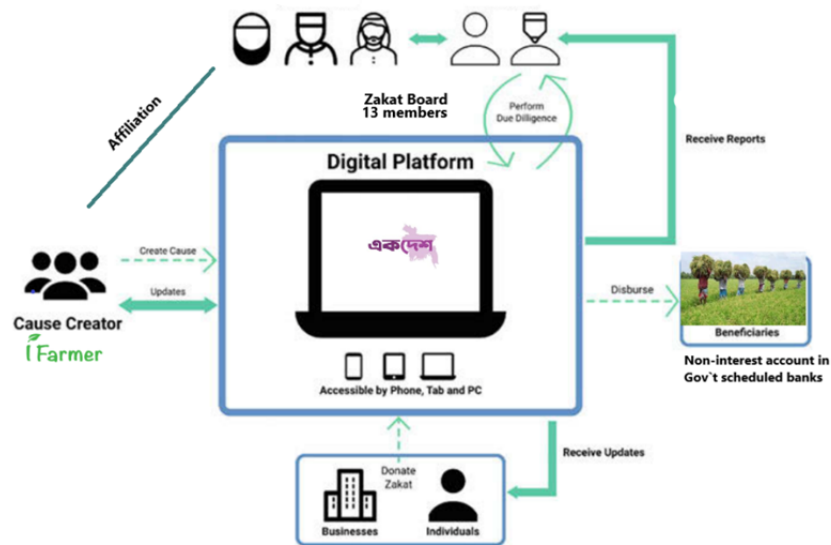


Figure 6 Modified Model 2

Though iFarmer itself a digital platform to raise fund. In the modified model, the affiliation and recognition of iFarmer as a cause creator under the supervision of Government may double the impact for both sides.

On the demand side, there would be a confirmation that marginalised farmers be the only or major proportion of beneficiaries. Through its 'Sofol' digital app, each farmers got registered and got fund according to their specified needs. Relevant data as well as a custom-developed credit rating algorithm are also used to determine whether consumers are likely to be successful. Therefore, the transparency and accountability, those embedded in zakat distribution principle, between zakat donors and receivers could be assured. On the supply side, Affiliation with Government may give iFarmer more exposure for the purpose it has been started for.

5 DECIPHERING THE VIABILITY OF ZAKAT-BASED CROWD-FUNDING BASED ON THEMATIC ANALYSIS

5.1 Aspects promoting Zakat-based crowdfunding platform.

5.1.1 Strong religious obligation

Giving zakat, or a part of one's wealth, to those who are less fortunate is a religious responsibility for Muslims and entails giving a percentage of one's possessions. Since Muslims make up the majority of Bangladesh's population, there is a good chance that zakat-based crowdfunding campaigns may attract considerable sums of financial support from donors.

In 2022, Bangladesh was estimated to have had a Muslim population of roughly around 91%, according to a study by the US department of State¹⁵(international religious – 2022). Given that Bangladesh is projected to have a total population of around 167 million by the year 2022 (Jahangir and Bulut 2022,139). The potential of zakat-based crowdfunding to involve more donors in the financing of marginalized farmers is evident. During the 2018-2019 fiscal year, it is anticipated that Zakat would contribute 35% of national income and 21% of the budget for the nation in Bangladesh (Sakib Najmus 2022). This indicates that there is a great potential for zakat-based crowdfunding to collect cash for long-term socio-economic purposes in Bangladesh.

5.1.2 Growing interest in Islamic finance:

The government of Bangladesh has aggressively promoted Islamic financing in the nation. In 2010, the government of Bangladesh created a distinct regulatory organization for Islamic banking and finance, known as the Islamic Banking Department (IBD) of the Bangladesh Bank, to monitor and support the growth of Islamic finance. In addition, the government has implemented tax incentives for Islamic financial institutions to stimulate their expansion (Bangladesh bank guidelines --2010). Islamic banking is gaining popularity among Muslims as a result of Islamic regulations and values, and it is largely religion that impacts consumers' opinions and ultimately leads to the acceptance of Islamic banking in Bangladesh (M. Rahman et al. 2022,44). Bangladesh's Islamic financial sector has expanded rapidly over the last decade. The Bangladesh Bank's Islamic Banking Report for December 2022 reported BDT 1.1 trillion in Islamic bank assets, up 17.5% from the previous year. In 2022, Islamic

¹⁵ <https://www.state.gov/>

banks held 25.8% of deposits, up from 23.7% in 2020. In 2022, Bangladesh has 1,449 Islamic bank branches and 20.6 million clients, up from 1,315 in 2020 (Bangladesh Bank 2022). Despite the COVID-19 outbreak, Bangladesh's Islamic financial industry grew. The sector is predicted to increase because to government backing, awareness, and demand for Shariah-compliant financial goods and services.

According to Rahman (2020), in Bangladesh, the practice of Islamic finance places a significant focus on both social responsibility and financial accessibility. Small and medium-sized firms, often known as SMEs, and microfinance are two types of businesses that may be helped by Islamic financial institutions, which can in turn assist economic development and the alleviation of poverty. In addition to this, Islamic financial institutions are obligated to provide a percentage of their earnings to charity organizations via a practice called as zakat.

5.1.3 Efficient Fundraising:

When asked about the priorities when contributing to charity organizations, eighty-five percent of respondents to a poll conducted by the Islamic crowdfunding site EthisCrowd¹⁶ said that transparency was very important to them. Zakat-based crowdfunding platforms work in a transparent way to make sure that the money donated is used for what it was meant to be used for. Donors can see how the campaign is going, and the platforms will let them know how the money is being used. This openness builds trust among donors, making them more likely to give more money to good causes.

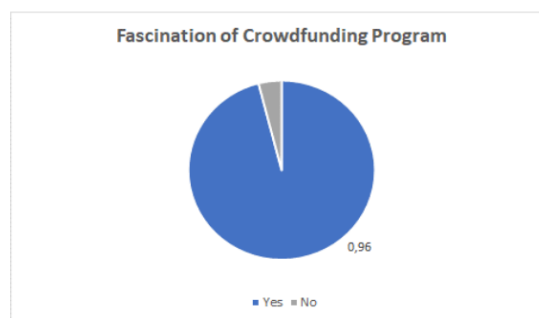


Figure 9: fascination of Crowdfunding program

The degree of transparency applied to charitable contributions can significantly affect the long-term sustainability and credibility of its operational procedures (Zhou et al. 2020,95). Platforms for crowdfunding that are based on zakat provide contributors the opportunity to become involved with the causes that are important to them. They foster a feeling of

¹⁶ <https://ethis.co/>

community by bringing together contributors to support issues in which they have a common belief. As per Hudaifah et al. (2022) Donors have the opportunity to interact with the campaign's organizers by communicating with them, asking questions, and providing comments. The study also confirmed the increase in the donors' level of involvement with the campaign.

5.2 Hindrance of Zakat Based Crowdfunding

5.2.1 Lack of Awareness and understanding

Zakat is not a radical concept in Bangladesh; rather, it has a long history there. The phrase "Zakat" is well recognized among the people of Bangladesh, which is the second most populous Muslim country in the world. Despite this, the actual practice of Zakat in Bangladesh is significantly different from other Muslim countries. People have a strong conviction in Zakat as an Islamic tenet, but the seriousness of zakat giving is not as well established in society as the other four pillars of Islam. As a consequence of this, the lack of knowledge and awareness of zakat payers and recipients, which is intended to guide the administrators responsible for the collection and distribution of zakat, is glaringly obvious.

the present prevalent practices of Zakat, such as the choosing of beneficiaries at random without exercising judgment, the giving of traditional fabric of poor quality, the non-calculation of Zakat, the flaunting of wealth, and the perpetuation of a general misperception about Zakat (Islam et al. 2022,15). The right procedures do not include treating Zakat in the same way that traditional alms have been treated. The study also made confirmation about the fact that Zakat donors do not evaluate the recipients to see whether or not their Zakat is acceptable. The decision was made at random due to the fact that individuals assemble in the payer's house to demand Zakat payment. Payers divide up the zakat among themselves based on a random system rather than considering each recipient's degree of acceptability in light of Islamic law. This is done to prevent any potential conflicts, inconveniences, or embarrassments.

Another research conducted by Obaidullah (2015), figured out few challenges those are predominantly revolved by Knowledge gap- rich individuals who are qualified to pay zakah and impoverished people who receive zakat do not have a clear understanding of their rights, obligations, and duties in this respect, Awareness of public- efforts that may play an important role in raising public awareness of zakat and its administration is basically non-existent in rural Bangladesh. Imams usually provide Friday sermons in Bangladesh. Yet, most mosque imams in rural regions, particularly villages, are uneducated. They often mis-

understand zakah concerns, carelessness- Many don't take this worship (Zakat) seriously since they don't understand zakat and other concerns. Yet, they don't understand zakat, even if they pray regularly. Despite being affluent, they don't sure whether they're qualified. Several persons who went hajj twice did not pay zakat consistently. Many individuals could not respond to the inquiry on minimal zakat.

5.2.2 Lack of trust in online platforms and arising cyber threat

In 2009, the Bangladesh Bank enabled online cash transfers and credit card utility bill payments (Waughen et al. 2015,3). Since 2011, financial transaction legislation (mobile payments, digital wallets, and smart cards) and transaction infrastructure (e.g., electronic money transfer payment gateways) have advanced, as has the Bangladesh Electronic Funds Transfer Network (BEFTN) to modernize payment system infrastructure. Businesses are always trying to engage consumers, and each successful onboarding lets them acquire a lot of user data, which makes customers anxious. In a local behavioural environment of regular news and friends-and-family stories concerning online fraud, difficult discounts, invasive target-based marketing and advertising, phony advertisements, adware, spam email, and credit card information theft scams, consumer trust in the system typically suffers (Rahman and Rede 2022). Therefore, the protection of one's privacy and the safety of one's personal information becomes an important concern that may slow down the spread of zakat-based crowd-funding. The Bangladesh Association of Software and Information Services (BASIS)¹⁷ did a study that found that online payment in Bangladesh is still in its early stages (BASIS 2022). The study found that only 17% of people use online payment services, which shows that people don't know about them or trust them. Among this percentage, users don't actually care much or at all about how their personal information is shared online or how safe it is. This is why cybercrime is growing quickly in Bangladesh. According to the government of Bangladesh, e-Government Computer Incident Response Team (BGD e-Gov CIRT), Spam¹⁸ has been designated as Bangladesh's top carrier of cyber danger in the year 2021 (M. T. Islam et al. 2022,10). In September 2021, the average daily spam volume was over 210.54 billion worldwide, which amounts to roughly 84.83% of the total daily email traffic. Bangladesh ranks 18th on the list of spam generators by nation and is responsible for 7.2% of the global spam volume (Paul 2022). Amid the Covid-19 pandemic, spamming and

¹⁷ <https://basis.org.bd/>

¹⁸Spam, unsolicited email, is one of the most pervasive and persistent cyber hazards. (source: <https://www.merriam-webster.com/dictionary/spam>)

phishing¹⁹, in the overall Bangladesh cyber threat landscape, has become significantly bigger threats. The report of (BGD e-Gov CIRT) further added that the cyber threat landscape in Bangladesh follows the global threat landscape, and changes in the ranking are due to spam, phishing, and ransomware²⁰ climbing to higher positions. (Romke 2013)

5.2.3 Limited Access to Technology and digital competency:

Almost 70 percent of Bangladesh's population resides in rural regions, where there is limited access to technology and digital infrastructure (Bangladesh Bureau of Statistics 2022). Despite the fact that the government of Bangladesh has been effective in implementing e-governance and has digitized a large number of public services, there is still a major "digital gap," especially in rural Bangladesh (Waughen et al. 2015, 5). The government project known as the Digital Bangladesh Vision 2021, which aims to turn Bangladesh into a digital economy, has mostly concentrated its efforts on metropolitan regions, leaving rural areas unserved (Hossain 2022, 37). According to Romke (2013), the digital divide in Bangladesh may be broken down into many subcategories: the gap can be seen between urban and rural regions, between various economic levels, and between literate and uneducated individuals. The author had anticipated that as days progressed on, individuals would run the danger of becoming marginalized not just by their access to ICT but also by their skill to utilize information technology of this kind.

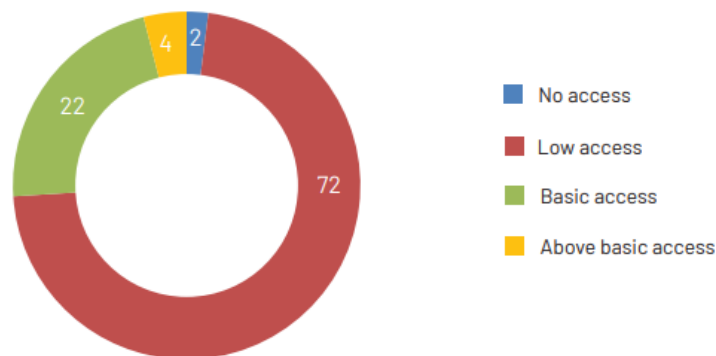


Figure 7 Overall digital access (Source: BIGD Digital Literacy Survey 2019)

¹⁹ Phishing is an attack that attempts to steal your money, or your identity, by getting you to reveal personal information. (Source: <https://www.ibm.com/topics/phishing>)

²⁰ Ransomware is crypto virology software that threatens to publish or permanently block the victim's personal data unless a ransom is paid. (Source: <https://www.ibm.com/topics/ransomware>)

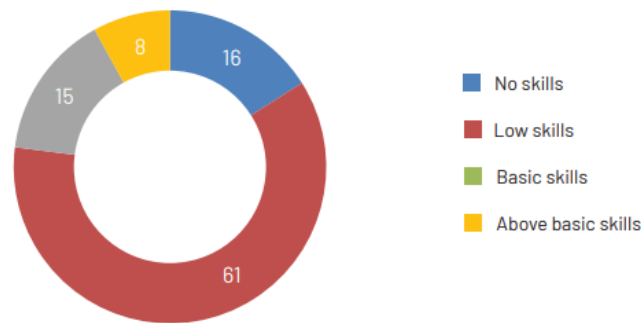


Figure 8 Overall Digital skill (Source: BIGD Digital Literacy Survey 2019)

In order to construct a Digital Literacy Index, Brac Institute of Governance and Development (BIGD) surveyed 6,500 rural families throughout the nation and found that In Bangladesh, 54 percent of rural families do not have access to the internet. In addition, 96 percent of households have mobile phones, while 59% do not have smartphones. Computers are used by just 8 percent of homes, and computer ownership is significantly lower (2.4%) (Shadat et al. 2020,67). The survey also found that the literacy level of rural people is limited to read and write mobile SMS. Thus, Farmers who live in marginalized communities sometimes do not have access to mobile tech or the internet, which makes it difficult for them to get the knowledge and tools they need to engage in crowdfunding initiatives that are based on zakat. In addition, rural areas may have difficulty navigating digital crowdfunding sites due to language hurdles, poor levels of digital literacy, or both.

The research objective revolves around the utilization of Zakat-based crowdfunding to finance marginalized farmers. Examining the present availability of financing choices for underserved farmers allows me to comprehend the constraints of current sources and investigate the possibility of Zakat-based crowdfunding as an alternative. Furthermore, understanding how Zakat-based crowdfunding can be used as an alternate financing model requires overcoming the hindrances mentioned.

5.3 Harnessing the power of Zakat based Crowdfunding platform.

5.3.1 Addressing poverty and inequality

Crowdfunding, which is the process of supporting a project or enterprise by raising little quantities of money from a big number of people, might be a promising approach to assist entrepreneurial endeavors and small companies in developing nations (Lehner et al. 2015,171). Crowdfunding is defined as the practice of raising small amounts of money from a

large number of individuals. Zakat, on the other hand, is a religious requirement in Islam, and it mandates that Muslims contribute a percentage of their money to help those who are in need, especially the disenfranchised and the destitute. Crowdfunding campaigns that are based on zakat may be used to collect money from a wider pool and then distribute it to individuals who are in need, particularly farmers.

Manara et al. (2018), in a study of proposing strategic model of utilizing zakat fund potential towards poverty reduction showed that the zakat based crowdfunding method offers ease in the collecting of zakat contributions from the broader community, and it does so in accordance with a number of places in Indonesia that indicate the potential for and beneficial effect on improved income distribution. In the study of Ashiq and Mushtaq (2020), It has been determined that it is needed to assist those economically disadvantaged Muslims in India in raising their level of life with the assistance of those Muslims in India who are reasonably rich. In this regard, a conceptual model to integrate zakat fund and crowdfunding platforms in India has been generated.

Small scale farmers make up a large portion of the overall workforce in agriculture across the world's less developed areas. One research estimates that there are between 450 and 500 million smallholder farmers in the globe. Savoy C.M. (2022) pointed out that the majority of these farmers are situated in Asia and Sub-Saharan Africa, collectively representing 90 percent of all farmers in these regions and contributing 80 percent of the food supply for the continent.

The result of the Agricultural Census-2019 Bangladesh states that the number of families dependent on agriculture in rural regions is 16.048 million, while the number of such households in urban areas is .833 million. In terms of percentage, it is 47.48, which is 5.43 percent lower than the previous Census-2008 (Agricultural Census 2019). And the most specific proportion of household of smallholders is 14 million, which can be regarded as the major portion, 91%.

The demand for access to financial services is greatest among smallholder farmers in many developing countries including Bangladesh, who are frequently at the bottom of the economic ladder. Food security, the quality of life for farmers whose livelihoods are tied to the agricultural sector, and rural and ultimately national economic development may all be influenced by the availability of credit (Rapsomanikis G. 2015,15).

Bangladesh is a country that has been beset with poverty and inequality issues for many years. At the national level, 18.7 percent of the population lives in poverty, with a rate of 20.5 percent in rural regions and a rate of 14.7 percent in urban areas, respectively. (Bang-

ladesh Bureau of Statistics 2023). Therefore, the purchasing power parity is 1.90 US dollar per day, a kind of minimal amount that farmers need to allocate among their needs and for agricultural production cost. Every year, Bangladesh bank in accordance with through modification of its' agricultural and rural Credit policy and programmes increases the agricultural credit disbursement mostly targeting the marginal and smallholder farmers. But the programmes lack the consideration of real funding necessity and household maintenance by the poor farmers as non-farm activity. As per Credit policy of Bangladesh bank, new disbursements are given only after the borrowing farmers have paid back the earlier dues, which results in the net credit supply to the farmers being very minor.

It is feasible to possibly generate a ripple effect that helps not just the farmers but also the broader economy of the area by offering financial assistance via Zakat-based crowdfunding. This is conceivable because it is possible to create a domino effect. In addition, zakat-based crowdfunding models have the potential to become an integral component of a more comprehensive plan to combat poverty and injustice in Bangladesh. Zakat-based crowdfunding may be a useful addition to initiatives to increase the availability of resources and infrastructure for smallholder farmers, provided that these efforts are carried out in partnership with local non-profit organizations and government agencies. This would finally provide them access to the help they need to enhance their productivity, raise their income, and break the cycle of poverty in which they find themselves trapped. Crowdfunding models that are based on zakat provide a one-of-a-kind chance to give financial support to underserved farmers in Bangladesh. Zakat-based crowdfunding may supplement conventional sources of financing and, eventually, contribute toward relieving poverty and inequalities in the area by leveraging philanthropic funds for development goals. This is accomplished through leveraging charitable donations. The effect of crowdfunding via zakat is persuasive, and it should be considered among the various financial channels for tackling poverty and inequality in Bangladesh.

5.3.2 Fostering Community empowerment and involvement

It is evident that the Islamic practice of donating a percentage of one's income to those who are less fortunate, known as zakat, has the potential to eradicate inequity and significantly decrease poverty. Zakat has the potential to assist in the development of communities that are both more robust and better able to withstand adversity since it helps alleviate economic suffering and promotes economic stability (Abd Wahab et al. 2020,1591). S. Khan (2023) em-

phasized on the act of giving itself may cultivate feelings of compassion, solidarity, and social responsibility, which further contributes to the empowerment of local communities.

In Bangladesh, community involvement and the practice of zakat have both been acknowledged for a long time as being crucial components. In Islam, zakat is seen to be a responsibility for those who are less fortunate and is regarded as an integral component of an individual's commitment to fulfil their religious duties. As a result, Muslims in Bangladesh are exhorted to donate zakat as a means of gratifying their obligation to their religion and making a positive contribution to the well-being of their community. Education, healthcare, and women's economic independence are just few of the many areas that benefit from zakat in Bangladesh. Schools, educational programs, healthcare, and microfinance projects that serve low-income people and communities have all benefited from zakat donations. In addition, efforts in Bangladesh that are based on zakat have been effective in fostering community engagement and participation. In the case of Bangladesh, for instance, several Zakat-based organizations include members of the local community in the process of distributing Zakat contributions. This helps facilitate the creation of a feeling of ownership and responsibility among members of the community in regard to the resolution of social challenges.

Crowdfunding gives people access to money, but it also has the potential to get more people involved in the development of new projects and ideas. Crowdfunding platforms can help build a sense of community ownership and interest in the success of a project by letting people give small amounts of money toward a common goal. On the aspects of the rise of crowdfunding campaigns to support social causes and community initiatives in Bangladesh, GoFundMe²¹, a crowdfunding platform in a crowdfunding campaign for the educational support in Rohingya Refugee Camps raised over \$1 million from more than 23,000 donors from around the world, demonstrating the power of crowdfunding to mobilize community support for important social causes (Suresh et al. 2020, 302). Another example can be seen in the growing use of crowdfunding by small businesses and entrepreneurs in Bangladesh to raise capital for their projects. A study by the International Finance Corporation (IFC) found that crowdfunding has the potential to play an important role in financing the growth of small and medium-sized enterprises (SMEs) in Bangladesh, particularly in sectors such as technology and agriculture.

Sulaeman (2020) conducted a study on the behavioural intention of zakat payer in the context of Indonesia where it has been proven that empowering and development of commu-

²¹ <https://www.gofundme.com/>

nity in terms of social influence have a strong and beneficial impact on the desire of Muslim crowd funders to embrace the type of crowdfunding platform that is based on zakat.

By leveraging philanthropic capital for development purposes, zakat-based crowdfunding can complement traditional forms of finance and ultimately work towards promoting community participation and empowerment.

5.3.3 Promoting financial inclusion

M. M. Rahman (2020) describes financial inclusion is the process of enabling access to adequate financial goods and services for all individuals and vulnerable groups, especially the weaker parts and low-income groups, at an accessible price, in a fair and transparent way, through a regulated, mainstream institutional actor. Financial inclusion is recognized as a fundamental driver of a nation's sustainable economic development by the Sustainable Development Goals (SDGs) of the United Nations and confirmed by the World Bank (World bank 2022). This is because it enables access to beneficial and reasonably priced financial goods and services for individuals and organizational stakeholders in the form of financial transactions, payments, savings, credit, and insurance.

There are still significant discrepancies in terms of financial inclusion across both individual nations and the region as a whole across Asia and the Pacific (Jahan et al. 2019,10). According to studies conducted by the International Monetary Fund (IMF), in low and middle-income nations in the area, close to fifty percent of the adult population does not yet have a bank account. Less than ten percent of them are in a position to get credit from conventional lending institutions (IMF 2022). According to the World Bank, Bangladesh is one of the 25 nations around the world where 73.0 percent of the world's population does not have access to adequate financial resources (World Bank 2023).

It has been estimated in the agriculture Census Bangladesh-2019 that only 16.8 percent of smallholders in 2019–20 would have access to financing. For all farmers, regardless of size, the percentage of access to newly established accounts is 23.20 percent (Smallholders need -- 2020). The vast majority of smallholders are forced ultimately to turn to MFIs and money lenders despite the fact that the higher cost of fund and onerous payback schedules they impose.

Zakat-based crowdfunding as an unconventional financing alternative (Biancone, P. P., & Radwan M. 2018,3) has the potential to increase financial inclusion in Bangladesh, especially among poor farmers who lack access to conventional financial institutions. This strate-

gy comprises the collection and distribution of funds for charity purposes in accordance with Islamic values, and it may offer an alternative source of financing for farmers who are often barred from traditional financial institutions.

zakat-based crowdfunding emerges as a powerful tool that can be effectively utilized to finance marginalized farmers. Its implementation can lead to significant positive impacts, including poverty reduction, improved income distribution, community engagement, and enhanced economic development. Moving forward, it is crucial to continue exploring and implementing strategies that maximize the potential of zakat-based crowdfunding, in collaboration with local non-profit organizations and government agencies, to create sustainable and inclusive agricultural systems that benefit all stakeholders involved.

5.4 Challenges of Zakat Based Crowdfunding

5.4.1 Regulatory Challenge:

As zakat-based crowdfunding is still a novel idea in Bangladesh, there are no established rules or criteria for it. For crowdfunding sites hoping to launch operations there, this may be a significant obstacle.

Suresh et al. (2020) found that the regulatory framework for crowdfunding in Bangladesh was weak. There are currently no such frameworks available, despite the availability of several platforms. According to Dr Habib, a professor and director of the Bangladesh Institute of Bank Management (BIBM), it is difficult to explore the possibilities of crowdfunding in Bangladesh due to a lack of policies and legal framework (Habib A.S. 2019). Suresh et al. (2020) also observed that while the government has made some headway in governing equity crowdfunding, there are currently no explicit laws in place for crowdfunding that is based on rewards or donations.

This lack of legislative clarity may be especially problematic for crowdfunding systems based on Zakat, which depend on contributions from people for charitable purposes. Zakat is a kind of Islamic almsgiving. Since there are no clear laws governing these platforms, it may be difficult for them to attract donors, who may be hesitant to provide money in the absence of adequate control or protection.

5.4.2 Competition with other form of zakat distribution

Zakat-based crowdfunding platforms might have to compete with other ways to give out zakat, like traditional charities. Crowdfunding has the potential to reach more people and raise

more money, but traditional charities have been around for a long time and have a good reputation with donors.

According to the Survey report of UK based organization Charities Aid Foundation (CAF), Bangladesh ranked 69th as most generous in the 2021 World Giving Index (CAF 2021). 22 percent of the surveyed people are willing to donate, and the major proportion of donation comes from zakat giving obligation. Of these, minimal percentage donate through online platforms, while the rest prefer to donate through traditional charity organizations or directly to individuals in need.

Zakat-based crowdfunding platforms have the ability to reach a bigger audience; nevertheless, they may have difficulty winning the confidence of donors who are used to contributing money via more conventional methods.

In addition, traditional charitable organizations sometimes have already established networks and connections with the communities in which they operate, which might make it simpler for them to determine who is in need of assistance and properly disperse the zakat donations. On the other side, crowdfunding sites could not have the same degree of community participation, and it might be difficult for them to locate and communicate with those who are in need.

5.4.3 Economic and political instability:

A kind of Islamic financing known as crowdsourcing that is supported by zakat gives individuals the opportunity to combine their resources to contribute to charitable causes. In recent years, the practice of crowdfunding that is supported by zakat has gained popularity in the country of Bangladesh, where Muslims make up a significant section of the population. Despite this, the potential for this kind of funding to be successful may be hindered by the political and economic unpredictability that exists in the nation. Instability in the economy may have a number of different effects on zakat-based crowdfunding. For instance, if individuals are having trouble meeting their basic needs, they may not have the financial means available to donate to crowdfunding initiatives. Additionally, if the economy is performing poorly, people may be less inclined to invest in ventures that are perceived as risky, such as crowdfunding campaigns.

The World Bank reports that the COVID-19 epidemic caused a slowdown in Bangladesh's economic development in 2020, with GDP growth estimated to be about 3.6% in 2021 (World Bank 2021). Many individuals have lost their jobs and seen a decrease in their income

as a direct result of the epidemic, which may have an influence on their capacity to contribute to crowdfunding initiatives.

Instability on the political front is another factor that may work to the detriment of zakat-based fundraising. In the event that there is widespread violence or civil upheaval, for instance, individuals could be more concerned with ensuring their personal safety than they are with donating money to charity organizations. People may also be cautious to invest in crowdfunding projects because of worry that their money will not be utilized in the way that was intended if the government is unstable or corrupt. In recent years, Bangladesh has been plagued by political instability, marked by demonstrations and outbreaks of violence on topics like elections, corruption, and freedom of speech, among other things (Al Jazeera 2020). Concerns have also been raised regarding how the government is responding to the COVID-19 outbreak, which has resulted in heightened political tensions and distrust among the general populace.

It is possible that the economic and political unrest in Bangladesh will have a detrimental effect on the success of zakat-based crowdfunding. In spite of the fact that this kind of funding has the potential to help philanthropic causes and advance economic growth, it may encounter difficulties if the environment in which it operates is unclear and unstable.

The probable exploration of zakat-based crowdfunding in Bangladesh reveals several challenges that must be overcome for these platforms to thrive. However, these challenges also present opportunities for potential solutions that can ignite the potential of zakat-based crowdfunding in the country.

6 CONCLUSION

6.1 Theoretical Implication

The prevailing economic turmoil, heightened poverty rates, escalating unemployment figures, the advent of diverse social predicaments, coupled with constraints on public expenditure, collectively underscore the imperative to explore novel and alternative avenues for sourcing social financing (Biancone, P. P., & Radwan 2018,1). As a subset within the realm of social financing, a novel and innovative financial resource takes the shape of impact investments. Within this framework, capital is allocated by investors who are specifically in pursuit of ventures capable of delivering concurrent social and economic value (Biancone et al. 2019,3). In consideration of the preceding context, Islamic finance can be perceived as aligning with comparable aims and prerequisites as social impact investments, which engender both social and economic advantages. Collins J. (2007) emphasizes the fact that Islamic finance has the capacity to significantly enhance liquidity in the financial mainstream, and the potential for raising capital from Muslim countries should not be overlooked. Zakat as an Islamic financial tool has the potential to serve as effective solutions and appropriate instruments for facilitating social impact investments. By investigating the use of zakat for crowdfunding, the study could demonstrate how this traditional practice can be adapted to modern financial contexts, effectively channeling resources toward social responsibility projects.

Financial inclusion entails the process of ensuring that a diverse array of individuals, including vulnerable segments and those with limited incomes, have access to appropriate financial products and services (Hashem et al. 2015,415). The study adds to the theoretical discourse on financial inclusion and empowerment by investigating the feasibility of zakat-based crowdfunding for marginalized farmers. The study enhances the understanding of how inclusive finance can empower marginalized farmers and contribute to their overall well-being. An essential facet of financial inclusion from an Islamic standpoint lies in its distinctive approach to wealth redistribution, setting it apart in its developmental trajectory from the conventional financial industry (Hashem et al. 2015,417). The quest for an ideal mechanism of wealth redistribution has consistently ranked as a paramount concern for economists, sociologists, and legislators alike (AlMatar, F. 2015, 119). Zakat serves as a facilitator of wealth redistribution within communities, functioning as a deterrent against the concentration of wealth in the hands of a privileged few (Ibrahim, S. M. 2015,439). The study's contribution involves showing how zakat-based crowdfunding can contribute to wealth redistribution at a

grassroots level, particularly among marginalized farmers who are often excluded from mainstream financial activities.

Zakat-based crowdfunding is conceptualized on the phenomenon of financial technology. Fintech as a form of disruptive innovation encompasses financial services that leverage technological advancements to fulfill their functions in the realm of finance (Rachman et al. 2018, 57). Zakat-based crowdfunding contributes significantly to the knowledge area by introducing an innovative fusion of Islamic finance principles and modern crowdfunding technology. By offering a globally relevant model, zakat-based crowdfunding showcases the potential for integrating cultural, ethical, and technological dimensions to address societal challenges and foster inclusive and sustainable development. Sustainability has evolved beyond being solely an environmental concern; it now encompasses economic and social dimensions as well (Dempsey et al. 2011,291). Zakat, a distinct strategy to the Islamic economic paradigm, would lay the groundwork for sustainable development, addressing its many facets of poverty reduction, economic empowerment, rural development, and community resilience (Olanipekun 2015,15). Incorporating zakat with the concept of crowdfunding to finance marginalized farmers, the study enriches the theoretical discourse on sustainable development by serving its multiple dimensions. The correlation between sustainability and agriculture is presently an emerging concern, contributing to the knowledge domain of sustainable agricultural development. Farmers commonly encounter a lack of financial resources, posing a challenge in achieving the requisite level of sustainability (Anshari et al. 2019, 235).

Zakat-based crowdfunding significantly enhances the understanding of donation-based crowdfunding by shedding light on a crucial aspect of philanthropic behavior. Existing literature on philanthropic behavior indicates a substantial disparity between individuals' intentions to donate and the realization of those intentions through actual contributions (Bekkers et al. 2020,930). The study illuminates the influence of a trust factor on individuals' distribution patterns of Zakat funds through a crowdfunding platform, elucidating behavioural dynamics in this context. Pavlou, P. A. (2003) believed that trust has consistently held a pivotal role in shaping donor behavior, with its absence often cited as a key factor preventing donor engagement in e-commerce activities. Along with trust, as indicated by Karmanto et al. (2021), perceived usefulness and perceived ease of use exerted a notable and meaningful impact on payment intentions concerning zakat contributions through a crowdfunding platform. The study advances the broader discourse on behavioral economics, offering empirical insights that can potentially inform strategies for encouraging positive financial behaviors and social impact. In essence, this contribution enhances the understanding of how behavioral dynamics

are influenced by both cultural and technological factors, enriching the literature on individual decision-making within the context of ethical finance.

A notable evolution in the domain of ethical finance was its transformation from solely being an ethical and social activist movement into a commercially viable proposition (Chelawat et al. 2013, 35). By demonstrating how zakat-based crowdfunding can seamlessly integrate ethical values with financial transactions, this contribution redefines ethical finance's role in fostering both economic growth and social well-being, bridging the gap between ideology and practice.

6.2 Practical Implication

The absence of a zakat-based crowdfunding practice as an alternative financing avenue, particularly tailored to the needs of marginalized farmers in Bangladesh, accentuates the critical importance of the ongoing study. This research endeavors to not only fill this gap but also to establish a novel financing mechanism that integrates the principles of zakat with the innovative approach of crowdfunding. This synthesis holds significant implications, potentially offering a much-needed solution for marginalized farmers who lack access to conventional banking institutions. Moreover, the implications of this study transcend academic boundaries, as its outcomes could have tangible real-world impact.

pioneering the concept of zakat-based crowdfunding, this research introduces a fresh perspective to various stakeholders, including potential donors, marginalized farmers, and policymakers. Through its findings, the study could stimulate discussions and inspire practical implementations, leading to the formulation of new regulations, initiatives, and programs aimed at fostering and expanding the scope of zakat-based crowdfunding. This, in turn, could open up new avenues for marginalized farmers to access capital for their agricultural activities, helping to uplift their financial standing and contributing to the overarching goal of poverty reduction.

Furthermore, the research can play a pivotal role in addressing the financial exclusion often faced by marginalized farmers. These farmers frequently encounter substantial barriers when seeking loans due to their limited assets, modest income, and the inability to provide sufficient collateral. In this context, the potential of zakat-based crowdfunding to act as an alternative funding source takes on heightened importance. By offering an avenue that circumvents these traditional constraints, marginalized farmers could bridge their financial gaps, leading to increased agricultural productivity and improved livelihoods.

The study also holds promise in terms of collaboration. By identifying potential synergies among stakeholders such as zakat institutions, financial organizations, and agricultural entities, the research can foster a collaborative environment to support the development and implementation of zakat-based crowdfunding platforms for marginalized farmers. Such collaboration could leverage the strengths of each stakeholder, ultimately maximizing the potential benefits of zakat-based crowdfunding in the pursuit of sustainable agricultural development.

In addition to its practical implications, the research has the potential to raise awareness and understanding about the concept of zakat-based crowdfunding and its potential advantages for marginalized farmers. As the knowledge of this innovative financing mechanism spreads, it could stimulate increased adoption and utilization, ultimately contributing to the empowerment of marginalized communities. Efforts to establish trust and confidence in zakat-based crowdfunding can further enhance its impact, fostering a conducive environment for its successful implementation and long-term sustainability. Overall, the study's comprehensive exploration of zakat-based crowdfunding's potential underscores its potential to address a multifaceted range of challenges faced by marginalized farmers and contribute to the broader landscape of sustainable agricultural development.

6.3 Limitation and suggestion for future research

The study is confined to the particular setting in which it is done. Since there is no such practice of zakat-based crowdfunding for marginal farmers, the study's results may not be relevant in other areas or nations where social and economic situations vary greatly. Future research could be carried out in different regions or countries to examine the generalizability of the findings of the study. This would help to identify the factors that are context-specific and those that are universally applicable.

The research is based only on secondary data, which may not offer a comprehensive and accurate picture of the situation on the ground. Future research should consider using a mixed-method approach that combines secondary data with primary data to provide a more comprehensive understanding of the feasibility of zakat-based crowdfunding for marginalized farmers.

Future study should include performing experimental studies to evaluate the viability of zakat-based crowdfunding for underprivileged farmers in a variety of locations and circumstances. This may assist give more convincing proof of this funding method's viability.

7 SUMMARY

The study aimed to analyze the feasibility of zakat-based crowdfunding as a financing model for marginalized farmers in Bangladesh. Given the absence of zakat-based crowdfunding specifically targeted at farmers in the country, the research question and sub-questions were formulated to explore the effective utilization of this model for financing marginalized farmers. The research also involved developing modified zakat-based crowdfunding models and conducting a thematic analysis to identify the key enablers, hindrances, opportunities, and challenges associated with financing marginalized farmers through zakat-based crowdfunding.

The research began by assessing the accessibility of current financing options for marginalized farmers in Bangladesh. It was found that the existing options were limited and often inaccessible for this specific group. This highlighted the need for alternative financing models that could address the challenges faced by marginalized farmers in accessing funds for their agricultural operations.

To address this gap, two modified zakat-based crowdfunding models were developed, incorporating key actors such as "Ekdesb" and "iFarmer." These models aimed to provide a platform for marginalized farmers to receive financial support through zakat contributions. The models were based on the proposed frameworks of another author but tailored to the specific context of Bangladesh.

Thematic analysis was then conducted to evaluate the feasibility of the zakat-based crowdfunding models for marginalized farmers. The analysis revealed several key findings. Firstly, zakat-based crowdfunding offered significant potential benefits, including increased access to finance, empowerment of farmers, and the potential to address poverty and inequality among marginalized farming communities. The models also provided an avenue for social impact investment, allowing donors to contribute zakat funds with the objective of achieving both financial and social returns.

However, the analysis also identified certain barriers and challenges that needed to be addressed. These included the lack of awareness and understanding of zakat-based crowdfunding among potential donors, the need for effective marketing and communication strategies to attract donors, and the necessity of building trust and credibility in the platform. Additionally, regulatory challenges and the competition with other financing options posed further obstacles that needed to be overcome.

In conclusion, the feasibility analysis indicated that zakat-based crowdfunding has the potential to effectively finance marginalized farmers in Bangladesh. The modified models developed in this research provide a framework for implementing zakat-based crowdfunding platforms tailored to the needs of marginalized farmers. However, the successful implementation of these models requires addressing the identified barriers and challenges.

Overall, this research contributes to the understanding of zakat-based crowdfunding as an alternative financing model for marginalized farmers in Bangladesh. By addressing the identified challenges and leveraging the potential benefits, zakat-based crowdfunding can play a vital role in empowering farmers, reducing poverty, and fostering sustainable agricultural development in the country.

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