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Support for smallholder farmers through Islamic instruments

The case of Bangladesh and lessons for Nigeria

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Abstract

Purpose – In societies with strong presence of Islam, Islamic instruments with more scope for fairness and equity can be innovatively harnessed to play an increasing role in the development process and poverty alleviation schemes. Poor smallholder farmers dominate agricultural production in many developing countries and contribute a significant portion of global food production. This paper aims to develop a scheme to improve poor smallholder farmers' vulnerable financial situation through the application of *Zakah* and *Salam* contract, using Bangladesh as a case study. Secondary goals are to show the effect of the scheme on food security and relevance to Nigeria.

Design/methodology/approach – The authors explore the existing traditional modes of financing available to poor smallholders, identify their challenges and propose an appropriate Islamic financing scheme.

Findings – With the *Zakah*-based *Salam* forward contract, the proposed scheme would procure food through Institutional Demand to offer interest free financing, fair price and access to new marketing channels and reduce income uncertainty for the rural smallholders. The discussions indicate that the local food security will be enhanced through incentivized farming activities and disbursement of food from the food bank to the *Zakah*-eligible food insecure local people.

Research limitations/implications – This proposal brings forth a potentially powerful idea that needs further empirical validation.

Originality/value – The religion-based Institutional Demand initiative to promote smallholder agricultural development and social protection is a novel one. The attempt to apply the framework to Nigeria context shows the potential of the framework to generalize for other Muslim developing countries with similar characteristics, especially the poorer agriculture-based countries.

Keywords Bangladesh, Smallholders, Nigeria, Food security, Zakah, Salam contract

Paper type Research paper

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1. Introduction

Value-based Islamic instruments to tackle development and welfare issues come with more scope for fairness and equity. In societies with strong presence of Islam, they can play an important role along with the dominant secular development models to conform to the cultural realities of indigenous people. Initiatives such as the World Bank's World Faiths Development Dialogue show the growing interest to inject religion into development process (Mesbahuddin, 2010). *Zakah* and Waqf institutions, having played a significant function in the betterment of Islamic civilization over time, can be harnessed innovatively to positively contribute to the socio-economic development of Muslims. Recent studies propose the use of *Zakah* and Waqf for economic and financial activities, such as financing and investment into micro-enterprises for sustainable growth purposes (Anwar, 1995; Hassan, 2010; Karim and Murad, 2010; Muhammad and Naiya, 2015). Several prominent Islamic scholars argue for the mobilization of funds through *Zakah*, Waqf and Sadaqah as an additional source of funds to assist in poverty alleviation schemes in Organisation of Islamic Cooperation countries (Savaş and Haneef, 2015). Many rural poor from the developing world rely on smallholder agriculture as an important source of income and food security (Gollin, 2014).

The study aims to outline a scheme to improve poor smallholder farmers' vulnerable financial situation in developing Muslim-majority countries through the following two Islamic instruments, using Bangladesh as a case study:

(1) establishment of a faith-based *Zakah* fund led by a local management committee; and

(2) development of *Salam* contract, an Islamic forward contract, to engage the local smallholders to deliver future agricultural outputs targeted to a food bank set up for vulnerable population as *Zakah*.

The secondary goals are to show the effect of the scheme on food security and illustrate relevance to Nigeria.

Nehring *et al.* (2017) argued that Institutional Demand could be a key policy intervention to address both rural poverty and malnutrition. They defined Institutional Demand as a set of initiatives to create a long-term demand for smallholder production by procuring those to distribute among vulnerable populations through food assistance programs. This paper pushes forward the argument by presenting the above religion-based Institutional Demand initiative to promote the dual objective of agricultural development and social protection, leading to a positive impact on food security.

The existing market conditions in many areas of the developing world promote marketing channels that are not favorable to small farmers (Humphrey and Navas-Alemán, 2010; Key *et al.*, 2000). For instance, the forward contract is a widely used marketing instrument for many agricultural products in developed countries; however, their use by smallholders in Bangladesh is rare. In that aspect, introducing forward contract through *Salam* is a novel contribution.

2. Food security and smallholder farmers

Ever since Thomas Malthus in the eighteenth century presented the dismal view on population growth and food production, food security has become an international issue. The food security concept in research and public policy has evolved over time due to the complexities of technical and policy issues involved (Faridi and Wadood, 2010). The 1996 World Food Summit developed a broad definition of food security which was refined in 2001: "Food security [is] a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary

needs and food preferences for an active and healthy life" (FAO, 2002). Recent global food and financial crises had a serious adverse effect on poverty and hunger in low-income countries. The number of food-insecure people in the world increased to approximately one billion people in 2009 (Shapouri *et al.*, 2009). Moreover, nearly 44 million people were added to the 1.2 billion people who were already living under the extreme poverty line of US$1.25 a day because of the 2010-11 food price shock (World Bank, 2011). Bangladesh has a high proportion of households living just above the poverty line. These households and many others are vulnerable to food insecurity, with high incidence of poverty that is estimated at 35.2 per cent in rural areas and 21.3 per cent in the urban areas (BBS, 2011). Looking at 13 developing countries, Banerjee and Duflo (2009) found that rural households' 56-78 per cent of consumption was on food. As a larger share, estimated to be 35-65 per cent, of poor family's limited income is spent on food, they are disproportionately affected by any food price shock (World Bank, 2009). Global food price crises of 2007-08 led to increased food insecurity and higher poverty levels in Bangladesh (Deb *et al.*, 2009). Bangladesh had 64 million, close to half of its total population at the time, food-insecure people in 2008 (FAO, 2009). Akter and Basher (2014) concluded that the 2007-2009 food price hikes exposed the poorer and net-food-buyer households to food insecurity more than the other groups in the rural areas of Bangladesh. There is also empirical evidence that fixed wage earners in general suffer more from food insecurity as a result of increasing food prices (Faridi and Wadood, 2010). It is imperative that Bangladesh expand its social safety net programs to safeguard food security of vulnerable households. Research shows the effectiveness of safety net programs in improving food security of such households (Faridi and Wadood, 2010).

While food security is multi-faceted in nature that includes, among other things, availability, accessibility and affordability of nutritious food, production of food is still high on international agenda dealing with food security. Despite expansion of large-scale commercial agriculture, small farms contribute a significant portion of global food production (Kremen *et al.*, 2012). Smallholders (less than 2 ha) make up approximately 85 per cent of about 525 million farms (Nagayets, 2005) and represent around 2.6 billion people worldwide (Dixon *et al.*, 2001). They lack adequate access to important resources such as financial, material, technological, human capital, infrastructural and mainly rely on household labor (Nehring *et al.*, 2017). Altieri (2004) estimates that 30-50 per cent of the world's food is supplied by traditional indigenous agriculture. Government policies prioritizing domestic food self-sufficiency and other national socioeconomic conditions are contributing in increasing importance of smallholders in some countries (Nagayets, 2005). The share of the smallholders could be even more pronounced in developing regions where around 60 per cent of the population live in the rural areas, 85 per cent of whom are agricultural (Dixon *et al.*, 2001). At the same time, decreasing mean farm size over time contributes to vulnerability of small farmers and worsening poverty situation in many parts of Africa and Asia (Nagayets, 2005).

Bangladesh, where approximately 75 per cent of its 160 million people lives in rural areas, is one of the most densely populated countries in the world. Rural villages are largely built around traditional agricultural farms. Though the country is industrializing, large-scale commercial farming is not common. Agriculture sector employs more than half of the total labor force and contributes to 20 per cent of the Gross Domestic Product (GDP) (Akter and Basher, 2014). However, agricultural sector growth rate, at low single digit, has lagged well behind that of the industrial and service sectors, and its contribution to GDP has been declining (Bonnerjee and Köhler, 2011). Bangladesh depends on domestic agricultural production for most of its basic food consumption. As food availability and food security in

Bangladesh are affected by actions of other countries in the world market, experts recommend Bangladesh to target self-sufficiency in production of important staple crops such as rice (Deb *et al.*, 2009). As rice is the major source of calorie, rice prices play an important role in determining food security of a typical household in Bangladesh (Faridi and Wadood, 2010).

3. Islamic instruments: *Zakah* and *Salam* contract

Zakah is one of the five fundamental pillars of Islam. Allah commands Muslims, who possess nisab (a certain minimum amount of wealth), to pay *Zakah*. The payment is mandatory and can be collected by the official authority where such authority exists. Being the third pillar of Islam, *Zakah* is mentioned together with prayer 27 times in the Quran. Allah says "And establishes prayers and give *Zakah* and bow with those who bow (in worship and obedience)" (Translation of Quran: 2:42). Similarly, in another chapter of Quran, Allah highlights the importance of *Zakah* by emphasizing that compared to usury or gifts given with the intention to obtain greater benefits or gifts from the recipients, only *Zakah* will result in multiple benefits from Allah: "And whatever you give for interest to increase within the wealth of people will not increase with Allah. But what you give in *Zakah* desiring the countenance of Allah those are the multipliers" (Translation of Quran: 30:39).

Islam supports people to have a decent and prosperous life, and *Zakah* plays an important role in that regard. *Zakah* enhances goodwill, a key Islamic concept, by linking rich and poor. It provides a major tool to support the most vulnerable economic groups in society. Contemporary Muslim societies have not fully exploited the potential of the institution of *Zakah*. Hence, effort is made to focus not only on the charity aspect but also to diversify the uses of *Zakah* funds for social empowerment and development (Hassan and Khan, 2007; Oran, 2009). Available public data from half of the formal *Zakah* institutions in Muslim majority countries show a combined yearly *Zakah* fund of over $7bn (Minor, 2014). Part of that money could be allocated to productive activities.

Salam is a contract between a buyer and a supplier whereby the buyer pays cash in advance for a designated quantity and quality of a certain commodity to be delivered in the agreed future date and price. In this contract, the seller receives advanced payment on the spot and gives an undertaking to supply specified goods to buyer at a future date. It is particularly beneficial for small and marginal farmers, who constitute the majority of the agricultural workforce. Through the *Salam* contract, working capital is provided to these farmers during production time, which allows them to properly manage their farming expenses. According to *Shariah* (Islamic law), for any sale to be valid, the commodity must be in ownership and physical possession of the seller, except in the cases of *Salam* and *Istisna* contracts, where such conditions are not included to facilitate the contract to take place. In fact, as mentioned by Kahf and Khan (1988), *Salam* practice was common in the agricultural sector of Madinah during the time of the Prophet (pbuh).

Bangladesh is a country with close to 90 per cent Muslim population (BANBEIS, 2017). Mesbahuddin (2010) argues that Islamic solutions to welfare have a prominent role to play in Bangladesh, where daily practices of rural villagers are shrouded in their Islamic beliefs. The powerful conventional non-governmental organizations (NGOs), such as Bangladesh Rural Advancement Committee, Grameen Bank and ASA, have success stories with secularized code of development practices such as the interest-based microfinance programs. However, some of their practices have the potential to ignite cultural clashes due to underlying tones of anti-Islamism (Mesbahuddin, 2010). On the other hand, the progress of Islamic microfinance operations in Bangladesh has been rather slow and inadequate. The most prominent one is the Rural Development Scheme of the Islamic Bank Bangladesh

Limited, which has been actively operating poverty alleviation programs since the mid-1990s. Inadequacy of *Shariah*-compliant funds is found to be one of the main obstacles in the growth and efficient operation of Islamic microfinance (Ahmed, 2002).

4. The proposed scheme

According to Kahf (2013), with the exception of few countries where laws make it an obligation to make *Zakah* payments to the government, most other countries with significant Muslim population have numerous mosques, NGOs and individuals taking the responsibility of collecting and distributing *Zakah*. Some countries established special government institution to collect *Zakah* on a voluntary basis, such as The Islamic Foundation in Bangladesh. The inefficiency and peoples' general preference to manage *Zakah* affairs individually make the effectiveness and activities of the institution very limited in the case of Bangladesh.

This study adapted the more complete and integrated framework of Hossain (2017), which demonstrates the application of *Shariah*-compliant *Salam* forward contract to impact different dimensions of food security. A competent local *Zakah* Management Committee (ZMC) would be at the center of the scheme presented in this paper. The decentralized nature of the scheme will create a sense of community ownership and allow efficient responsiveness at the local level. Local committee-based *Zakah* management models exist in some countries like Kuwait and Pakistan, where religious leaders or the committee members are expected to have better access to relevant information about the needs of the community (Kahf, 1995; Ajeel, 1995).

ZMC would determine the functional policies of the system. It would also manage the *Zakah* fund, set up the food bank and choose recipients of the *Zakah*. The paper by Hossain (2017) has more details about the collection of *Zakah* and distribution activities. The procurement of food aspect and its impact on smallholders are the primary focus of this paper.

The *Zakah* fund takes in collections from the local community, as well as a designated share from an available national *Zakah* fund. The fund creates a food bank, which includes some basic nutritious food items that satisfy local customs, dietary needs and local production practices. The ZMC develops a *Salam* contract with farmers, making advance payment for future produce that is destined for the food bank.

Expecting scarcity of the available *Zakah* fund and subsequent food bank, the selection process for eligible recipients of food as *Zakah* should take utmost care to have the greatest impact with the limited resources. Qardawi (1999) argued that the poor and needy are the most deserving groups to receive *Zakah*, which highlights fighting poverty as one of the primary aims of *Zakah*. Along with poorer households with young children, pregnant and lactating women, widows, disables, orphans and old-age people should get priority as recipients. They would be given food vouchers or ration cards that will allow them access to food banks on a periodic basis. The proposed scheme conveniently makes food available locally to the consumers who lack purchasing power, thus targeting the accessibility and affordability aspects of food security.

5. Discussion: implications for the smallholder farmers

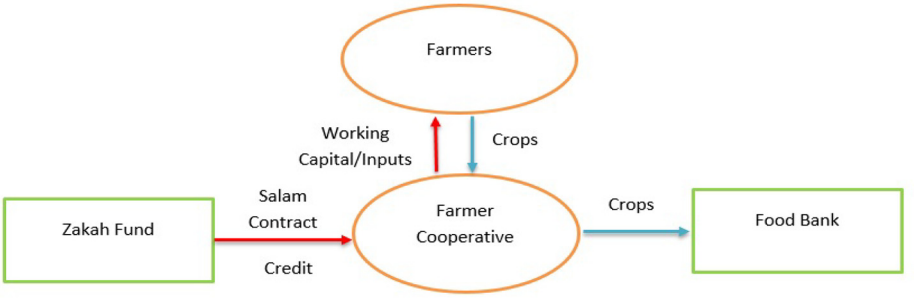
By implementing a *Zakah* awareness campaign based on information, education and motivation with positive social peer pressure, the local population is encouraged to pool their *Zakah* contributions to the ZMC. The pooled *Zakah* fund will allow the ZMC to deal with local farmers through facilitating credit and Institutional Demand that would promote smallholder agricultural development and food security.

The proposed scheme operates as illustrated in Figure 1. The smallholders can organize themselves into a village level cooperative to provide an institutional platform to deal with the ZMC. Effective farmer organizations can overcome many market asymmetries that local intermediaries take advantage of at the expense of the smallholders. The village level cooperatives, such as Grameen Motsho Foundation and Milk Vita Dairy Producer projects, have success stories in many parts of Bangladesh. The key steps in the scheme are as follows:

- using the *Zakah* fund, ZMC provides credit in the form of *Salam* contract to the farmer cooperative;
- the cooperative uses some of the fund to source inputs from the factor market taking advantage of their bargaining power;
- the cooperative then engages the individual farmers by offering inputs and working capital;
- the farmers, in turn, deliver their crop produce to the cooperative in the future according to the agreement; and
- the cooperative deposits the crops to the food bank.

As in many other developing countries, rural households in Bangladesh borrow from formal lenders such as government banks and agencies, commercial banks and non-government microfinance institutions (MFIs) or from informal sources such as relatives, friends and moneylenders. One of the main sectors where they invest borrowed funds is in agriculture-related activities such as purchasing inputs, bullocks, irrigation and cultivation services. However, many poor farmers suffer from financial exclusion in the formal credit markets due to lack of collateral. In addition, there is a tendency for formal financial institutions in Bangladesh to be centralized in urban areas. Faruqee and Khalily (2011) show that informal sources charge significantly higher annual interest rates (180-240 per cent) compared to commercial banks (10-13 per cent) and MFIs (20-35 per cent). They also estimate using conservative estimates that the average annual interest rate charged by the MFIs for the loaned fund to the Bangladeshi farmers is about 28 per cent. Another estimate put the average annual interest rate charged by the informal moneylenders at 103 per cent, with a standard deviation of 59 (Mallick, 2012).

Bangladesh's Household Income and Expenditure Survey (HIES) estimates in Table I show that MFIs are by far the top loan providers for farmers, with government institutions as the second most popular, followed by the informal lenders. The inefficient and corrupt



Source: Authors' own illustration

Figure 1.
The proposed scheme

bureaucratic process in the government institutions makes it harder to borrow from them although the interest rates are lower. MFIs, with higher interest rates, are popular among the farmers due to their aggressive and comparatively easier lending policies. However, farmers in many cases turn to informal credit markets, such as moneylenders with excessively higher interest rates, for additional funds owing to the strict repayment schedule of MFI loans and unavailability of sufficient working capital during the production season. There is evidence of increasing interest rates charged by the moneylenders due to increased demand for their funds as the MFI coverage expands (Mallick, 2012). Many studies (Zeller *et al.*, 2001; McKernan *et al.*, 2005) have detailed borrowing from informal sources by rural households in Bangladesh.

It is interesting to note from the HIES analysis a general dissatisfaction about the borrowing when over two-thirds of the farmers who already borrowed money were not interested to again borrow more money from their lenders. In fact, the limited impact of commercial banks and microfinance on the borrowers' livelihood has been documented by some studies (Mahmud, 2010; Mesbahuddin, 2010). Deb *et al.* (2009) highlighted the importance of steady supply of inputs, such as fertilizer, quality seed, agricultural credit, in achieving higher food grain output in Bangladesh. However, lack of appropriate funds to invest in farming leads to subsistence farming with the absence of many advanced high-yielding inputs. This contributes to lower productivity in farms (Mahmud *et al.*, 2014). This is a serious setback for a country like Bangladesh where land is the most critical and limited productive asset for agricultural production. *Zakah*-based financing system can play a significant role in reducing poverty in Bangladesh (Raquib, 2011) and contribute to the expansion of Islamic microfinance by providing much-needed *shariah*-compliant fund. Of course, Islamic microfinance is not the only solution to improve the economic conditions of the smallholders. However, through efficiently targeting the financially vulnerable farmers, they can create favorable borrowing conditions for them by exerting pressure in the existing credit market by offering more competition.

Smallholders in many developing countries face various economic, social and infrastructural barriers over long time due to historical drawbacks originated from colonial rule, underdevelopment and inequality. Using monopolistic intermediaries, the existing marketing channels in those areas marginalize the small producers (Key *et al.*, 2000). The dominant marketing route for many smallholders in Bangladesh is producer–middlemen–consumer route, which is a serious obstacle for them to have better access to market supply chain (Alam, 2001). Nabi (2008) also reports the actions of wholesalers and their agents (middlemen) as a barrier to market access. The inadequate rural infrastructural facilities and connectivity and uncompetitive rural markets force many smallholders to heavily rely on local intermediaries. They often exploit the situation by making syndicate to control the crops' prices and using their superior knowledge of wider market trend in an environment of

Sources	(%)
MFIs	66
Government institutions	23
Informal lenders	8
Others	3

Notes: Authors estimate the figures from Bangladesh's HIES conducted by Bangladesh Bureau of Statistics in 2010. The total sample size was 12,240 households where 7,840 were from rural areas and 4,400 were from urban areas. The table considers the sources of loans only for the farmers out of all the respondents

Table I.
Sources of loans for farmers

asymmetric market information. The result is significantly higher gap in the prices received by smallholders and market retail prices. Barrett (2008) has shown similar evidence from eastern and southern Africa, where smallholders' economic strain and limited transportation means to regional markets to negotiate a better price forces them to sell their produce to local intermediaries and traders.

Moreover, farmers are often involved in "distress sales" when their produce are sold to intermediaries at a time of lowest price during harvest (Bronkhorst, 2011). One of the reasons for that is the poor smallholders' need to borrow money during production time when they cannot afford rising costs of agricultural inputs. In the absence of reliable formal credit markets, they may borrow from traders or local moneylenders. Traders often take advantage of the situation by offering contract of future sale of the harvest at unfavorable prices to the farmers. The limited market power of smallholders with respect to whom and at what price they sell their products and their inability to holdout for a better price result in difficulties in repaying high interest-bearing loans like the ones taken from informal moneylenders. They may end up selling their limited physical asset-holdings. They are likely to even migrate to urban areas in adverse conditions.

As explained above, many rural smallholders fall into vicious cycle of poverty due to unfavorable financing schemes, loss of productivity and intermediaries' exploitation. The benefits from offering the *Zakah*-based *Salam* contract to smallholders are summarized below (*source*: prepared by authors):

- financial inclusion.
- interest free working capital.
- collective bargaining power in factor market.
- application of high yielding inputs.
- better access to market supply chain.
- reduction in intermediaries' exploitation.
- fair price for crops; and
- increase in demand for local production.

This scheme promotes financial inclusion by making much-needed working capital accessible interest free during the production season, which in turn makes application of high-yielding inputs more viable. The community-based collective approach would increase the producers' bargaining power to negotiate better input prices and fair price for their produce. The Institutional Demand from the *Zakah* fund creates favorable markets for smallholders and reduces harmful domination of private intermediaries in the already underdeveloped rural markets. The price stability and reliable source of income provide incentives for increased local production. The local food security situation is enhanced through incentivized farming activities and disbursement of food from the food bank to the vulnerable populations. This scheme is sustainable in the long term due to the nature of *Zakah* as a repetitive yearly affair. In short, *Zakah*-based *Salam* contract can be an effective strategy for stabilizing smallholders' income to improve their precarious economic condition in Muslim-majority areas.

6. Nigerian context and lessons from Bangladesh

Nigeria is the most populated country in Africa and the seventh largest in the world [World Food Programme (WFP), 2018b)]. The country that once relied on agriculture for its revenue and foreign exchange, the sector has now suffered from underinvestment, policy neglect and

corruption. Studies have identified many problems the agricultural sector in Nigeria faces, which include inappropriate financing, low farm productivity, insufficient modern farm machineries and poor communications network (Mohammed *et al.*, 2016; Ogunbado and Ahmed, 2015). Thus, it has become a net importer of foods from abroad, and majority of its people engage in subsistence agricultural practices.

Poverty level is very high in Nigeria, where 60 per cent of the people live below the poverty line [World Food Programme (WFP), 2018b)]. The figure puts majority of smallholder farmers as incapable of purchasing farm inputs for productive and efficient agricultural activities. Similarly, lack of access to working capital of finance has been identified as one of the major challenges of small- and medium-sized enterprises in Nigeria. Beck and De La Torre (2007) found that this lack of access to finance will cause the problem of poverty to persist as there will be obstacles to transform talents into productive activities to uplift socio-economic conditions. In view of this, Hussaini and Garba (2011) advocate for profit and loss sharing mode via Islamic financing institutions such as *Zakah* and Awqaf to be utilized properly. However, they have not provided details in that regard.

Despite the fact that the country`s mainstay is agriculture, which employs over 60 per cent of the total labor force and contributes almost 40 per cent of GDP, the country was ranked 156th out of 187 in the 2011 UNDP Human Development Index (www.foodsecurityportal.org/nigeria/resources). Though the GDP in the non-oil sector increased by 0.55 per cent in the second quarter of 2017 and the country exited recession as a result, the recent security challenges in the northeast have left many households to live on humanitarian assistance due to limited staple harvest, high food prices and poor labor opportunities in the affected areas (FEWS, 2018).

The similarities in socio-economic conditions between Nigeria and Bangladesh make the proposed scheme applicable in both countries. First, both are Muslim-majority countries. Though Nigeria is made up of approximately 55 per cent Muslims (Muhammad, 2013), most of its northern states are overwhelmingly Muslim majority. Second, in both countries, there is large rural population, with majority of them being farmers. Third, though both countries made progress on achieving some Millennium Development Goals (MDGs), there is more to be done to realize the goals set, particularly the poverty reduction goal (Bangladesh MDG progress Report, 2015 and Nigeria MDGs Survey Report, 2015).

There are varying practices of *Zakah* collection and distribution in Nigeria such as private, mosques and state administration of *Zakah*. Recently, 12 out of 36 states in Nigeria institutionalized *Zakah* collection and distribution with the objective of regulating the practices in those states. Recent findings (Table II) show that potential *Zakah* collections in Bangladesh range from 1.63 to 3.92 per cent of GDP. The corresponding figures in Nigeria range from 0.86 to 2.08 per cent of GDP. Looking at the resource shortfall (7.57 per cent in Bangladesh compared to 1.47 per cent in Nigeria) required to alleviate poverty at $1.25

Table II.
Resource gap and potential *zakah* collection

Country (Year)	Resource Gap as % of GDP at $1.25 per day	Resource Gap as % of GDP at $2.0 per day	Potential *Zakah* collection as % of GDP
Bangladesh (2010)	7.57	33.36	1.63-3.92
Nigeria (2013)	1.47	3.50	0.86-2.08

Source: IRTI (2014, 2015)

per day, mobilizing *Zakah* fund has high potential in eradicating poverty and improves financial vulnerability of smallholders in both countries. Though food availability, food accessibility and food utilization are the major components of food security in any country, poverty is an overall denominator of food insecurity. This underscores the role of *Zakah* in tackling poverty in Nigeria and Bangladesh, where poverty rates are high and, by extension, food insecurity.

A glimpse into agricultural production of some of the major crops in Bangladesh and Nigeria is presented in Tables III and IV. According to Global Hunger Index (2017), on a scale of 100, the average Global Hunger Index (GHI) score for 2017 (21.8) is 27 per cent lower than the 2000 score (29.9), indicating worldwide decline in the levels of hunger and undernutrition over the long term. The GHI scores for Bangladesh were 37.6 in 2000, 32.2 in 2008 and 26.5 in 2017. On the other hand, Nigeria's scores were 41.0, 33.7 and 25.5 in 2000, 2008 and 2017, respectively. It can be discerned that the figures are quite close to each other, corroborating the similarities in poverty and other indices in both countries. Particularly, in Nigeria, the activities of insurgents in the northeastern region have displaced 1.62 million people, with another 4.7 million in need of emergency food assistance in the region [World Food Programme (WFP), 2018b)]. The country`s recurrent vulnerability in disasters such as floods and droughts reduces agricultural output, thus affecting the living standard and welfare of the people.

In terms of lessons, the deep penetration of microfinance in the Bangladesh society easily helps reach out majority of the farmers to introduce various types of intervention, such as *Salam* financing. Initiatives such as Rural Development Scheme of Islamic Bank Bangladesh could be an effective partner in the application of *Salam*. Thus, Nigeria needs to open more MFIs that are line with Islamic principles to ensure financial inclusion and acceptance among majority of the populace particularly rural farmers. For instance, Kano, a northern state in Nigeria with more than 95 per cent Muslims and one of the most important agrarian regions, has already established MFIs in all its local governments to benefit agriculture, trade, commerce, etc. (Mohammed *et al.*, 2016). These kinds of initiatives give opportunities to introduce *Salam* financing to enhance agricultural output in the Kano State

Items	2011	2012	2013	2014
Rice production (MT)	50,627,000	50,497,000	51,534,000	52,325,620
Wheat production (MT)	972,085	995,356	1,255,000	1,303,000
Maize production (MT)	1,018,287	1,297,717	1,548,000	2,124,000
Soybean production (MT)	65,883	64,143	58,037	112,024

Source: World Food Programme (WFP) (2018a)

Table III. Agricultural production in Bangladesh

Items	2011	2012	2013	2014
Rice production (MT)	4,612,614	5,432,930	4,823,330	6,734,000
Wheat production (MT)	165,000	100,000	80,000	70,000
Maize production (MT)	8,878,456	8,694,900	8,422,670	10,790,600
Soybean production (MT)	492,852	650,000	517,960	679,000

Source: World Food Programme (WFP) (2018b)

Table IV. Agricultural production in Nigeria

along with other agrarian states to enhance agricultural output taking into account heavy interest burden and religious sensitivity associated with conventional banking. *Salam* can play a vital role in agricultural financing, creating employment opportunities and sustained economic growth. It is an essential tool for farmers to acquire farm inputs and working materials such as harvesters, tractors and incubators among others, particularly in countries with vast agricultural and harvestable land.

7. Conclusion

The Government of Bangladesh has made a commitment to fulfill the MDGs, where the eradication of poverty and hunger gets high priorities (Haneef *et al.*, 2015). The proposed scheme has a positive influence on some of the MDGs, such as poverty alleviation, increased employment, hunger reduction and sustainability. The MDGs have now evolved into Sustainable Development Goals, but the main aims and activities are unchanged. In addition, the scheme is also consistent with the aim of governments of many developing countries to improve smallholder farming in rural areas. The importance of food security, along with poverty and inclusive development, has been acknowledged worldwide. Diverse Institutional Demand initiatives in the form of targeted food procurement schemes, such as national food reserves, public food distribution system, Food for Work, School Feeding programs, are being implemented in many developing countries.

Religion can play an increasing role in the development process as it brings a value rationality based on equity and fairness and adds stronger moral and ethical codes to institutions in countries like Bangladesh where rampant corruption exists. Besides Bangladesh, being a country with high poverty incidence, along with many obstacles in agricultural sector, needs an array of support to better the situation. This paper elaborated the procurement of food aspect of the original framework proposed by Hossain (2017). Two existing Islamic instruments, *Zakah* and *Salam* forward contract, have been used for the betterment of the smallholders using rural Bangladesh as a case study. Smallholders are a major player in the food security conundrum and need special protection and support to be able to make a substantial impact on the challenge.

With the pooled local *Zakah* fund, the scheme proposes procurement of food through Institutional Demand to offer fair price and access to new marketing channels and reduce income uncertainty for the smallholders. This would make farming more attractive, leading to increased food production and better food security. *Zakah*-based *Salam* contract could be an addition to traditional bank-centered modes of financing to empower the smallholders, the backbone of many developing countries' agricultural sector, to improve their precarious financial condition. Effective distribution of food from a food bank created mostly with the procured food from the contracted farmers will help support long-term improvement of the *Zakah*-eligible food-insecure groups in the area.

The religion-based Institutional Demand initiative to promote smallholder agricultural development and social protection is a novel one. The attempt to apply the framework to Nigeria context does show the potential of the framework to generalize for other Muslim developing countries with similar characteristics, especially the poorer agriculture-based countries. Obviously, diversities in producers, problems and institutional capacities emphasize the responsibility of local and national governments to appropriately design and implement the framework. However, because of the absence of empirical validation, it needs further exploration to assess the applicability of the scheme. Though the evidence and rationale presented in the paper is inadequate, the proposal brings forth a potentially powerful idea that needs an expanded research agenda with more quantitative and qualitative investigation of different aspects of the scheme.

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