

# Empowering Women in the Agricultural Value Chain through Islamic Blended Products to Attain the Agenda 2030 in The Gambia

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**Abstract-**The importance of women empowerment has become the central piece in numerous development agenda around the globe. In The Gambia, as part of the national development agenda, the government has eye marked key priority areas to champion the course of women empowerment. In addition, the government has enacted laws and ratified several other international goals including the Agenda 2030 to support this course. Despite this, women entrepreneurs especially those in the agriculture value chain continue to struggle hard to access commercial loans due to exorbitant interest rate and lack of collateral while those with surplus get minimal returns on their savings. Thus, the aims of this paper is to understand the financial constraints facing women and offer an alternative and sustainable cheap sources of funding for women in the agricultural value chain in The Gambia. The paper proposed an Islamic Blended finance model that have the potential to offer a better return for those on the supply side and cheap source of funding for those on the demand side by minimising financial intermediation and transaction cost. In addition to this, the model will derisk investment to attract private capital, provide social safety net, skills training and most interestingly it would scale up the attainment of six (6) of the Seven (7) most critical SDGs. It is anticipated that this model can be replicated in other least developed countries.

**Keywords:** Agenda 2030, Blended Finance, Micro Techakaful, Retail Sukuk, Women Empowerment.

## I. INTRODUCTION AND BACKGROUND

Funding women empowerment remains the major and overriding challenge for governments around the world, especially those in the least developed countries like The Gambia. In traditional Gambian society, women are supposed to be doing domestic work with limited access to basic fundamental rights compare to men. Women participation in economic activities in the olden days was unthinkable. However, a lot has changed as women now constitute about 78 percent of the economically active workforce in the Agricultural sector despite not accorded the same rights, such as land ownership, access to credit, technology, and markets as men [1].

A whole range of socio-economic, and cultural factors including land ownership, continue to constitute a major hurdle for women to access credit due to lack of or inadequate collateral [2]. Land ownership remains largely a male dominated field as only 4 percent of women own land by themselves, with another 15 percent mutually own, and the rest do not own any [1]. Besides, limited access to agricultural extension services, financial services, market, storage and processing technology caused great impediments to the progress of women in the agricultural value chain [1].

Notwithstanding, the Government of The Gambia (GoTG) over the years has made several attempts through policy directives, development programs, resources mobilisation, aid programs, and project interventions to boost the capacity of women in the agricultural sector. Yet, 70 percent of the women involved in low productivity subsistence agriculture and cannot access financial services due to exorbitant prevailing interest rates, and financial institutions even shy away in financing women in value addition [2]. Moreover, the little credits offered are embedded with *riba* and excessive *gharar* and many believe this may even force women into more financial distress. With these shortcomings, Islamic finance offers alternative financing mechanism in funding women in the agricultural value chain in The Gambia. As it provides a useful financing tool for domestic resource mobilisation, an equitable tool for resource allocations, and social financing instruments to leverage on [3].

Thus, this paper looks into the financial constraints of women entrepreneurs in the agricultural value chain in The Gambia and offer an Islamic Blended Finance model that is impactful, sustainable and scalable. The paper is divided into five parts. Part (I) talks about the introduction, objectives and methodology of the study. Part (II) deals with the literature review on the economic status of women in Islam, the financial constraints of women in the agricultural value chain in The Gambia and Gambia's SDG status. Part (III) focuses on the Overview, Concept and Practice of Blended Finance, Part (IV) provide a discussion on multidimensional sustainable and impactful Islamic blended finance model. Part (5) of the paper provides conclusion and recommendations.

### A. Objectives of Research

The Goal of this research are:

- i. To understand the financial constraints facing women in the agricultural value chain in The Gambia;
- ii. To ease resource mobilisation and offer cheap source of funding for women in the agricultural value chain to scale up SDGs in The Gambia.

### B. Research Questions

To achieve these research objectives, the following research questions are crafted:

- i. What are the financial constraints facing women in the agricultural value chain in The Gambia?
- ii. What alternative financing model can be adopted to provide cheap source of funding for women in agricultural value chain in The Gambia?

### C. Research Methodology

The researcher adopted is a mixed of exploratory and case study. To achieve the research objective, both primary and secondary sources of information were utilised. Secondary sources were utilised to collect qualitative information through exploratory research by examining scholarly articles, policy guidelines, conference proceedings, academic journals, newspaper articles, books, websites, reports etc. This gave the researcher a better understanding of blended finance, financial constraints facing women in the agricultural value chain in The Gambia, the economic status of women and Gambia's SDG status. Primary data was collected through case study method from two women SMEs in the agricultural value chain. The two SMEs were conveniently selected from a list of twenty (20) that were randomly selected. The quantitative data collected through this approach was used to make a justification for the model proposed in this paper by computing the potential cost reduction. Quantitative approach was also utilised to compute the potential of waqf for The Gambia using macroeconomic variables such total population, percentage of muslim population, number of mobile phone users etc. and zakat potential for Islamic Financial Institutions in The Gambia.

## II. LITERATURE REVIEW

Reducing poverty and inequality through women empowerment is the fundamental principle underpinning both the SDGs and Maqasid Al Shariah. The GoTG has also made this as a priority over the years in several of its development agenda, and the most recent is The Gambia National Development Plan 2018-2021 (GNDP2018-2021). However, financing women empowerment initiatives remains a challenge. Therefore, the purpose of the literature review is to understand the economic status of women, their financial constraints in undertaking economic activities and The Gambia's SDG performance.

### A. The Economic Status of Women in Islam

The issues of women inferiority have been in existence since the pre-Islamic era where women faced discrimination, social exclusions and lack property rights and financial insecurity [4]. Notwithstanding, Islam treats both men and women equal and accorded women certain rights. For example the right to inheritance (Quran 4:7), the right to own property (Quran 4:31) and the right to earn equally like men (Quran 4:32). These are clear indications that in Islam women can accumulate wealth through inheritance and from financial support given by their husbands [4]. Moreover, Islam bestowed on women the rights not to only earn and spend as they wished but also the will to lead economic activities based on their skillset and prudence [5].

These views are consistent with the fact that Islam has given women independence and full potential to be financially autonomous [6]. In Islam, women have the right to own a business, earn money, own property, enter into legal contracts, acquire and manages assets as they will [6]. In addition, the property and earning of women are under their full control and are not obliged to share in their husband's responsibilities even if they are richer [6]. In support of this view, the Mamluk, Safavid and Ottoman literature has shown that women in Islam were both involved in diverse trade activities and managed businesses on their own [7]. He stated that the Prophet peace be upon him (SAW) himself promoted women in various spheres of activities including trade and commerce and his wife being one of the most successful among them at the time is the testimony to that fact [7]. This means that Islam has indeed permitted women to venture into and managed any kind of business provided they are within the ambit of shariah principle.

### B. The Economic Status of Women in The Gambia

Agriculture is the mainstay of The Gambian economy and it employs more than 60 percent of the population [1]. Crop production caters for nearly 75 percent of the household incomes, employs 70 percent of the labour force, representing 3 percent of the GDP and 40 percent of the foreign exchange earnings [1]. Women made up 78 percent of the economically active population who work in agriculture despite not given the same rights as men, such as land ownership, access to credit, technology, and markets [1]. They are involved in small scale rice production to feed their families, horticultural production partly for consumption and for sale to earn supplementary income, livestock, and poultry for better living [1]. Despite fewer inputs, and in certain contexts disproportionate limits on their authority, women of the Gambia were central to the economic life of traditional Gambian society, and had been agricultural trendsetters, processors, and traders of marine resources and manufactured goods [8]. However, with more women than men in the agricultural sector, their immense contribution does not translate to the desired improved social status [8].

C. The Financial Constrain of Women in The Agriculture Value Chain

Women empowerment has become the cornerstone of Gambia’s development agenda. The Government of The Gambia (GoTG) and partner institutions have come up with some policy and strategy initiatives to enhance the productive capacity of women. Among these are the Social Development Fund (SDF), Gambia Women Finance Association (GAWFA), Rural Finance and Community Initiative Project (RFCIP)[9]. Accordingly, these institutions together are only able to meet 55 percent of the credit needs of women in The Gambia[9]. With agriculture being the main occupation for Gambian women especially small scale rice production, livestock, poultry and horticulture, women continue to operate at low productivity level as they are constrained by access to agrinputs, credit, and markets[10]. Even where women access credit, they may not be in full control of the money due to the cultural barrier[11]. Studies have indicated that it is even harder for provincial women to access credit and venture into business because, most financial products favour men[2]. However, this has not deterred Gambian women from participating in the business. The widespread informal neighbourhood short-term savings by way of putting cash together and paying to participants through ballot is an indication of women aspiration to improve their livelihood[9].

D. The Gambia’s Performance in The SDGs

There are good resemblance between the five (5) pillars of the SDGs and the eight priority areas of the Gambia National Development Plan (GNDP 2018-2021)[12]. For example, the GNDP priority (1) Poverty reduction through mechanised agriculture will ensure that SDGs 1, 2, and 3 are achieved[12]. Moreover, the SDGs and GNDP 2018-2021 both envision to transform the human race, eradicate poverty in all its form, and protect the people and planet[13]. However, as shown in figure 1 Gambia’s SDG performance have been stagnating largely due to funding difficulties.

TABLE 1: THE GAMBIA’S SDG PERFORMANCE

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| <b>1</b> No Poverty<br>→                | <b>2</b> Zero Hunger<br>→                   | <b>3</b> Good Health & Well-Being<br>→              | <b>4</b> Quality Education<br>↗                     | <b>5</b> Gender Equality<br>→                   | <b>6</b> Clean Water & Sanitation<br>→  |
| <b>7</b> Affordable & Clean Energy<br>→ | <b>8</b> Decent Work & Economic Growth<br>→ | <b>9</b> Industry, Innovation & Infrastructure<br>→ | <b>10</b> Reduce Inequality<br>→                    | <b>11</b> Sustainable Cities & Communities<br>→ | <b>12</b> Responsible Consumption & Production<br>→                                 |
| <b>13</b> Climate Action<br>↑           | <b>14</b> Life Below Water<br>↗             | <b>15</b> Life on Land<br>↗                         | <b>16</b> Peace, Justice & Strong Institutions<br>→ | <b>17</b> Partnership for the Goals<br>→        |  |
| No Data                                 | On Track                                    | Decreasing  | Stagnating  | Moderately Improving                            |   |

Source: SDG Index and Dashboards Report 2019

It is not clear how much The Gambia needs in dollar terms to achieve the Agenda 2030. Nevertheless, it is estimated that The Gambia will need around USD235 per capita to achieve the SDGs, compare to between USD270 to USD350 per capita for other poor countries[14]. The Gambia’s needs is low because its extreme poverty rates are low relative to its income level, so the country has little need for social transfers to eradicate extreme poverty[15]. Yet, The Gambia is unable to meet up its SDG funding needs. Therefore, this paper is expected to contribute to the countries progress in terms of funding towards achieving the Agenda 2030.

III. OVERVIEW, CONCEPT AND PRACTICE OF BLENDED FINANCE

A. Conventional Practice of Blended Finance

One concept gaining prominence in financing the SDGs is blended finance[16]. There is no specific definition of blended finance, over 30 definitions have been given so far. One such definition is the “strategic combination of public and/or private development finance flows (e.g. aid and philanthropic funds) with other public or private capital to enhance resources for investment in key areas such as infrastructure”[17]. The rationale is to leverage compassionate funds to attract private investment, develop the impact-driven skillset required to deliver the SDGs and provide risk-adjusted returns[17]. The aid element in blended finance can be utilised to de-risk investment by protecting the investor from undue risk, and to assure investors of future repayments on their investment[17]. In practices, the concept has already been utilised in so many SDG related projects across the globe. In Jordan, the expansion of the As-Samra Wastewater Treatment Plant, where the blending includes public sector fund contributed by the government as a viability gap funding; a grant from the Millennium Challenge Corporation (MCC); and private capital from a syndicated limited recourse loan provided by domestic banks in local currency[18]. In Tunisia, the Derisking Renewable Energy project was funded using a UNDP innovative ‘Derisking’ model

comprising of grant instrument; and private capital to the tune of EUR935 million[17]. However, the flow of blended finance to poor countries remains a challenge due to the perceived risk. It is estimated that of total private finance mobilised for development finance interventions between 2012 and 2017, only USD 9.3 billion, or 6%, went to low-income countries, whereas over 70% went to middle-income countries[16]. This clearly demonstrates the shortfall of conventional blending in mobilising SDGs resources for poor or least developed countries to fill the SDG funding gaps, thus, the need for more holistic resources mobilisation approach to attain global agenda in these countries through Islamic blended finance.

#### *B. Overview, Definition and Concept of Islamic Blended Finance*

Islamic blended finance is a new concept which has not been defined, one of the first attempt to define it was put forward by[13]. She define it as “*an optimal mixture of Islamic social funds like Zakah, Waqf, Sadaqa and penalties from delinquency with financial instruments for the purpose of financing socially responsible and positively impactful businesses for SDGs*”. However, the concept of Islamic blended finance has already been utilised to provide funding for a number of SDG-related projects around the globe. For example, the National Zakat Board of the Republic of Indonesia BAZNAS contribute zakat fund for a micro-hydro energy and leverages a UNDP/GEF funded project and CSR funds from Bank Jambi[19]. In Indonesia, a innovative Waqf based bank was created by blending government funding with private capital and philanthropic fund that attracted impact investors through crowdfunding and the funds were committed to SDGs [20]. The Islamic Development Bank (IsDB) and International Federation of Red Cross and Red Crescent (IFRC) created the One WASH funding model from blended financing sources, leveraging on impact Sukuk, traditional donor funds and partial kafala facility mechanism from the Islamic Solidarity Fund for Development (ISFD) to achieve SDG 3 (Good Health & Well-Being) and 6 (Clean Water and Sanitation) in IsDB member states[21].

#### *C. Theoretical Framework Islamic Blending Instruments*

The Islamic blending instruments are the replica of conventional blending instruments. For example, sukuk is the replica of bond, takaful is the replica of insurance and waqf and zakat are a replica of compassionate fund. Below is a theoretical description of each of the Islamic Blending Instruments:

#### *D. Sukuk*

The literal meaning of sukuk comes from the Arabic word sakk which means certificate, its technical meaning is an Islamic bonds or securities structured in line with Shariah principles[22]. According to him Sukuk was first issued in February 1988 subsequent to the Council of the Islamic Fiqh Academy of the Organization of Islamic Conference (OIC) held its fourth session in Jeddah, Saudi Arabia. In May 2003, the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) published its first Sukuk Standard where they define

sukuk as certificates of equal value representing undivided ownership shares in tangible assets, usufruct, and services[22]. The sukuk market has grown exponentially over the years in response to the growing need of shariah compliant financing to promote sustainable and equitable economic development[22]. The four basic features of sukuk that makes it distinct from conventional bond- i) the sukuk certificates represent undivided shares in ownership of an asset and the holder is entitled to all rights conferred by shariah; ii) the sukuk contract must not contain any guarantee; iii) the sukuk must not contain any guarantee of a fixed profit or profit based on a percentage of the capital; iv) the sukuk must not contain any statement of obligation from the issuer’s side that it will buy back sukuk for a nominal price[23].

#### *E. Takaful*

Takaful was practice during the time of the of the Prophet (SAW) by its adoption of the Doctrine of Aqilah which means compensation for the decease family. Shariah scholars are believed to have prohibited the conventional insurance practice since 1976 when takaful was introduced as an alternative shariah compliant insurance[24]. The concept of it is based on the mutual corporation and assistance among participants and the sector is dubbed as the fastest growing Islamic financial sector[24]. The difference between Takaful and conventional insurance lies in the ethical nature of the instrument and the prohibition of riba and gharar[25].

#### *F. Zakat*

Zakat is an act of worship religious duty to give a certain amount of one’s wealth to those in need [26]. The root word is derived from the Arabic word "Zakah" which literally means "cleanliness, purification, increase, growth, righteousness, blessing and praise"[27]. As mentioned in both the holy Quran and Sunnah of the Prophet (SAW) Zakat is the right of the poor on the wealth of the rich and it is made compulsory at a prescribe rate for all Muslim who meet the nisab[27]. Zakat was meaningfully contributed to poverty alleviation in the past and now and its impact on reducing the poverty gap is substantial[27]. Zakat is a long term planning tool for poverty alleviation through building training institutions which provide technical and entrepreneurial training and provide seed capital in the form of investment to economically active poor[28]. Zakat fund has now been institutionalised and integrated into the social protection system of many countries[26].

#### *G. Waqf*

Waqf literally means tying up of an asset for some specific sharia compliant initiative[29]. It is derived from the Arabic word which means to make endowment of the land and give it to the course of Allah (SWT). It also means to make endowment of houses and donate its proceeds in the way of Allah (SWT)[30]. Waqf is exclusively introduce in Islam to play a significant role in the socioeconomic, cultural, and religious development through Islamic civilization. During the time of the Prophet (SAW) and the Caliphs (AS) Waqf was able to fulfill the needs

of society as both charity and during jihads [31]. In contemporary society, innovative Waqf have been utilised in Interest free loans and Debt relief in some countries[32]. Cash waqf has now been utilised in countries like Malaysia, Singapore, Indonesia, India, Pakistan, The UAE, Kuwait, the UK, and the US among several other countries[32].

#### *H. Islamic Blending Instruments in The Gambia*

The concept of Islamic blended finance was deduced from conventional blended finance albeit with differences in blending instruments. The proposed Islamic social financing and funding instruments such as Zakat, waqf, sadaqqa and Sukuk can be harmonised to promote inclusive and sustainable human development[33]. The blending instruments and their potentials available in The Gambia are:

##### *I. Sukuk for Women Empowerment in The Gambia*

The money and capital market in the Gambia are underdeveloped. The country is only at the advanced stage of launching its capital market albeit excluding the Islamic component. Hence, the opportunity to invest in stock and received rewards is non-existence. A market for trading in short term instruments apart from treasury bills and Sukuk does not exist. The first Sukuk was issued in The Gambia in 2008.

Furthermore, there has been notable growth in the Sukuk market, but since then it has been trailing the conventional bond and deposit instruments despite showing the same returns as treasury bills and better returns than retail deposit. For example, data from the CBG website shows that Sukuk is seriously underutilised in The Gambia, accounting for only 6.2 percent of industry asset compare to 29.8 per cent for treasury bills. Deposit mostly retail is 68.8 percent of total industry assets. Meanwhile, one year Sukuk return 7.4-22.3 range as much as treasury bills, with return on deposits only 0.25-4.0 percent per annum.

To understand the potential of Sukuk as a blending instrument, we conducted a mini case study of two women in the agricultural value chain.

Case 1: Aisha is a 24-year-old postgraduate student in harvesting and transportation of agricultural goods who would want a loan of GMD250K (USD5K) to expand her business. However, she can get the loan only at 20-25 per cent from the bank.

Case 2: Saffiyah is a 30-year-old secondary school graduate who is into poultry. She has a total savings of GMD350K (USD7K) which only returns 2 per cent per annum.

Let us look at how our mobile money retail Sukuk model will help both Aisha and Saffiyah. Suppose Aisha borrows the GMD250K (USD5K) from Saffiyah via the proposed retail Sukuk at the prevailing Sukuk rate of 11.32 per cent as at end April 2020. Assuming Aisha can get the same loan from her bank at 23 per cent. Aisha will save GMD29.2K or USD0.58K and Saffiyah will earn additional income GMD23.3K or USD0.47K from her investment.

TABLE 2: A CASE STUDY ON THE POTENTIAL OF SUKUK

| Aisha's Account                 |       | Saffiyah's Account                  |       |
|---------------------------------|-------|-------------------------------------|-------|
| Borrow from Bank                | GMD   | Deposit with Bank                   | GMD   |
| Interest Paid<br>250K @ 23%     | 57.5K | Interest Earn<br>250K @ 2 per cent  | 5.0K  |
| Borrow from<br>Saffie Via Sukuk |       | Invest in Sukuk                     |       |
| Interest<br>250k @ 11.32        | 28.3K | Interest Earn<br>250k @ 11.32       | 28.3K |
| <b>Total Savings</b>            | 29.2k | <b>Additional<br/>Income Earned</b> | 23.3K |

*Source: Authors own*

Given the two scenarios above and the fact that Sukuk has been largely underutilised despite showing similar returns as treasury bills and better returns than deposits, it will have great potential as a blending instrument in attracting private capital.

##### *J. Takaful for Women Empowerment in The Gambia*

The Gambia has only two takaful companies, one established in 2008 and the other in 2020. According to data from the Central Bank of The Gambia, takaful asset as at December 2019 represents 15.9 per cent of the total Islamic finance industry assets. In addition to the various products like hajj, accidents its provide, the takaful company offer insurance coverage for SMEs[34]. Therefore the self-help takaful scheme that is proposed in this paper can utilise the set takaful company as a retakaful for hazards it cannot cover.

##### *K. Islamic Social Financing (ISF) for Women Empowerment in The Gambia*

Islamic finance market offers varieties of instrument as an avenue for suppliers and users of funds in a number of ways such as sales, trade financing, and investment (Biancone and Radwan 2018a)[35]. Islamic finance instruments such as zakat, waqf and sukuk are been used as complementary or alternative funds to finance poverty alleviation initiatives, enhancing financial inclusion and upholding sustainable growth (Biancone and Radwan 2019)[36]. Therefore, Islamic financing and the mobilisation of ISF instruments has the potential to fund women entrepreneurs in the agricultural value chain in The Gambia.

##### *L. Potentials of zakah in The Gambia*

There is no empirical evidence on how much Zakat is collected and distributed in The Gambia. However, [13] estimated the potential of Zakat (in The Gambia from 2002 to 2021) in her Masters' thesis using Kahf model[37]. She utilises macroeconomic indicators such as GDP at PPP, total population, poverty gaps under USD1.9 and USD3.2, population under USD1.9 and USD3.2 and percentage of the Muslim population. Her result shows that Zakat potential for Z1 (based on

classical scholars view that zakat levied on agriculture, livestock, merchandise, gold, silver, and wealth) has increased from about 1.1 percent of GDP in 2004 to almost 1.7 percent in 2018, Z2 (based on views of contemporary scholars where Zakat can be levied on net returns of manufacturing concerns and building rents and from net savings out of salaries) from nearly 2.4 percent of GDP in 2004 to above 3.7 percent in 2018 and Z3 (based on Maliki views, that Zakatable item includes buildings and other fixed assets except those assigned for personal and family use) from 2.7 per cent of GDP in 2004 to 4.2 per cent in 2018.

In addition to this, IFIs in the Gambia except for Takaful Gambia are currently not paying zakat on their income because regulations do not require them to do so. Islamic banks utilised various method to compute zakat. They include the Growth Model method, the Working capital model, the Profit Loss Method, Average Growth Method and Shareholders’ Funds Growth Method[7].The two common practices are the adjusted working capital method and the adjusted growth capital method because these two methods have no relationship with the tax computation and accounting [38]. For this paper, the profit/loss approach is used for the two IFIs in The Gambia. In this model, the Zakat is payable at the rate of 2.5% of profit before tax and is based on the percentage of estimated individual Muslim ownership [39].

TABLE 3: ESTIMATED ZAKAT AMOUNT OF TWO IFIS FROM 2016-2018

| Profit Before Tax | Agib Islamic Bank | Zakat@ 2.5 per cent | Takaful Gambia | Zakat@2.5 per cent |
|-------------------|-------------------|---------------------|----------------|--------------------|
|                   | GMD'000           | GMD'000             | GMD'000        | GMD'000            |
| 2018              | 40,491            | 1,012               | 20,626         | 516                |
| 2017              | 30,956            | 774                 | 11,047         | 276                |
| 2016              | 53,901            | 1,348               | 9,413          | 235                |
| Total GMD'000     | 125,348           | 3,134               | 41,086         | 1,027              |
| Total USD'000     | 2,507             | 63                  | 822            | 21                 |

Source: Authors Own

*M. The Potential of Waqf in The Gambia*

Studies have indicated that countries with high Muslim population can benefit immensely from waqf through sustainable infrastructure, education, healthcare, food security, renewable energy and water management [13]. The Gambia’s about 96 percent Muslims and 3.6 percent Christians are equally compassionate[13].Waqf properties in The Gambia are huge even though its accurate amount cannot be quantified due to improper documentation, however, it is noted that religious and educational Waqf account for the greater share[13].

A study has suggested an integrated cash waqf micro enterprise investment model(ICWME-I Model)to improve the financial

accessibility of micro-enterprises in Malaysia by providing financing facility using a cash waqffund[40]. To model the potential of cash waqf to support funding for women enterprises in the agricultural sector, the study adopts [41] model which is based on the number of active mobile phone users and the number of people who are between the ages of 15-69 years contributing X dollar per week at a 5% level of cash collection error rate.

The assumption are i) There are 4 weeks in a month and 52 weeks in the year; ii) No of active mobile phone users according to Public Utility and Regulatory Authority (PURA) is 2.5 million given that most Gambians have more than 1 SIM card, we just assume that the population living on more than USD1.9 per day each have 1SIM card; iii) A high contribution error is taken to exclude the population at 16 – 17 years who are still considered minor under Gambia law; and iv) the exchange GMD to USD is 0.02. The amount projected to be collected base on the cash waqf model as indicated in Table 4 is GMD222.543 million or USD4.451 million. The cash waqf can be utilised to invest directly into SME business or the retail Sukuk and the return can be used to provide Qard Hassan to those women in financial distress. Suppose based on our model the cash waqf is invested at the Sukuk rate, the investment will yield annually GMD25.192 million or USD0.504 million. This amount only is enough to provide funding for a number of SMEs in the agriculture value.

TABLE 4: PROJECTED CASH INFLOW FROM CASH WAQF VIA MOBILE

| Details                             | Raw Data | Process Data | Projected Cashflow Contribution |              |              |
|-------------------------------------|----------|--------------|---------------------------------|--------------|--------------|
|                                     |          |              | Per Week                        | Per Month    | Per Year     |
| Population as at 5/2020 millions    | 2.32     | 2.32         |                                 |              |              |
| % population 16-64 years millions   | 0.56     | 1.32         |                                 |              |              |
| Living on > \$1.9 per day millions  | 0.89     | 1.18         |                                 |              |              |
| No of mobile users millions         | 2.58     | 1.18         |                                 |              |              |
| % of Muslim population              | 0.96     | 1.14         |                                 |              |              |
| Contribution Rate                   | 5        |              | 5.7                             | 22.8         | 296.7        |
| Collection Error Rate               | 0.25     |              | 1.427                           | 5.706        | 74.180       |
| <b>Net Collection GMD' millions</b> |          |              | <b>4.280</b>                    | <b>17.11</b> | <b>222.5</b> |
| <b>Net Collection USD' millions</b> |          |              | <b>0.086</b>                    | <b>0.342</b> | <b>4.451</b> |

COLLECTION

Source: Authors own Computation

Population of the Gambia retrieved from <https://countrymeters.info/en/Gambia>, Gambia’s Multidimensional Poverty Index, number of mobile phone users from PURA website, and exchange rate from Central Bank of The Gambia website

TABLE 5: PROJECTED INCOME FROM INVESTMENT OF CASH WAQF FUND

|                                | Projected Cash Contribution per Week | Projected Cash Contribution per Month | Projected Cash Contribution per Year |
|--------------------------------|--------------------------------------|---------------------------------------|--------------------------------------|
| Net Cash Collection            | 4.280                                | 17.119                                | 222.543                              |
| Invest at Current Sukuk Yield  | 0.113                                | 0.113                                 | 0.113                                |
| Investment Yield GMD' millions | 0.484                                | 1.938                                 | 25.192                               |
| Investment Yield USD' millions | 0.010                                | 0.039                                 | 0.504                                |

Source: Authors Own

IV. PROPOSE ISLAMIC BLENDED FINANCE MODEL

Given the two scenarios in our two case studies above, and the potential of Sukuk, Zakat, Waqf and the underutilization of takaful products, we are proposing a blended finance model to support the funding of women in the agriculture value chain in The Gambia. While zakat and waqf are mainly charitable sources of funding, sukuk is a commercial instrument that could be utilise to attract financing (Biancone and Radwan 2018) [42].

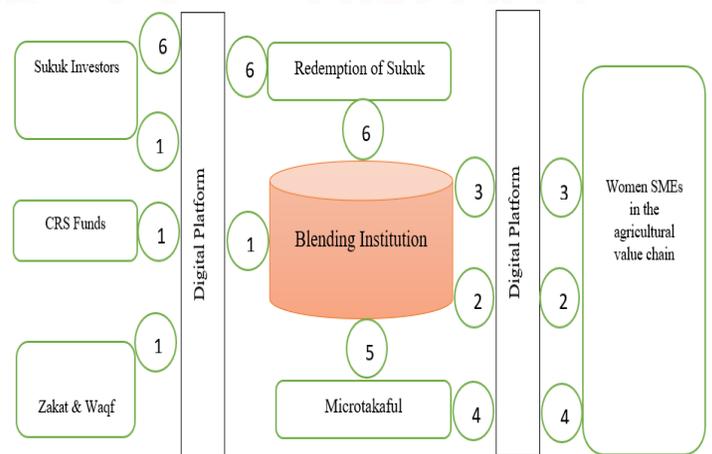
A. Rationale for Blending

The aim is to strategically blend benevolent funds with private investment to mobilise the much needed funds towards impact driven SDG related women empowerment initiatives. The fact that Sukuk is grossly underutilised in The Gambia despite showing the same returns as T-Bill and better returns than deposits, it has great potentials to attract private capital. On the other hand, ISF instruments by default are meant to create value and enhance the wellbeing of the poor. In this regard, ISF instruments will be of great help to derisk the Sukuk investment by mitigating default risk and provide social safety nets and subsidies, and skills training for the economically active poor women in the agricultural value chain. In a nutshell, the rationale is to provide an alternative source of funding by blending compassionate funds of Zakat, Waqf, Saddaqa and CRS funds with private capital, in which the compassionate funds will be utilised to subsidise the operational and transactional cost and provide skills training for women entrepreneurs while utilising Sukuk to mobilise private capital.

B. Proposed Islamic Finance Blending Model

As indicated earlier, blended products were utilised around the globe for SDG related projects albeit most of them are conventional blended products. [13] proposed a blending model for SME financing in The Gambia, where she suggested pooling of funds from private capital with compassionate funds of Zakat, Waqf, sadaqah, the penalty from delinquency, donations by providing social subsidy through Islamic blended Murabahah and blended Murabahah credit line. This paper will take a slightly different approach by mobilising private capital through retail Sukuk, compassionate funds through zakat, waqf and CSR funds of Islamic institutions and a microtakaful to protect investors by providing respite for defaulting women entrepreneurs.

FIGURE 1: PROPOSED ISLAMIC BLENDED FINANCE MODEL



Source: Authors Own

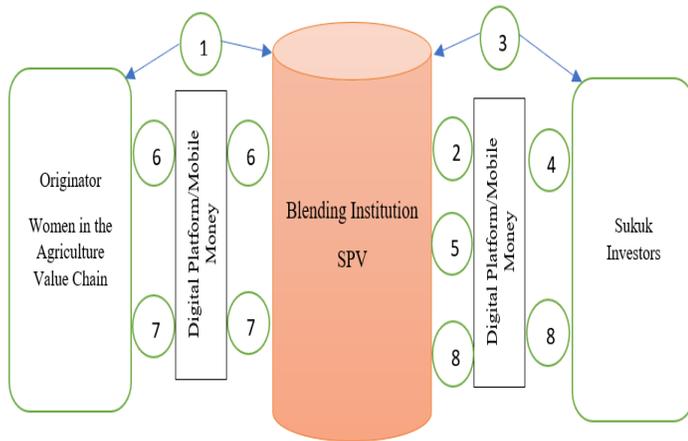
1. The blending institution also serving as the Special Purpose Vehicle (SPV) pools blending resources utilising a mobile money platform. This stage will include the issuance of Sukuk;
2. ESG screening, credit screening, skills training, training on financial management and bookkeeping to determine eligible projects and women entrepreneurs;
3. Fund remit to eligible and qualifying SMEs via the Islamic contract of Salam
4. Micro takaful contribution for participants. The takaful fund will be utilised to protect Sukuk investors from the risk of default;
5. Takaful fund will both be invested and utilised to cover defaulting customer.
6. The SPV deliver proceeds (principal plus profit rate) to investors via mobile money or bank account where they can access the funds.

C. Mobile Retail Sukuk Model

Retail Sukuk is one of the most important innovation in the Islamic finance industry as it seeks to make Sukuk available to

small scale investors and strengthen retail participation in the market[43]. The proposed retail sukuk structure is Salam Sukuk which is suitable for agricultural produce. This structure will help women entrepreneur in the value chain to access cheap source of funding (as seen in case 1) to increase productivity. Women entrepreneur on the supply side (as in case 2), high net worth individuals, financial institutions and Diasporan Gambians can invest in this product.

FIGURE 2: PROPOSED MOBILE MONEY RETAIL SUKUK MODEL



Source: Authors Own

**D. Sukuk Issuance**

1. A Salam and Wakalah agreement executed between the originator (women in the value chain) and the SPV;
2. The SPV issue the prospectus via the mobile money platform, social media and local newspaper
3. SPV executed the Salam Sukuk contract and the Wakalah contract to sell the produced on behalf of the investors;
4. The retail investors invest using mobile money platform and receive digital Sukuk certificate;
5. Proceeds transfer to SPV account via the direct credit using the Payment System;

**E. Investment Proceeds of Sukuk**

6. SPV remit funds to originator who funds women in the agriculture value chain by investing in shariah compliance project.
7. The originator sells produce on behalf of SPV at the agreed price and remit funds to SPV.

**F. Sukuk Maturity**

8. The SPV deliver proceeds (principal plus profit rate) to investors via mobile money or bank account using direct credit. Investor may choose to roll over their investment.

**G. Risk and Mitigants for the Issuance of Sukuk**

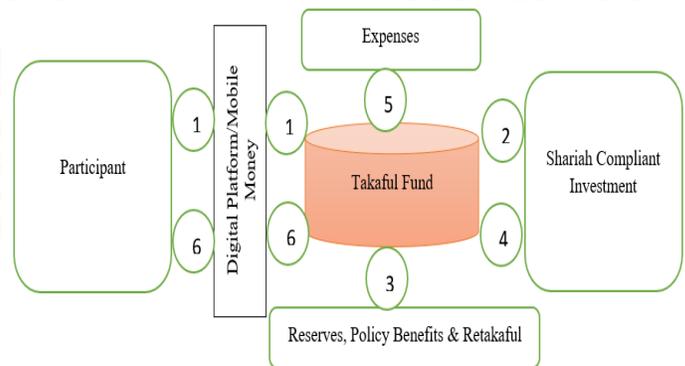
- i. **Low Quality Product-** sell products at market price and settle the difference using ISF and takaful fund.

- ii. **Quantity not Met-** sell products at market price and settle the difference using ISF and takaful fund.
- iii. **Investor not able to Sell Produce-** Appoints SPV as agent via Wakalah to sell, who may appoint beneficiary through the originator to sell.
- iv. **Default Risk-** Use ISF and takaful fund to cover for defaulting beneficiaries

**H. Mobile Microtakaful Model**

Mobile-based microtakaful utilising the insuretech concept increase efficiency reduced transaction cost and transparency. The fund belongs 100 percent to participants. The contribution will be made via Tabarru. Part of the fund will be invested by the blending institution as mudarib and investment return will be shared 40 by 60 to participants. Retakaful for the risk the blending institutions cannot manage. The microtakaful will be used to derisk the investment and protect Sukuk investors. The women in the value chain with contribute to the fund in proportion to the value of financing.

FIGURE 3: PROPOSED MOBILE MICROTECHAFUL MODEL



Source: Authors Own

**I. Modus Operandi of Microtakaful**

1. Participants executed wakalah contract with the fund manager, remit takaful contribution and pay wakalah fee.
2. Fund Manager invests 50 per cent participant risk fund in a shariah-compliant investment. May invest in the salam Sukuk as well.
3. Remaining 50 per cent of participant risk fund will be used to settle claims, transfer to the participants' reserve fund and retakaful for the risk the fund manager is not able to cover.
4. Investment proceeds received by the fund manager,
5. A percentage of the investment proceeds will be use in paying expenses and the balance added to participant risk fund and reinvested; and
6. Surplus fund 100% goes to participants

**J. Risk and Mitigants for Microtakaful**

**Participant’s Abuse-** create incentives like reduced premium or 100 percent cashback via hibah for participants who have not make a claim. Proper underwriting to ensure that participant’s risk commensurate with tabarru contribution.

*K. How this Models Will Contribute to the Attainment of SDGs in The Gambia*

This blended finance model has the potential to make The Gambia reduce its dependence on the importation of rice, poultry and horticultural produce. The negotiated rate for the Sukuk which is below the normal lending rate and above the normal deposit return will benefit both women on the demand side and supply side. The government will access cheaper capital to fund women in the agric value chain while making savings and the investors will earn more on their deposits. This will have great potentials to reduce poverty, attain to include other SDGs. This model, if implemented, will contribute to achieving the SDGs in the following ways:

TABLE 6: CONTRIBUTION OF PROPOSED BLENDING MODEL TO SDGS

| SDG  | Contribution   | SDG   | Contribution  |
|--|--|---|---|
|    | Poor women in the agriculture value chain will access finance and increase productivity                        |    | Increase productivity, reduced rice importation, export vegetables will increase GDP and spur economic growth |
|  | Increase productivity in rice and vegetable production at local level means more food on the table.            |  | Since poor people are the ones in the agric value chain, poverty gap will reduced.                            |
|  | Increase productivity will increase the disposable income for families, more money for health care and liesure |  | Grow what you eat and eat what you grow, export the surplus and earned more foreign exchange.                 |
|  | Women will have the opportunity to compete in the market and invest in their surplus fund.                     |  | Opportunity for everyone, rich or poor in The Gambia to invest in poverty alleviation.                        |

*Source: Authors own*

V. CONCLUSION AND RECOMMENDATIONS

The goal of this paper is to understand the financial constraints facing women in the agricultural value chain in The Gambia and propose an impactful financing solution that is cheap and scalable. The findings of the research reveals that despite the women representing about 78 percent of the economically active population in the agricultural value chain in The Gambia, they are not accorded similar rights as men. They continue to have limited access to agric extension services, financial services, market, storage and processing technology. The study also reveals that with more women than men in the agricultural sector, their immense contribution does not translate to the desired improved social and economic status.

Therefore, we are proposing a blended finance model where Sukuk will be used to attract private capital and ISF instrument will be utilise to mitigate default risk by providing social safety nets, subsidies, and skills training for the economically active women in the agricultural value chain. This paper has policy implication for the government of the Gambia and the potential source of funding for women entrepreneur in the agricultural value chain. It is therefore recommended that the government create the enabling environment by empowering the blending institutions with sound policies, give tax breaks and encourage the utilization of ISF instrument to provide subsidies to women organisations.

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