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Ecosystem in Islamic Finance and Its Link with SDGs

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Abstract

SDGs are ambitious and require all encompassing efforts and involvement of all sorts of institutions. It is especially crucial for countries that are much behind the targets and need considerable effort and resources to pull themselves up to meet the targets. However, some countries have different values, institutions and system. Countries, such as Brunei, Malaysia, Indonesia and Singapore have additional Islamic economic institutions (such as waqf, zakat, sadaqah). These institutions which have a socio-economic character can also be employed in creating synergistic efforts towards achieving the sustainable development goals.

Keywords: SDGs; Islamic finance, zakat, waqf, sadaqah

JEL classification: B00, B40, G23, O23, P40

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1. Introduction

We face enormous environmental challenges in the post-industrial society. In the human age of existence in the ecosystem, the post industrial era has challenged the planetary boundaries and has caused unprecedented loss of bio-diversity. Paul Crutzen introduced the term ‘Anthropocene’ in the mid-1970s and the term is used in the context of pollution emissions that are produced as a result of human activities. Individual self-interested behavior; money based usurious financial intermediation and detachment of moral values in the post-industrial human relation with ecosystem and environment are the contributing forces to this state of affairs.

Just over three centuries after the arrival of industrial revolution, we have achieved unprecedented economic growth. Gross World Product which combines the GDP of all countries and regions has risen from a mere \$100 billion in the year 1700 to \$81 trillion in 2017. During the twentieth century, world population increased by a factor of 4, whereas industrial output sharply rose by a factor of 40. On the other hand, the intensity with which environmental resources are used up in the production processes has increased sharply. The last two generations in the twentieth century alone brought an increase in energy consumption by a factor of 16. The challenge to biodiversity and environment, as mentioned in Dasgupta (2010), can be appreciated from the fact that fish harvesting has increased by a multiple of 35 and carbon and sulphur emissions grew 10 times in the last half century.

We have pushed planetary boundaries through unprecedented burning of fossil fuels, rapid deforestation, contamination of seas and which has caused rise in temperature, frequent heat waves, floods, melting of glaciers and enormous loss of marine and tropical forest species. It is estimated that continued use of fossil energy will lead to an increase of the average global temperature by 1.0–3.5 degree Celsius in the coming 50–100 years. (Dagobert, 2000). Cook et al. (2013) reveal that 97.1% of scientists endorsed the consensus position that humans are causing global warming. The recently concluded COP21 conference in Paris in 2015 on climate change put forward an agreement to reduce greenhouse emissions and control global warming, however, the agreement will become legally binding only if it is joined by at least 55 countries which together represent at least 55% of global greenhouse emissions.

In addition to the above anthropogenic disruptions, the global sea levels have risen by about 8 inches since 1870, according to World Research Institute. As the ice caps melt and sea level rises, the potential of floods increases. Sea levels are predicted to rise by 20 to 80 inches by 2100, according to a report by Surging Seas. Ironically, we have a garbage island of the size of India, Europe and Mexico combined floating in our oceans. The oceans absorb as much as 25% of all human carbon dioxide emissions. On the other hand, as reported in Lundqvist (2008), we also waste almost half of the food that we produce.

Forests cover 30 percent of the planet’s land, and provide vital protection from sandstorms and flooding as well as an essential natural habitat for wildlife. Yet, every single year we lose an area the size of Panama. Humans have already chopped down about 50% of the rainforests that once existed on the planet in the last half century alone. Deforestation simply means clearing of green cover.

Over the last 250 years, surface acidity of the ocean has increased by an estimated 30%. The acidity is expected to increase by 150% by 2100. According to a research published in Nature, by 2050, rising temperatures could lead to the extinction of more than a million species.

According to the World Health Organization, air pollution is now the world’s largest single environmental health risk. Air pollution is responsible for approximately 3.7 million deaths a year. Going forward, cities will generate approximately 2.2 billion tonnes of solid waste per year by 2025 which could poison soil and waterways, kill plants, and harm humans and animals.

According to United Nations Environment Program (2016), natural capital has declined in 116 out of 140 countries. Greenhouse gas emissions add energy to the Earth's system at a rate equivalent to the detonation of four nuclear bombs every second. On average, 26.4 million people have been displaced from their homes by natural disasters every year since 2008. Quite alarmingly, one third of the world's arable land is jeopardized by land degradation, triggering economic losses of \$ 6.3 to \$10.6 trillion per year.

All these alarming statistics emphasize on the need for pre-emptive action to help change the way we produce, consume and live. It requires structural transformation of our business processes, food production and technological capacities. We need a reflective change in our value system to have a more caring relation with the eco-system. In the next section, we discuss how Islamic worldview provides a promising basis of looking at our relation to the environment. What can Islamic finance do for each goal.

2. SDGs – An Overview

In 2015, more than 190 countries committed to 17 Sustainable Development Goals (SDGs) to help us all end extreme poverty, fight inequality and injustice and fix climate change. Each one of us has a role to play if we want to achieve these goals of a more prosperous, equitable and sustainable world. Although the goals, as shown in Figure 1, and targets (169) (<https://www.un.org/development/desa/publications/the-sustainable-development-goals-report-2018.html>) are “global” in nature, because they takes into account different national realities, capacities and levels of development and respecting national policies and priorities.

We believe that there are few things that need to be addressed. First, the following questions are still relevant: (i) can we reach these goals without addressing human rights and complex humanitarian issues at the same time?; (ii) are the goals independent from each other?; (iii) do the goals need to be implemented in an integrated manner involving the different stakeholders - civil society, governments, the private sector and academia. So how, then, are these goals reached and what do they look like?

Second, at some point, we agree that SDGs are universal in nature. Universally, they try to “reach the poorest people” and promise to deliver that “no one will be left behind”. Also, SDGs also concern about the planet. The conflict and climate change are major contributing factors leading to growing numbers of people facing hunger and forced displacement, as well as curtailing progress towards universal access to basic water and sanitation services. It shows that SDGs concern about both people and planet. In addition, the efforts: to reduce the debt burden, and to speed up the transfer of technologies and scientific know-how to developing nations are not on favorable terms. The establishment of an open, non-discriminatory and equitable trading system to help developing nations increase their exports is slowly taken place.

These are among the challenging nations' efforts to achieve the SDGs.

Third, mainstreaming effort that is helping countries to translate the 2030 Agenda into national and local policies, plans and budgets. What does this mean in practice? We should start with our analysis of the alignment of national plans with SDG targets. The issue is disaggregated data at sub-national level and capacity issues to track progress such as in Brunei and Malaysia, they have vision 2035 (which is based on Malay, Islam and Monarchy) and vision 2050 (which is based on several transformation programs). Both countries also practice the Islamic banking system which also needs to be aligned with SDG. The mainstreaming activities also cover: (i) identifying gaps can spur dialogue around policies and partnerships which can help address them; (ii) participatory monitoring – asking people what they think: using perception data to monitor the SDGs; and (iii) partnership - the transformative 2030

Agenda can only be achieved if all of society - civil society, business, philanthropy, academia - are engaged, working in partnership with governments at national and sub-national levels.

Fourth, SDGs provides Islamic Finance an opportunity to redefine their role pertaining to (i) people empowerment (e.g., social finance for micro and small enterprises), (ii) socio-economic development (e.g. profit sharing and poverty), and (iii) the environment (creating new Islamic financial instruments such as green sukuk – green financing and carbon emissions

– through sustainable and responsible investments). Islamic finance also provide opportunities - (i) creating a value-based proposition; (ii) to widen the definition of Islamic Finance – deepening the system, institutions and instruments as given in state constitution; (iii) to expand the Muslim funds as stated in the state constitution (see for example, in Brunei, Malaysia and Singapore). Therefore, the SDGs Agenda enhances these possibilities for Islamic Finance as the SDG goals and values have parallels relevance and application with Islamic Finance practices.

All the above “things” are dependent to each other. Hence, it can be explained through the concept of an eco-system. By referring to simply definition of an ecosystem, i.e., as a community of all the living and non-living things in a specific geographic area. Whether alive or not alive things, all components of an ecosystem impact each other directly or indirectly. For example, less iman can affect the climate (by throwing rubbish) and subsequently affect microscopic organisms that live within it. The number and health of those micro-organisms then affect the plants that grow in the soil, and the plant growth then impacts the animals (including humans) in the food chain. Therefore, an ecosystem is important aspect. However, it is not widely discussed from Islamic perspective.

3. Ecosystem in Islamic Perspective

Defining and naming ecosystems is difficult, because it is not always clear where the boundaries lie. Sometimes ecosystems are based on natural topographic features, such as a mountain range or the edges of a lake. Other times, scientists outline ecosystems based on shared characteristics, such as an area with similar snowfall or flooding patterns. And sometimes, we define an ecosystem based on man-made boundaries, such as all the counties that rely on water from a particular river. As you can imagine, ecosystems often overlap and can also be subsets of one another. In this section, we propose that the ecosystem from Islamic perspective is bounded by the concept of tawheed and khilafah,; and the ethics.

(a) Concept of Tawheed and Khilafah & their Implications to Ecosystem Relations

The concepts of *Tawheed*, *Khilafah* and *Akhirah* govern the Islamic way of life. Belief in the single source of creation defies racial, ethnic or gender basis of biases. According to Islam, all creations belong to Allah. Animals and plants are partners to man in the universe (Mian et al., 2013). Simultaneously, the concept of *Khilafah* raises the stature of human beings as moral beings with inbuilt and active conscience, which provides the ability to differentiate moral from immoral acts. It inculcates the responsibility of custodianship, trusteeship and stewardship in human beings with regards to the use and ownership of physical property and environmental resources. The two worldly view of life in Islam extends the decision horizon of economic agents, be they firms or consumers.

While the concept of *Tawheed* creates an equal basis for humans to use what is bestowed in nature, the concept of *Khilafah* instils stewardship towards the responsible use of natural and environmental resources without pushing planetary boundaries and causing precious loss of biodiversity. Hope and Jones (2014) investigate the link between faith and

attitudes to environmental issues. As per the findings, the Muslim participants argued that the continued burning of fossil fuels would be immoral because they could disrupt the balance of nature, leave a dubious inheritance for future generations, and would constitute poor stewardship of Allah's creation, for which they would be judged. According to World Values Survey sixth wave (2010-2014), 29% respondents in 21 OIC member countries state that 'looking after the environment and to care for nature and save life resources' best describes their view and attitude towards environment as compared to 21% stating the same view in 39 non-Muslim majority countries. Ansary (2010) also gives account of how religious motives in practice prove to be strong motivators for environment friendly actions like conservation and tree plantation than the laws of the land.

Environmental stewardship requires that we use natural resources ethically so as to equally improve the welfare of society, other living organisms, and future generations (Alghamdi, 2014). The relationship between human and nature is one of custodianship or guardianship, and not of dominance (Islam, M. N. & Islam, M. S., 2015). The earth's resources are available for humanity's use, but these gifts come from God with certain ethical restraints. We may use the resources to meet our needs, but only in a way that does not upset ecological balance and that does not compromise the ability of future generations to meet their needs (Riham, 2014). These principles lead Kula (2014) to conclude that Islam is an environment friendly religion.

The Islamic moral injunctions influence preferences through moral filtering of the consumption set by identifying the moral 'BADS'. The moral philosophy imbued with socio-ethical spirit extends the decision horizon of consumers. It encourages the transformation of self-centric self interest into self-cum-social centric self interest. The moral injunctions explicitly extol virtuous philanthropy. Finally, by flattening all other basis of distinction except on piety, Islamic values garner contentment whereby, the consumer is asked to shun envious and conspicuous consumption of luxuries.

Islamic philosophy of life prioritizes equitable distribution over Pareto efficiency. Overreliance on Pareto efficiency paralyses the equity and ethical concerns of development policy change. As per Pareto efficiency, it is inefficient to help millions of poor to make them better off while making any single rich person worse off. While Islamic principles allow freedom and liberty in lawful consumption within the moral boundaries, they induce affirmative action to promote wellbeing when people possess the means. In contrast, according to consumer sovereignty, as long as people can put up dollar votes for their preferences, resources will be allocated on producing, marketing and distributing inessential goods even if a quarter of world population lives in poverty and suffer from hunger, malnourishment and curable diseases.

Rather than complimenting humans in their animalistic instincts to keep having one-eyed focus on material well-being only, Islam inculcates piousness, kindness, cooperation and communal responsibility in humans. In some instances, Islam guides explicitly to avoid extravagance, lavishness and using certain products and services which harm a human's ethical existence and well being either individually and/or harm the society in the process. Islamic economics incorporates ethical values and excludes from the consumption bundle various goods which bring either private loss or welfare loss to the society.

Islamic philosophy of life brings a long term perspective to the pursuit of self-interest by informing humans about the positive and negative consequences of their actions and choices in the life hereafter. In the secular worldview, due to the absence of afterlife accountability, the rich people with absolute and inviolable property rights can command natural and environmental resources whose potential lifespan is much more than the lives of their owners. But, if the rich people believe in no afterlife accountability, they can extract and exploit these resources quickly and deprive future generations of their use.

Extinction of species, global warming, climate change, depletion of ozone layer and massive carbon emissions are inevitable results of the secular and individualistic paradigm. Climate change is a slow, but cumulative process. Individual human lifespan is only an infinitesimally small fraction of the life of environmental resources and eco-system services. Hence, the self-centric and this worldly view of life are incompatible with the concerns of sustainability and socially responsible behaviour. Rather, the dogmatic commitment to self-centric secular worldview results in inevitable proliferation of pollution as a right and product to be bought and sold in the market economy.

Mortazvi (2004) contends that Western economics has become a discipline devoid of values. Exploitation of the natural environment can be abated when individuals consider intergenerational welfare and justice to be important factors in their economic decisions. Na’iya (2007) suggests that the effective solution to the environmental problems lies on the overall worldview which spells out the relationship between man, nature and his Creator as well as the implications of one’s actions in the hereafter.

Islamic worldview provides such meaningful conditioning which enables bringing the right balance between human aspirations and the physical limits of nature. Religion also promises salvage from the limitedness of this worldly life in heaven which will be awarded to the most righteous people. This, in turn, provides a permanent incentive to choose righteous behaviour as an end with the hope and fear of deterministic results in the life hereafter.

(b) Ethics in Relation to Environment

This section will provide the coverage of Quranic verses and hadith which define the ethics. It will highlight how ethics shape up the responsible attitude towards the use of environmental and ecological resources and to live in harmony with bio-diversity.

In this section, we look at how Islamic environmental ethics encapsulated in Islamic principles compliment Sustainable Development Goals (SDGs) and can act as a catalyst to foster commitment, responsibility and affirmative action for sustainable and congenial co-existence with environment.

The discussion of ‘protection of progeny’ as Maqasid-e-Shari’ah by Imam Ghazali shows the ethical commitment for sustainable existence in an Islamic paradigm much well before the reactionary focus in West about sustainable development. Below, we mention several verses from Quran and sayings of Prophet Muhammad (peace be upon Him) which discuss the responsibilities to the environment.

It is pertinent that humans incorporate social cost in their private actions for achieving environment related SDGs. If we want clean air, fresh water and proper sanitation for ourselves, then we must also like these things for others living in the present age as well as those who are to come in this world in the next generations. Prophet Muhammad (peace be upon Him) said:

“A Muslim is the one who avoids harming Muslims with his tongue and hands.” (Source: Sahih al-Bukhari, Vol 1, Book 2, Hadith No. 9)

The realization of enormous value of nature and environment even if it is in no one’s private ownership is vital for fostering a culture of caring and responsibility towards environment. Quran refers to nature as ‘Ayat’ (signs). The book of nature is also a revealed scripture, each page of which reveals a truth (Ansary, 2010). Affirmative actions towards preserving and conserving environment are needed as a culture for achieving environmental sustainability. Islamic philosophy of life provides the necessary impetus and deterministic rewards for

affirmative action towards promoting positive externalities in the environment. Prophet Muhammad (peace be upon Him) said:

“There is none amongst the Muslims who plants a tree or sows seeds, and then a bird, or a person or an animal eats from it, but is regarded as a charitable gift for him.” (Source: *Sahih Al-Bukhari*, Vol 3, Book 39, Hadith No. 513)

In another Hadith, Prophet Muhammad (peace be upon Him) said:

“Whoever plants trees, God will give him reward to the extent of their fruit.” (Source: *Musnad*, Vol 5, Hadith No. 415)

Climate change and environmental degradation is a slow and cumulative process. To resurrect environment, the efforts also need to be cumulative and consistent. A self-centric secular worldview encourages self-centric use of private property resources. However, even small things done collectively and consistently can have compounding effect. The two-worldly view of life in Islam encourages socially responsible behaviour as one of the prime determinants of salvage in life hereafter. Prophet Muhammad (peace be upon Him) said:

“If the Resurrection were established upon one of you while he has in his hand a sapling, then let him plant it.” (Source: *Musnad Ahmad*, Hadith No. 12491)

Quran informs that other species also praise and thank the Creator for the blessings. Quran says: *“Do you not see that to Allah bow down in worship all things that are in the heavens and on earth - the sun, the moon, the stars; the hills, the trees, the animals; and a great number among mankind?”* (Chapter 22, Verse 18). The single source of creation as encapsulated in the concept of *Tawheed* undermines the tendency to feel ‘fittest survivors’. It brings humbleness, niceness and peaceful co-existence with other life in the environment. Prophet Muhammad (peace be upon Him) said:

“A good deed done to a beast is as good as doing good to a human being; while an act of cruelty to a beast is as bad as an act of cruelty to human beings”, and that: “Kindness to animals was promised rewards in life hereafter.” (Source: *Mishkat al-Masabih*; Book 6; Chapter 7, 8:178)

In another narrative, the Prophet (peace be upon Him) was asked whether acts of charity even to the animals were rewarded by Allah or not. He replied: ‘yes, there is a reward for acts of charity to every beast alive.’(Source: *Sahih Muslim*, Book 26; Hadith No. 5577).

Islam and Islam (2015) explicate that killing animals for fun or mere sport is strictly disallowed in Islam. In order to protect land, forests and wildlife, the Prophet Muhammad (peace be upon Him) created sacred zones known as *hima* and *haram*, in which resources were to be left untouched. *Hima* applies particularly to wildlife and forestry and usually designates an area of land where grazing and woodcutting are restricted, or where certain animal species are protected.

As mentioned earlier, almost half of food goes wasted while on the other hand, one out of every 9 people in the world suffers from hunger, according to Food and Agriculture Organization. Islamic principles discourage conspicuous consumption on luxuries. The Quran says:

“But waste not by excess: for Allah loveth not the wasters. ” (Source: Holy Quran, Chapter 6: Verse 141)

When the Prophet Muhammad (peace be upon Him) saw Sa'd performing wudu, He (peace be upon Him) said: “What is this? You are wasting water.” Sa'd replied: “Can there be wastefulness while performing ablution?” The Prophet Muhammad (peace be upon Him) replied: “Yes even if you perform it in a flowing river.”

(Source: Ibn-e-Maja, VI, Hadith No. 425)

Even with finite resources, we can still do much better in reducing hunger, malnourishment, child mortality and deaths from easily curable diseases. This requires a transformation of self-centric self interested view of life into self-cum social centric one. Prophet Muhammad (peace be upon Him) said:

“Among the three types of people with whom God, on the Day of Resurrection, will neither exchange neither words, nor look at is the one who possesses an excess of water but withholds it from others. God will say to him: ‘Today, I shall withhold from you my grace as you withheld from others, the excess of what you had, but which you did not create. ” (Source: Sahih Al-Bukhari, Vol 3, Book 40, Hadith No. 557)

Thus, we see that Islamic environmental ethics can play a catalyst role to increase commitment, encourage affirmative action and responsible co-existence with environment.

4. Link between Islamic Finance and SDG

The discussion in section two and three shows that all the targets are inter-related. The facts that the realization of Sustainable Development Goals depends a large part on availability of funds, infrastructure, inclusive growth, creation of jobs, ‘environment friendly’ technological advancements and business processes reengineering. All of this is not going to be possible without availability of funds. By some estimates, around \$3.5 trillion to \$5 trillion is needed every year to make desirable progress on SDGs. At global level, investment in infrastructure is estimated to be US\$ 100 trillion over the next two decades (Ahmed et al., 2015).

In Middle East, there is immense potential to use solar energy alongside oil. In Arab world, the annual per capita share in water resource will be less than 500 cubic meters, less than 10% of global average. Lack of financing is one of the major obstacles for minimal use of renewable energy in developing countries. Financial sectors of developing countries are often underdeveloped and are unable to efficiently channel financing to produce renewable energy.

As per World Bank, developing countries spend about \$1 trillion a year on infrastructure. An additional \$1-1.5 trillion will be needed through 2020 in areas such as water projects like dams, desalination plants, power projects and transportation projects. Asian Development bank estimates that emerging Asian economies alone will require \$8 trillion over the next decade to satisfy growing demand in the areas of energy, water and transportation.

Governments in developing countries have much more distance to travel in achieving the SDG targets and yet they generally have weak tax base to work with. Because of the transformative and sustainable nature of the new development agenda, all possible resources must be mobilized if the world is to succeed in meeting its targets (Ahmed et al., 2005). The financial crisis of 2007-2009 and subsequent contagion effects has not helped in improving on the commitment to provide 0.7% of Gross National Income as Official Development

Assistance (ODA) by the developed countries to the underdeveloped ones. With resources allocated to development by donor countries remaining insufficient coupled with the headwinds of financial and economic crises affecting many countries worldwide, it is important to explore alternative and complementary innovative financing mechanisms such as Islamic finance.

There is much potential for Islamic finance to promote sustainable economic development through such approaches as widening access to finance (including microfinance), financing infrastructure projects, and expanding the reach of Takaful (Islamic insurance). As part of its commitment to the SDGs, the Islamic Development Bank has announced it will increase its funding of SDG related activities through its ten year strategy framework, from \$80 billion recorded during the MDGs, to \$150 billion over the next 15 years (2016-2030).

Global Shariah-compliant assets totaled \$2.0 trillion at the end of 2015, and are expected to exceed \$3 trillion by 2020. With resilient growth, effective risk mitigation and participative modes of financial products, Islamic banking and finance promises to play a significant role, especially in the Muslim world. Islamic finance also can enhance financial inclusion, as it incorporates people who are excluded from the traditional financial system for religious reasons.

Islamic finance has some distinct advantages over the money based usurious interest based financial intermediation. In the US, the share of total corporate profits generated in the financial sector grew from 10% in the early 1980s to 40% in 2006. These earnings are transaction costs for the productive sector. Financial institutions that were just supposed to be playing a supportive role to the productive economy got much bigger and unregulated through shadow banking practices. Islamic finance as a form of financial intermediation offers tremendous potential in reinforcing links between finance and real economy.

Real sector based productive enterprise in Islamic finance has positive implications for the ecosystem. Risk-sharing shifts the emphasis from credit-worthiness of the borrower to be placed on the value creation and economic viability of investments that create new wealth. High levels of debt in the conventional interest based financial architecture are one of the prime causes of financial crises (Buiter & Rahbari, 2015; Mian & Sufi, 2015).

As per Islamic Development Bank (2015), innovative Islamic financial instruments especially for infrastructure development such as Sukuk can be used to mobilize resources to finance water and sanitation projects (SDG-6), sustainable and affordable energy (SDG-7), build resilient infrastructure (SDG-9) and shelter (SDG-11).

Islamic social finance package includes institutions like *Zakāt*, *Waqf* and Microfinance which can cater to the financially excluded households who are missed by the commercial banks. Wilson (2007) also contends that Microfinance is best provided by non-banking institutions. Sadiq & Mushtaq (2015) suggest that *Zakāt* and *Waqf* based Microfinance institutions can be used to serve the social sector. Real estate-based *Waqf* can generate proceeds through the rental of properties, which then can be used to finance social development needs. Cash and commodity based *Waqf* can provide interest-free loans (*Qard Hassan*) to the needy in sectors like education, health and agriculture. Lastly, *Takaful* is an insurance concept based on the principles of shared responsibility, solidarity and cooperation. Thus, we see that Islamic finance has sufficient institutions and product structures to contribute in financing assets, which will be critical for making progress towards achieving SDGs.

How does Islamic finance be linked with SDGs. What is the channel? In this section, we will examine the transmission channel that provides the financial services to people (bankable customers and non-bankable customers).

(a) A brief explanation on the Transmission Mechanism

The current structure of Islamic financial institutions appear to believe that they have a limited ability to serve unbanked customers who would like wire transfers, and international remittances because of compliance concerns under the Islamic Financial Services Act (IFSA), Anti-Money Laundering Act (AML) and other regulatory requirements. Islamic financial institutions also are reluctant to cash checks for non-customers for reasons related to regulatory compliance, identification, and loss prevention (fraud) concerns. For example, the lack of valid identification makes it difficult to serve non-customers.

Therefore, the Islamic financial institutions should look into the largest untapped market, i.e., customers who have neither bank accounts (the unbanked) nor incremental financing (the underbanked). Therefore, they need to examine how financial services to the underserved market can help increase financial inclusion and in achieving the maqasid shariah (see, Ngilim and Ismail (2014) and Ngilim et. al (2015)). In addition, how could the Islamic financial institutions transform their business models to address changes in the financial services marketplace via philanthropy instruments (such as zakat, waqf and sadaqah)? Especially in responding to the needs of the underserved market that could make the difference to Islamic financial institutions' role.

(b) Transmission Mechanism

Panels A, B and C in Diagram 1 explain the channels of transmission mechanism. As shown in Diagram 1, the target is to reach and link the bankable customers (rich and poor customers) with unbankable customers (poor customer). In Panel A, the rich customers pay the zakat on their businesses to Baitulmal. They also have saving accounts in the Islamic financial institutions. The rich customers also pay zakat on their wealth (i.e., saving funds). Here, the rich customers pay zakat to Baitulmal or pay zakat direct to Baitulmal from their saving funds. At the same time, the rich customers that own the Islamic banks and Islamic microfinance institutions also pay zakat to Baitulmal, as shown by bidirectional line between philanthropy institutions and Islamic financial institutions.

Baitulmal, then, who has an account at Islamic financial institutions channel the zakat to the recipients, including the poor. The same also apply to Baitulmal who channel zakat to Islamic microfinance institutions (Hadisumarto and Ismail (2010), and Abdullah and Ismail (2014)). The later will provide benevolent loan to the poor.

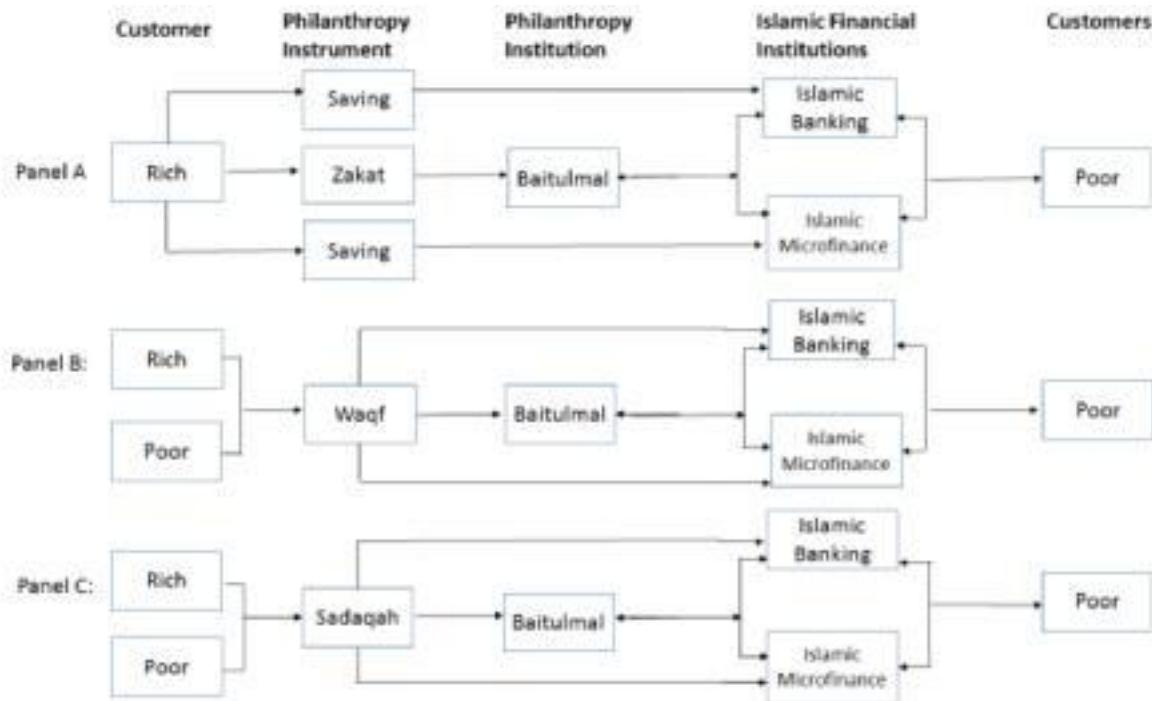
In Panel B, the philanthropy instruments (waqf or endowment) comes from both rich and poor customers who are also looking for non-monetary rewards. However, both customers channel the cash waqf (see, Ismail and Possumah (2014)) into Islamic banks and/or Islamic microfinance institutions by injecting capital in both institutions. While, the capital is still intact with them, but the poor (i.e., as beneficiaries) would receive dividend. Or the financial institutions may receive waqf deposits (and appoint Baitul mal as trustee) from the rich and poor customers and then, both Islamic financial institutions will invest the waqf deposits. The poor customers (and also return from this investment) will be channeled to the poor.

In Panel C, the sadaqah provides more flexibility for philanthropy and Islamic financial institutions on its utilization. It can be utilized fully for the benefits of the poor. Similar to waqf funds, the rich and poor customers may channel their sadaqah via Baitulmal or Islamic financial isntitutions. Then, the former will save the sadaqah funds with Islamic financial institutions. The Islamic financial institutions also can channel directly or indirectly (via Baitulmal) as expenses to the poor.

The more financial services (via different philanthropy instruments), it will increase the number poor to have an account with Islamic financial institutions and at the same time the

poor also get access to financings from the Islamic financial institutions. Therefore, it would expect a closed relationship between financial services indicator and real sector. The empirical evidence would be the best to look into this proposition.

Figure 2: Transmission Channel of Philanthropy Instruments



The above figure show that: first, philanthropy instruments increase the range of financial services available to underserve markets. Second, the more philanthropy instruments, they increase the number poor to have an account with Islamic financial institutions and at the same time the poor also get access to financings from the Islamic financial institutions. Therefore, it would expect a closed relationship between financial services indicator and real sector. The empirical evidence would be the best to look into this proposition.

5. Conclusions

The Sustainable Development Goals (SDGs) are the centerpiece of a new global agreement on what society seeks to become over the next twelve years. This agreement envisages a world free from poverty and deprivation, and where the fundamental conditions for human prosperity - healthy ecosystems, a stable climate, and a clean environment - are safely maintained. However, the SDGs do not offer a plan for how to achieve such laudable objectives. This paper joins a timely discussion on how the Islamic finance can be linked with SDGs. More specifically, the paper focuses on how Islamic social finance can bring the SDG agenda into action.

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Figure 1: The Sustainable Development Goals (SDGs)



