

Green investment and sustainable development: The case of Islamic finance

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Abstract

Reflecting on the impact of human activities on future sustainability has intensified the debate about the environment in recent years. Green investment, also called ethical investment, is considered as a vehicle that strengthens environmental management and sustainable development. In the Islamic economy, investment has to comply with principles of Shariah to administer justice with all stakeholders, protect the environment and sustain the development process. The paper sheds light on the Islamic financial system as a manifestation of the Islamic worldview which endorses ethical investment as a path for environmental management and human survival. Green investment provides an important solution for ensuring environmental protection and meeting people's basic needs. It also increases efficacy of the society's resources. Islamic finance could play a major role in environmental management by ensuring that green investment sustains growth and supports innovation. Increase in issuance of Islamic investment instruments like Green Sukuk in recent years is recognition of the importance of the environment in the Islamic economy. The paper contributes to our understanding about the role that the Shariah's plays in sustaining development and fostering economic growth.

Keywords: Green investment, the environment, Islamic finance, Ethical investment, Sustainable development

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INTRODUCTION

Green investment offers an important solution for environmental degradation and sustainable development. It has been acknowledged that the environment cannot be treated in isolation from the mainstream investment policy. Such an integrated approach helps policy makers to have a better understanding of the causes and consequences of human actions and the damage that may occur from such actions. This may contribute to environmental protection and improve allocation of resources. For developing countries, the green economy reduces the impact of environmental degradation on the poor by reducing health hazards and enhancing economic productivity. Ethical investment promotes efficient utilization of resources to meet people's basic needs and achieve sustainable development. Government policies should be directed towards resource efficiency and environmentally friendly investment to foster green growth and protect the environment. Excessive exploitation of natural resources, especially fossil fuels, has produced a

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substantial amount of waste and greenhouse gases, and has resulted in climate change and environmental degradation.

The Islamic banking system endorses green investments which comply with the Shari'ah (Islamic law). In Islam, ethical investment refers to what conforms to Islamic ethics and leads to productive economic activities by avoiding the production of luxury products at the expense of public necessities. In an Islamic economy, priority is given to the production of goods and services that, in meeting the basic needs of people, sustains development. In other words, from an Islamic perspective, investment must comply with the principles of the Shari'ah by funding environmental-friendly projects that encourage economic growth and protect the environment.

The aim of this paper is to examine the impact of green investments on environmental management and future sustainability. Sustainable development creates a balance between present and future consumption through management of natural resources, involving minimization of the risk of environmental degradation. It ensures that the basic needs of the coming generations will be met. This paper sheds some light on the role that the Islamic financial system can play in financing green investments and supporting the environment. Islam endorses ethical market activities to sustain human survival and protect natural resources from rapid depletion. The principles of justice and equity in Islam prohibit monopoly and excessive consumption to ensure equity in the division of natural resources among all members of the society.

This paper is divided into five sections. The first section focuses on the concept of sustainable development and its relation to environmental protection. The second section examines the Islamic financial system as a manifestation of the Islamic worldview, with specific reference to the Shari'ah principles in lending, financing and investing, with a view to highlighting the potential of the Islamic financial system in financing environmental-friendly projects. The third section describes the need for ethical investment to ensure that business activities comply with Islamic law. The fourth section focuses on green investments to protect the environment and reduce the risk of resource depletion. Channelling resources into green projects should be integrated into the financing policies of Islamic financial institutions to promote future sustainability. Finally, the conclusion integrates the main ideas introduced in the paper.

Sustainable Development

In recent decades, sustainable development has become a major goal of national, regional and international institutions. Sustainable development can be defined in many different ways, but the core focus is to “meet the needs of the present, without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987). According to this definition, sustainable development is concerned with the importance of ‘needs’ especially for the world’s poor and also with the idea of limitations imposed by the state of technology and social organization on the environment’s ability to meet present and future needs (Baker, 2006). A large number of people in developing countries rely on the environment for their daily survival with little or no support provided by governments to ease pressure on natural resources. In the coming decades, the demand for basic needs, including water, food, and energy are expected to increase beyond the capacity of the natural environment to provide for same. Expanding agricultural production is expected to cause large scale deforestation, water stress, and desertification. In Latin America, for example, commercial agriculture has been

responsible for 70% of deforestation. According to the Food and Agriculture Organization of the United Nations (FAO), the expansion of pastures was responsible for 45% of deforestation, while the expansion of commercial agriculture accounted for more than 43% in Argentina. In Brazil, more than 80% of deforestation is due to forest being cut down for pasture (FAO, 2016).

Rapid growth in population, urbanization, transportation and high economic growth in Asia have increased demand for natural resources, including energy consumption. In many parts of the world, particularly in developing countries, externalities associated with energy consumption and industrial production, involving the leaching of toxins into the ecosystem, have caused substantial damage to the environment. It is expected that non-renewable resources will be exhausted if the current trends in consumption of resources continue. Environmental degradation not only adversely affects mankind but also threatens the entirety of the ecosystem, including other living species.

Environmental management is directly linked to human activities and their ability to produce and consume. In economics, the environment is the source of most raw materials used in the production of goods and services. Finite resources will suffer depletion at a rapid rate in response to excessive exploitation. In theory, renewable resources, which continuously provide the required materials to support consumption, ought to be productive indefinitely. However, the sustainability of these resources will depend on the capacity to develop, maintain and increase the productivity of these resources. It also requires a reduction in the risk of environmental degradation negatively impacting these resources' productive potential.

The world population is expected to reach 9.5 billion by 2050. Almost 70% of this number is projected to live in urban areas in 2050 with close to 90% of the increase in world population taking place in Asia and Africa (United Nations, 2018). Most of this increase will occur in developing countries where environmental protection measures remains inadequate. Under such circumstances, risk management, an essential element of environmental protection, is vital to reduce the adverse impact of human activities on the environment. Environmental protection may involve scientific research and managerial skills which are lacking in many developing countries.

Global mega trends currently impacting the ecosystem, including demography, globalization, natural resources and energy, and climate change and the environment, are reducing the earth's capacity to support the demand for natural resources and sustain development. In developing countries, the depletion of natural resources has been linked to excessive consumption of material goods in industrialized countries. In addition, high rates of economic growth in Asia, particularly China and India, have increased demand for natural resources to support the mass production of material goods and services in those countries. In the case of China, for instance, the rise in average income has increased the number of people in the middle class, which caused demand for material goods to increase, putting further pressure on the global stock of natural resources (OECD, 2016).

Poverty also represents a source of such pressure. Often left with no alternative, the poor inefficiently consume, or use as an input into a subsistence production process, natural resources, namely land, forests, water and minerals as a means for their survival. As pointed out by the United Nations (2013), *“Poverty eradication, changing unsustainable and promoting sustainable patterns of consumption and production, and protecting and managing the natural resource base of economic and social development are the overarching objectives of and essential*

requirements for sustainable development.” Helping the poor to meet their needs must be given high priority on the global agenda for sustainable development. Protection of the environment should equally be a matter of concern to people worldwide, given that environmental issues are no longer confined to local boundaries; rather they are becoming global. Under such circumstances, global cooperation becomes necessary to increase the ability of nations, particularly developing countries, to manage the environment.

Ethics based consumption requires that natural resources be managed in an efficient and productive manner to reduce the risk of resource depletion and prolong the longevity of these resources. To defray public expenditures, developing countries often rely on the production and export of natural resources with little or no attention paid to negative environmental externalities. In this regard, making use of green technology can help poor countries to manage their resources and protect the environment.

The Islamic financial system

The principles of the Sharī‘ah form the bases of the Islamic financial system. Islamic financial institutions (IFIs) must take into consideration these principles in their funding to ensure that investment activities are in compliance with the Islamic legal system (HSBC Amanah, 2016). The aim of investment in the Islamic economy is to advance the cause of development by generating important social, economic and environmental benefits. The Global Report on Islamic Finance sums up the functions of IFIs in the following words:

“Islamic institutions can play a critical role in the realization of the global vision of generating sufficient income-earning opportunities; investing in people’s development prospects by improving the coverage and quality of education, health, and sanitation; and protecting the poor and vulnerable against sudden risks of unemployment, hunger, illness, drought, and other calamities. These measures would greatly boost shared prosperity, improving the welfare of the least well-off” (World Bank Group, 2016).

Financial transactions in the Islamic financial system are conducted on the basis of risk-sharing. Both the bank and the investor share the risk and the profit (or loss) of any investment on agreed terms. By reducing the risk of uncertainty and eschewing speculation, Islamic finance contributes to both financial stability and long term sustainability (Al-Roubaie, 2009).

In Islam, nature is a trust that should not be harmed or excessively consumed. Resources, according to Islamic principles, must serve the entire population and not be controlled by a few rich and influential individuals. Islam mandates that natural resources be used not only to protect the environment but also to support human survival. The Qur’ān (2:25) states: *“And when he turns away, he hastens through the land to cause corruption therein and to destroy the crops and cattle: And God loves not corruption”*. It is against Islamic law to cause damage to the environment by polluting the air, water resources and cutting trees. In this regard, financing by IFIs must serve environmental protection to ensure that production activities will not cause negative externalities. In other words, financing should be based on a complete understanding of what the investment is going to be used for to ensure that the environment is protected and for that purpose Islamic finance can serve the best. The World Economic Forum in its Green Investment Report (2014) acknowledges that: *“The Islamic law of Shariah which governs the Islamic financial system has ample injunctions which emphasise the need to care for the environment forms of life on earth while ensuring the proper usage of natural resources.”* Islamic

law, apart from prohibiting investment in companies that produce weapons, alcohol, contraband and tobacco, encourages investment which increase resources availability as well as reduce the risk of environmental degradation.

In conventional finance, unless otherwise compelled by governments, banks largely relegate environmental protection (the utility of which would be confined to hedging against a contingent environmental liability) as an ancillary factor in commercial lending. In the Islamic economy, however, all investments must abide by Islamic principles so that money will only be allocated for investment in products or activities which are lawful. According to Islamic teachings, man is given the privilege by God to be a vicegerent. As such, this requires man to act responsibly, fulfilling all the principles of the Sharī'ah and the practices shown to him by the Prophet (PBUH).

The Prophet (PBUH), in maintaining that 'the earth is a mosque,' recognizes the scarcity of all resources including those above and below the ground. The Qur'ān in several places reflects on the damage to the environment caused by human hands. It states, "Corruption has appeared on the land and in the sea because of what the hands of humans have wrought. This is in order that [Allah] give them a taste of the consequences of their misdeeds that perhaps they will return to the path of right guidance" (30:41).

Such "corruption" damages the environment and reduces the prospects that resources would enable humanity to sustain development and ensure human survival. Thus, Islam prohibits investment in environmentally-detrimental projects. Human activities represent a major factor in environmental management and sustainable development. Therefore, both public and private investors must take the environment into consideration when it comes to project financing in their decision-making concerning the use of natural resources. Accordingly, green investment or, more generally, green finance, should be incorporated into national economic policies to ensure that adequate environmental protection is provided in order to sustain development. Green finance is defined as "financing of investments that provide environmental benefits" (Finance, G, 2016). In the last 10 years, the World Bank issued 147 green bonds in 20 different currencies valued at about \$11 billion to fund projects that support the transition to low carbon and climate resilient growth. About 70 percent of green bond commitments were allocated to renewable energy sectors and energy efficiency (World Bank, 2018).

Islamic banks should finance enterprises that are free of environmental risk involving the use of green technologies. For example, investments in alternative energy sources will support building capacity for sustainable development by reducing carbon footprints. To this end, the employment of appropriate technologies will minimize the damage to the environment by reducing emissions of industrial effluents. Technology could also contribute to increasing sustainability by lessening pressure on natural resources by populations. The survival of living species, both humans and animals, depends on the environment to provide the basic essentials. Therefore, any failure to preserve and protect those natural resources jeopardizes human survival.

Recently, green finance in the bond market has evolved to encourage investment in environmentally-friendly projects. Green bonds are defined to include any type of bond instrument where the "proceeds will be exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible green projects". Green projects entail environmental benefits by mitigating environmental degradation. By the end of 2016, 1,002 investment funds served as sources of capital with more than US\$2.6 trillion in assets under management (Szala, 2017).

Such sources of capital include green *ṣukūk* (commonly known as Islamic investment certificates or Islamic bonds).

The *ṣukūk* market has become a major Islamic financial instrument. *Ṣukūk* represent time-bound shares in ownership of a particular project which pay returns in the form of profits or rent in case the underlying asset is leased, instead of a fixed interest payment as is the case with the bonds. The returns are paid from the return on investment in a project and reflect the profit and loss generated by the project being funded. This causes dividend payments to vary in relation to changes in profit and loss. In the case of bonds, holders, in contrast, are not affected by profit and loss of the project. They receive coupon payments as a debt obligation by the issuer of the bond. Investment in *ṣukūk* must comply with Islamic principles, which require support for clean energy and protection for the environment. Islamic banks are obliged to investigate the environmental impact of any project; in that respect, all *ṣukūk* can be regarded as a form of green investment instruments. In 2017 the National Bank of Abu Dhabi launched the Gulf's first green bond, raising \$587 million. In February 2018, Indonesia launched \$1.25 billion worth of green sukuk. In February 2018, Indonesia raised \$3 billion in sovereign sukuk including \$1.2 billion green sukuk. In March 2018, The Islamic Development Bank issued \$1.25 billion sukuk. The issuance of these sukuk could have a positive impact on environmental management by reducing the risk of pollution and enhancing countries capabilities to sustain development. (Akram, 2019)

From this perspective, rapid growth in Islamic financial funds creates new sources of capital for financing green projects. Global assets of the IFIs increased from US\$2 trillion in 2016 to \$2.6 trillion in 2017 and are offered in more than 60 countries. Based on US\$2 trillion, Islamic finance asset accounted for about 1.2 percent of the global financial market of US\$127 trillion (Trade online, June 2017). Financial indicators show that in 2017 the Islamic financial market grew by 13-15 per cent and expected to reach US\$3 trillion by 2020. For instance, Islamic banks in the United Arab Emirates (UAE) registered a 10.9% growth rate in assets during 2014-17 compared to 4.4% for conventional banks during the same period. Financing by Islamic banks also outperformed conventional banks, recording a 10.2% growth in 2014-17 compared to 3.8% for conventional banks (Khaleej Times, 2018).

Ethical investment

Ethical investment is defined by Cowton as the *“use of ethical and social criteria in the selection and management of investment portfolios, generally consisting of company shares. Ethical investors are not only concerned about the financial returns on their portfolios and the risks involved, but also with the characteristics of the companies in which the funds are placed. This involves the nature of the company’s goods or services, the location of its business and the manner in which it conducts its affairs. The strategy for ethical investment can either be positive or negative, the former being supportive of companies which are particularly approved of in terms of their products, activities or business methods”*. (Wilson, 1997)

Investors, including financial institutions, should avoid investing in projects or products whose business transactions are considered unethical. In Islam, investment in unethical business represents a clear violation of the Shari‘ah principles and thus must not be allowed.

To avoid investment in unethical businesses, allocation of resources and production activities are integrated into the financing policies of the IFIs to ensure compliance with Islamic principles. Banks must be sure that their investment activities will not abuse, misuse or excessively exploit natural resources to the extent of jeopardizing the future sustainability for the

coming generations. Natural resources are God's bounty to human beings the protection of which should be regarded as a religious duty. Investing these resources should be associated with their development to increase their future value.

In order to promote justice and improve equity in Muslim societies, investment consideration must include both sustainability and responsibility. Sustainable and responsible investing involves building strategies that "take into account a company's performance in three pillars (people, planet, and profit or social, environmental and financial) of sustainable development, when selecting and managing investment portfolios" (Fung & Yau 2010). Implementing such an investment will strengthen the principles of sustainable development to prolong resources availability and reduce poverty. In a socially responsible society, activities of all agents, including individuals, corporations, and institutions should be driven by ethical and responsible actions which serve the general welfare of society. Future generations have an equal right to these resources; therefore, it is incumbent on the present generation, in part through the use of indigenous technologies, to ensure that resources will not be subjected to excessive exploitation and depletion.

In some sectors of economic activity, modern technologies may be inappropriate. Muslims must invest in the development of technologies that ensure the sustainability of resources. The Qur'an (55:10) states: "And the earth He has established for living creatures." Most technologies used in Muslim countries are produced outside, with little or no attention paid to the management of the environment. Islamic banks should take notice of the overall impact of investment in terms of technologies employed in enterprises being financed.

Green investment

Green investment is a source of finance for green projects, the ultimate aim of the collectivity of which is to generate a green economy. Green investment involves selecting projects which strengthen the fundamentals for sustainable development, thus reducing the risk of environmental degradation. Sustainability requires not only efficient management of non-renewable resources to prolong their life span, but also protection on renewable resources from polluters and other negative human agents. A green economy is one in which the vital linkages among the economy, society, and environment are taken into account and in which the transformation of production processes, and consumption patterns, while contributing to a reduced waste, pollution, and the efficient use of resources, materials, and energy, will revitalize and diversify economies, create decent employment opportunities, promote sustainable trade, reduce poverty, and improve equity and income distribution (United Nations, 2012).

Green investment should be endorsed by financial institutions to promote green finance. Banks can provide preferential green credit with favorable terms to finance environment-friendly projects with the support from governmental authorities. Governments should incentivize banks to develop green structures to make green finance available and attractive to all investors including foreign enterprises.

In many developing countries, foreign direct investment (FDI) plays a key role in economic development. Environmental policies in these countries should encourage investment in green FDI projects by providing foreign companies with incentives to channel funds in magnitudes proportional to the "green-ness" of any investment.

Alternatively, green finance, in terms of capital markets, can be buoyed by encouraging the establishment of secondary, as well as primary, markets for green bonds. In developing countries, green Sukuk could become a powerful instrument for both public and private enterprises to build green economies sustaining development. To ensure environmental sustainability, foreign investment, whatever the form of capital, should comport with green investment policies.

Public financial institutions were the initial issuers of green investment instruments. Only recently have private banks, also including Islamic banks, begun issuance of green bonds / Sukuk to support investments in green projects. Currently, the green bond market stands at US\$155 billion and is projected to increase to US\$200 billion by the end of 2018 and US\$1 trillion by 2020. Since 2008, with a view to encouraging investment in climate solutions through projects with low-carbon and climate resilient growth, the World Bank has issued 132 Green Bonds in 18 currencies valued at more than US\$10 billion (World Bank, 2017).

Green bonds / Sukuk raise capital and investment for new and existing projects generating environmental benefits. The Green Bond Principles (GBP), updated as of June 2018, constitute voluntary process guidelines that seek to promote transparency, disclosure and integrity in the development of the green bond market by setting procedures for issuance of green bonds. The GBP are intended for broad use by the market: they provide issuers with guidance on the key components involved in launching a marketable green bond / Sukuk issue; they aid investors by ensuring availability of information necessary to evaluate the environmental impact of green investments and assist underwriters by moving the market towards standardized disclosure facilitating transactions.

Sukūk are among one of the important products issued by governments and IFIs towards social and economic development. These instruments can be classified as environment-friendly investments aimed at protecting the environment and reducing the risk of environmental damage. It is important to keep in mind that in the Islamic economy, project assessment and the decision to fund projects are subject to strict criteria with regard to the social costs and benefits to society at large. More financing will be granted to productive projects with a direct impact on meeting basic social needs. In Muslim societies, the objective of investment is to promote market activities through the creation of real assets and to generate new employment opportunities for the youth. “Through the application of properly designed evaluation criteria, according to Islamic ethical values, investments in projects meant for the production of socially less desirable/undesirable goods will be eliminated. The funds released will be available to produce socially desirable goods.” (Sattar, 1992). The United Nations opines that “The financial sector both public and private should be encouraged to support financing projects and activities that contribute to sustainable development. Governments should ensure that funding provided by Central or Federal banks support government policies in pursuit of sustainable development objectives. Commercial Banks should also be encouraged to support sustainable development projects through regulatory and incentive measures. Appropriate measures should be introduced to discourage banks from providing loans that encourage land speculation, or the funding of environmentally damaging and polluting activities.” (United Nations, 2012)

Conclusion

Ethical investment advocates allocation of natural resources to reduce waste and prolong the lifespan of these resources. It is to discourage environmental degradations by imposing ethical

guidelines on human activities in relation to the production, consumption and distribution of resources. The global linkages of climate change, driven by the rising temperatures and the more frequent occurrence of natural disasters, have spurred individuals, institutions, groups and nations to demand that urgent action be taken against pollution and waste at both national and international levels. Islamic financial institutions should be encouraged to invest in ethical businesses and contribute to sustainable development. From the Shariah perspective, it is prohibited to invest in unlawful products or in projects that contribute to waste and pollution.

Green funding by financial institutions holds prospects for the strengthening of the fundamentals for future sustainability by reducing excessive exploitation of resources and negative externalities. Governments must encourage green investment in enterprises that contribute to sustainable development. Islam represents a set of ethical and moral values, the implementation of which supports sustainable growth. For Muslims, protecting the environment is a religious duty which should be observed closely in terms of both production and consumption. As a creation of God, man is instructed to follow the guidelines of the Sharī'ah and work for the betterment of all people. Islam promulgates well-defined principles serving to protect the environment and, therefore, it is the duty of investors, including Islamic bankers, to avoid investment that cause harm to the environment.

The issuance of Green sukuk could serve as a solution to the challenges facing our planet. Rapid growth in population, urbanization, energy consumption and transportation has increased the concern about the impact of these forces on future sustainability. Islamic finance, driven by the Sharia compliance, offers an opportunity to reduce the risk of environmental degradation by supporting ethical investments and embracing green innovation. Islamic banks should continue to fund green projects to ensure that investment in the Islamic economy contributes to the principles of equity, justice and human sustainability.

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