Harnessing value-based financing for achieving SDGs: Social innovation model for Arab municipalities

Lulwa H. Budalamah[2], Ahmed O. El-Kholei[1][*]and Odeh R. Al-Jayyousi[2]

[1]*Department of Natural Resources and Environment, College of Graduate Studies, Arabian Gulf University, Kingdom of Bahrain*

[2]*Department of Innovation and Technology Management, College of Graduate Studies, Arabian Gulf University, Kingdom of Bahrain*

*E-mail: aelkholei@agu.edu.bh

*https://orcid.org/00003641-7445-0001-

Abstract

It is inconceivable to achieve Sustainable Development Goals (SDGs) at the national level without accomplishing them locally. In the Arab region, municipalities face challenges to meet a widening gap between expenses and revenues. Securing a locally based sustainable financing model is of paramount importance. *Wāqf* is a value-based funding model that can offer new opportunities for sustainable financing to achieve SDGs locally. It agrees with Islamic law with the intent to promote social cohesion. The paper examines whether *Wāqf*, as a financing modality, is a Social Innovation (SI) model and its potential to finance development at the local level. The research method applied in this paper is qualitative. The authors compiled over 50 published articles, books, and reports covering the *Wāqf* and SI. The paper attempts to establish and explain linkages between *Wāqf* and both SI and SDGs. Content analysis using qualitative data analysis software is the research technique the researchers applied.

The paper argues that *Wāqf* is an SI model. It can fund municipal initiatives that contribute to achieving SDGs. Results reveal linkages between *Wāqf* and SI and show that they contribute to sustainable development in human settlements. Besides, they both play a decisive role in fostering social equity, economic development, and environmental sustainability. *Wāqf* is a value-based financing model that satisfies the conditions and attributes of SI. *Wāqf* is an instrumental tool for financing development and supporting the attainment of SDGs in cities and municipalities. To harness the potential of *Wāqf* as an enabler for SDGs, organizational and business model innovation are needed to ensure transparency, accountability, and organizational learning.

Keywords: *Wāqf*, New Urban Agenda, Local Governments, Local administrations

Introduction

The contemporary environmental crisis is a symptom and an outcome of the consumerism culture that capitalism underpinned. It is the outcome of applying neoliberal policies, which eroded governments' ability to control national economies. Neoliberalism transformed the geographies of production by globalizing markets and free trade agreements, which resulted in moving production plants to cities of developing countries, such as Vietnam, Mexico,

India, and China.

Cities are amongst the affected and responsible parties for the present environmental crisis. According to an UN-HABITAT report released in 2011, cities occupy about 2 percent of the Earth's surface and emit up to 70 percent of greenhouse gases that contribute to climate change. Addressing climate change must be at the city level, as cities can be efficient (Hoornweg et al., 2010; UN-HABITAT, 2011). The environmental crisis in cities is an indicator of market and policy failures.

Since the industrial revolution, cities have transformed into the cradle of innovation and the location of production. Today, some cities like New York and London are wealthier than nations. For example, "The GDP of the State of New York is larger than that of Spain or South Korea. In Latin America, São Paulo State alone is richer than Argentina, Uruguay, Paraguay, and Bolivia combined. Guangdong in China is wealthier than Russia or Mexico" (Tavares, 2016).

Without changing production processes and consumption patterns that evolved during the twentieth century, achieving sustainable economic and ecological stability is unattainable. Hence, the industrial capacity will experience sudden and uncontrollable decline because of ecosystems' limits (Meadows, D.H., Meadows, D.H., Randers, J. and Behrens III, 1972; D. H. Meadows et al., 1992; Turner, 2008).

Climate change and biosphere integrity are among the planetary boundaries that anthropogenic activities drive and alter how Earth Systems function. Anthropogenic activities are often urban-based. Transgression of the planetary boundaries risks and undermines Earth Systems' status in which modern societies developed (Steffen et al., 2015). A planetary boundary is 'not' a global threshold or tipping point (Rockström *et al.*, 2018). However, knowing planetary boundaries expands the policy importance of environmental footprints. Planetary boundaries provide a set of consensus-based approximations of the regenerative and absorptive capacity (Fang et al., 2015). Without transgressing planetary boundaries, 150 nations can eliminate extreme poverty and meet physical needs, including nutrition, sanitation, access to electricity for all people (O'Neill, Fanning, Lamb, & Steinberger, 2018).

In 1992, the UN released an action plan for sustainable development. In 2000, the member states of the UN defined the eight Millennium Development Goals (MDGs). They pledged their commitment to the MDGs to be achieved by 2015. Sachs in 2012 noticed that the poverty rate in developing countries has declined by half between 1990 and 2010. He also noticed that progress was not uniform or balanced in all countries of the world. The MDGs were subject to criticism, including opportunities missed to achieve positive interactions between goals (Waage et al., 2015). Sachs (2012) argued for SDGs to replace MDGs. "The idea of the SDGs has quickly gained ground because of the growing urgency of sustainable development for the entire world" (Sachs, 2012, p. 2206). In his opinion, SDGs must address the issues of population growth, social inclusion, and environmental sustainability through good governance for sustainable development.

In 2015, the UN General Assembly articulated 17 SDGs and their corresponding targets and indicators. The first eight SDGs serve the human rights agenda. The next eight SDGs require investment to achieve SDGs. To assure good governance for sustainable development, SDG 17 addresses Partnerships for the Goals. It is possible to cluster these 17 SDGs into three groups where SDGs 1-10 are people-oriented, SDGs 11-15 aim to achieve environmental sustainability, and SDGs 16 and 17 are governance-

related goals.

Financing sustainable development is a predicament that challenges developing countries because of their institutional frameworks, legitimacy, accountability, and capacities (Najam, 2002). Many Arab countries suffer from external debts. Private finance is not reliable either because private savings are declining, as World Bank data suggest, and limited access to foreign funding sources. Most of the Official Development Assistance (ODA) is declining, and a significant share is for humanitarian support. Flows of Direct Foreign Investments to the region are also declining (Sarangi et al., 2018). Public-Private Partnerships (PPP) are another means of financing development. In the Arab world, PPP usually funds less strategic and loosely regulated sectors that are typically more profitable to the private sector (Sarangi et al., 2018).

Most municipalities in the Arab region depend on the State budget to finance development initiatives and avail municipal services. Local budgets depend on finance from the central government. Lack of funding was among the prime reasons for many Arab municipalities' poor performance in adopting and implementing the Hyogo Framework for Action to assure that cities are not ready to face disasters (El-Kholei, 2019a). Sarangi *et al.* (2018) painted a grim picture of State budgets in the Arab region. State budgets of many Arab countries cannot finance implementing initiatives to actualize SDGs. State budgets in the Arab world fall into one of the following groups: (1) oil and gas exports; (2) a mix of sources including taxes; or (3) low-income countries with development challenges. Oil-producing countries are vulnerable to fluctuations in global energy markets. The schemes of these countries for future development aim to diversify their economic base to minimise their dependence on exports of oil and gas. Non-oil-producing countries depend on taxes and levies to finance their government initiatives. Depending on unstable oil prices, workers' remittances, and tax revenues below potential and inequitable strain the government's budget. The share of income taxes to the GDP is below the global average. They allocate a significant percentage of their budgets to repay and service debts leaving little monies for development initiatives. Several Arab countries are among ODA recipients, mostly for humanitarian purposes (Sarangi et al., 2018).

Capital mobilized from either domestic or foreign borrowing requires financing projects for sustainable development and achieving the 17 SDGs. Sarangi *et al.* (2018) indicated that the private sector in many Arab countries could not borrow foreign capital because of international constraints. The savings rate in non-oil-producing countries is low, indicating that the domestic capital accumulation process is not enough to support initiatives to accomplish SDGs and their targets. Most of the Foreign Direct Investments target hydrocarbon and petrochemical industries. The Arab region's ability to mobilize private capital for financing larger infrastructure projects was modest (Sarangi et al., 2018).

Synergies and integration that SDG 17 requires are necessary for funding initiatives to achieve SDGs (Stafford-Smith et al., 2017). However, there is a need for innovative financing mechanisms to mobilize domestic resources for social change, economic growth, and protecting the natural resources in the Arabian city. Cities cannot be perceived as a problem, rather an opportunity. They are the cradle of innovation. Historically, cities were the birthplace of ideas and products that served modern societies.

The Addis Ababa Action Agenda (AAAA), elaborated in 2015, outlined a framework that combines financial and non-financial resources. Trade, technology, capacity building,

and systematic issues and their delivery channels, such as public and private; domestic and international, are non-financial means. AAAA aims to produce the fiscal space that governments need to follow a sustainable path to development. AAAA depends on establishing an enabling environment for business. Mitigating and managing risks to lever the private sector's power supports the development and functioning of the framework that AAAA recommends. Accordingly, companies and investors can increase the quality of their returns through responsible, sustainable opportunities. The suggested framework encourages businesses to bring innovation and technology to accelerate progress (Sager, 2015).

It is evident that through a quick review of the 17 SDGs that technological innovation is central to be on a path to a sustainable society. A mix of the following elements: Product, Process, Position, and Paradigm, referred to as (4Ps), constitute the map for innovation space:

1) Paradigm: How the municipality can improve doing business?
2) Product: What the municipality offers the residents?
3) Process: How the municipality offers the commodity or service?
4) Position: Who are the targeted group? How to reach them?

The above model applies to a governmental institution, a private sector company, and a non-government organization. Innovation rests on various concepts and domains (Al-Jayyousi, 2017), including but not limited to design thinking (Ford, n.d.), assumption testing (Paul & Elder, 2019), question framing (Wedell-Wedellsborg, 2017), systems thinking (Richmond, 2018), leverage points and complexity (D. Meadows, n.d.).

There are four types of innovation. First is incremental innovation, where an organization uses contemporary technology and increases the value to the customer, such as features, within an existing market. Second is disruptive innovation, which is an attribute of introducing new technology or processes to an organization's present market (Christensen et al., 2015). The emergence of smartphones, for example, gave rise to applications for the sharing economy, such as Uber. The third is architectural innovation. It uses lessons, skills, and overall technology developed in an industry and then applies them within a different market. Satellite dishes, for instance, depend on technologies developed originally for military purposes. The fourth is known as a radical innovation, which involves generating revolutionary technology. It is all about new industries or industries that end existing ones (Lopez, 2915; Satell, 2017).

Since the 1980s, and in association with the rise of neoliberalism, many governmental and non-governmental institutions started adopting and applying models developed for private sector companies, such as the strategic planning model. This movement gave rise to the new SI concept in addressing social problems, including availing infrastructures and education and health services and tackling issues such as unemployment and gender inequality.

SI can be mapped based on the innovation space as framed by the 4Ps model mentioned earlier. SI is concerned with discovering or rediscovering a new concept to meet a social need. SI intends to improve performance and to devise solutions for social or environmental problems. SI serves a targeted population, such as women, youth, the poor, an ethnic group, and the like. SI rests on stakeholder participation in decision-making and then enabling and empowering them (Edwards-Schachter et al., 2012; Mulgan, 2007; Phills et al., 2008), thus it is central to sustainable development and

serves the purpose of SDGs 16 and 11. SI is instrumental for a sustainable society that is a human-centered community, which balances economic progress while resolving social ills and protecting the environment.

A sustainable city must apply principles for good governance, achieve social justice, protect the environment, and mitigate market imperfections and encourage the transformation towards a circular economy and green growth (El-Kholei, 2019b). SI can improve services available to the residents using eGovernment applications, an example of incremental innovation.

Re-inventing and modernizing *Wāqf* is amongst the non-conventional means for funding sustainable development (Al-Jayyousi, 2001, 2012, 2017; El-Kholei, 2019b). It is possible to reform *Wāqf* by applying incremental and radical innovations by adopting technologies like fintech and blockchain. The paper addresses the following three research questions:

1. Is *Wāqf* an SI model?

2. If the answer is yes, then how can *Wāqf* finance executing initiatives to achieve SDGs at the local level?

3. Given that in many cases, the revenues of *Wāqf* are less than their expenditures, then how to re-invent and revive *Wāqf* in the Arab cities?

Methodology

The research methodology applied in this paper is qualitative. The authors compiled more than 50 published articles, books, and reports that cover *Wāqf* and SI. The document review aims to drawi linkages between *Wāqf* and both SI and SDGs.

The research framework used is Noticing-Collecting-Thinking. It is a three-step method (Friese, 2019; Seidel, 1998) that starts by noticing things, i.e., observing trends and patterns in the investigated material, including documents, reports, and interviews. The second step is coding the data by collecting and sorting occurrences of words. Next is an iterative process where the researchers re-coded, merged, and deleting codes. The last step is thinking about the facts and bits and pieces of information the researchers elicit from the data. The authors then searched the coded quotations for categories, groups, orders, and patterns that explain the relationships amongst the concepts, i.e., the citations and codes to which they belong.

The researchers used Atlas.ti version 8 to analyze the qualitative data. The software offers a wide choice of tools to enable a thoughtful, systematic inquiry of the gathered documents. The software facilitates generating networks to illustrate relationships between codes according to their joint frequencies of quotations. The researchers used a hierarchical layout to prioritize a left to right node placement and directed links — the network emphasizes group structures within the network. The software also generates a co-occurrence table of codes, including the joint frequencies of each pair of codes indicating an association between them—a c-coefficient ranges between zero and one. In case the coefficient is zero, then there is total independence between both codes; when it equals one, then there is a perfect association between them. The researchers used Equation 1 to calculate the co-occurrence coefficient:

Equation 1

$$c = \frac{n_{1-2}}{(n_1 + n_2) - n_{1-2}}$$

where

> c is the co-occurrence coefficient
>
> n_1 is the quotations to which code n_1 is grounded
>
> n_2 is the quotations to which code n_2 is grounded
>
> n_{1-2} is the quotations common to both codes n_1 and n_2

Most of the literature dealing with *Wāqf* addressed it from the perspective of Islamic law, *Shari'ah*, such as reciting verses from the *Qur'an* and sayings of Prophet Muhammed (PBUH), i.e., *āl Āḥādyt*, that encourages supporting philanthropic activities. Other references highlighted the importance of *Wāqf* in the past, arguing that since the State confiscated the properties, *Wāqf*, a vehicle for development and social change, lost its role. However, few scholars attempted to link *Wāqf* to sustainable development and SDGs. For this reason, the joint-frequencies and c-coefficients, as the next section reveals, are modest. They show a relationship but do not reflect the significance of the linkages. The following pages attempt to answer the three research questions.

Results

Wāqf is an SI model

Wāqf is an endowment. It is an Islamic institution that historically affected the economic and social development of the Muslim world. It still has the potential to support the development of both the Arab and Muslim world at large. The *Quran* emphasizes the importance of charity as an act of devotion to Allah. However, the *Quran* does not include specific reference to *Wāqf*; jurists' responsibility is to develop its legal parameters through centuries (Sait & Lim, 2005, 2006b). The Islamic worldview articulates what constitutes a good and sustainable life founded on equity and social solidarity (Al-Jayyousi, 2012).

In the Arabic language, *Wāqf* is both a noun and a verb. It is the act where a person freely settles or ties up her/his property, such as a farm, grazing land, an orchard, or a building, to use receivers in perpetuity. Once the owner dedicates that revenues from her/his property for a specific purpose forever, then the property is a *Wāqf*. The Islamic law (*Shari'ah*) is central to the rules governing *Wāqf*, which are also related to other law and society areas, such as family law, inheritance, and the like. There are two types of *Wāqf*. The first is public, known as (*Wāqf khyry*). The dividends of a property finance a specific purpose, such as a clinic or a school. The second type is family (*Wāqf āhly*), where the founder's family receives their share from the returns that the property yields. When her/his descendants are distinct, then the endowment is dedicated to benevolent purposes (Sait & Lim, 2005, 2006b).

In the past, *Wāqf* provided many services, such as support to small and micro enterprises, loans, and education and health services. In this sense, *Wāqf* is a civil society institution that integrates into the economic and social domains. *Wāqf* is a mechanism for wealth distribution as it aims to close the gap between the rich and the poor. According to Sait and Lim (2005, 2006), in the Ottoman empire, they actively involved women in

managing their properties and administering their *Wāqf*. "In the 19th century, the founding European-inspired municipalities marked a formal repudiation of the *Wāqf* system in favor of government-coordinated systems for delivering public goods" (Kuran, 2001).

Figure 1 depicts the organizational structure for a *Wāqf*, which requires a trustee to manage it. There are three spending categories:

1. Invest in the property (*Wāqf*) to finance the running costs and maintain the property (*Wāqf*).

2. Finance non-profit initiatives, such as sponsoring needy students, female-headed households; and

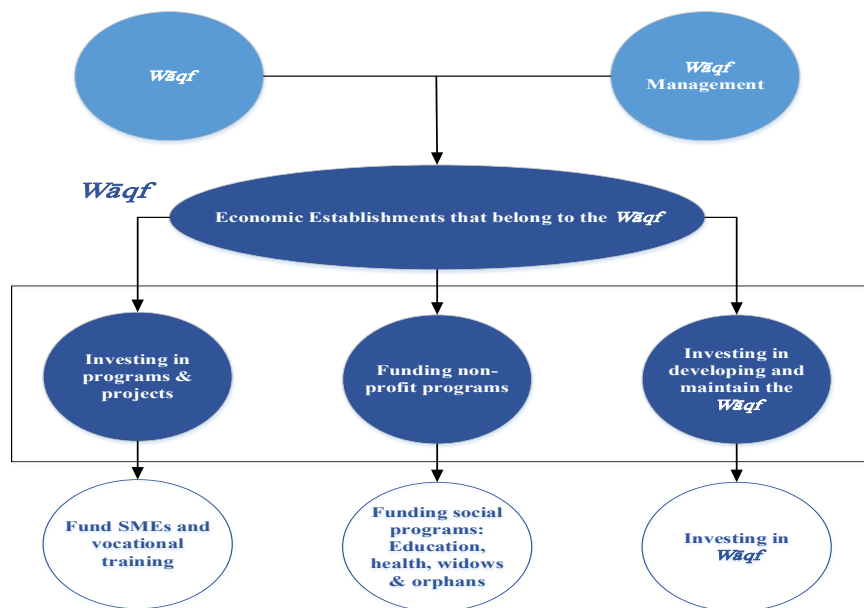3. Diversify the portfolio by establishing new programs and projects, such as real estate development.

Figure 1. The organizational structure of *Wāqf*

The *Wāqf* arose as a reliable pledge instrument to give property owners economic security in return for social services. In the Islamic world, *Wāqf* was a decentralized channel for availing public goods. The legitimacy of the *Wāqf* system eroded because the manager of the *Wāqf* often avoided the directives of the founder (Kuran, 2001). Following the fall of the Ottoman empire, both the British and French maintained *Wāqf*. However, following gaining independence, many governments in the Arab region confiscated *Wāqf* properties. It was a political move to introduce a planned economy. According to Moussa (2006), in Tunisia, a decree issued on 31 May 1956 abolished *habous* lands, i.e., *Wāqf*, and transferred 200 thousand hectares to State lands (El-Kholei & Zaibet, 2010). In Egypt, the *Wāqf* system helped resist the British occupation and lost its developmental role once the State amended *Wāqf* assets to its properties following 1952 (Ghanem, 2015).

After reviewing literature and case studies, Howaldt *et al.* (2014) concluded that the crucial first dimension of SI is that social practices depend on their local frame, including culture, historical, social, and economic contexts. Social practices take place in the

realities these elements define. Second, social practices function across boundaries. Any SI concept must consider the local environments and the cross-relations between the primary agents, such as the economy, the State, and society. SI initiatives aim to reach and serve marginalized population groups, i.e., those that both market and State failed to satisfy their needs. To survive, the marginalized population groups have no other choices except to continue digging their environment through unsustainable practices. For that very reason, SI concepts must address relations of power between agents and levels of administration. SI initiatives require changing the mindset of the local actors, including planners, city administrators, and the residents by building and developing their capacities, which is a requirement for building partnerships that assure ownership of the initiative and guarantee the sustainability of both exerted efforts and invested capital (Howaldt et al., 2014; Mulgan, 2007).

Private sector companies use SI to meet their social responsibilities. Companies attempt to pay back to their communities and their workers through corporate social responsibility. Many companies seek SI. for effective CSR as it supports the firm's community links in developing innovations, processes, and product-oriented (Segarra-Oña et al., 2017).

The linkages between *Wāqf* and SI reflect they both can lead to a sustainable community, Figure 2. They both address and resolve societal problems. The *Wāqf* system is unique and sustainably contributes to social justice as it contributes to wealth distribution.
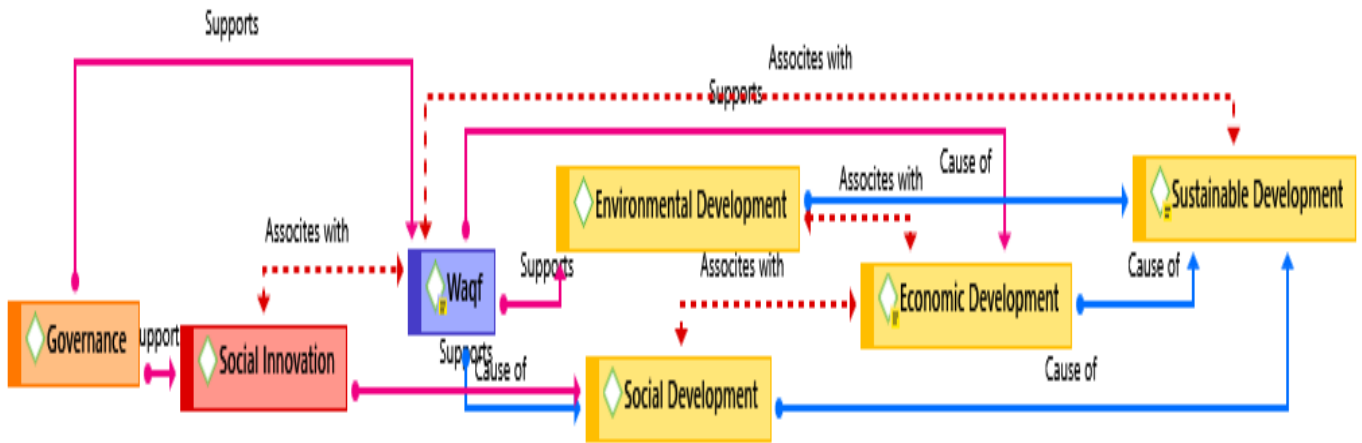

Figure 2. Network representing linkages between *Wāqf*, SI and sustainable development

Both the *Wāqf* system and SI have a positive impact on economic, social, and environmental development. The number of quotations that connect sustainable development with *Wāqf* and SI is 2,482 and 3,834, with c-coefficients that are 0.38 and 0.43, respectively, Table 1. The table shows the importance of governance to promote sustainable development. The count and coefficient reached 3,932 and 0.73, respectively, showing the importance of governance for attaining sustainable development. The result also suggests the need for more research on *Wāqf* and its role in sustainable development.

Table 1: *Code co-occurrence table showing relationships between Wāqf, SI and sustainable development*

	● Governance Gr=4356		● Social Innovation Gr=7740		● Waqf Gr=4039	
	count	coefficient	count	coefficient	count	coefficient
● **Sustainable Development** Gr=4952	3932	0.73	3,834	0.43	2,482	0.38

Note: Gr is the number of quotations in the manuscripts used in the analysis to which the code is grounded.

Table 2 shows the linkages between *Wāqf*, SI, and components of sustainable development. Once more, governance is crucial for economic, social, and environmental development, where the coefficients reached 0.74, 0.68, and 0.76, respectively. Both SI and *Wāqf* had a moderate association with the three components of sustainable development.

Table 2: *Code co-occurrence table showing relationships between Wāqf, SI, and components of sustainable development*

	● Economic Development Gr=5048		● Environmental Development Gr=4646	● Social Development Gr=4912	
	count	coefficient	count	count	coefficient
● **Sustainable Development** Gr=4952	4,837	0.94	4,604	4,537	0.85
● **Governance** Gr=4356	4,010	0.74	3,881	3,736	0.68
● **Social Innovation** Gr=7740	4,072	0.47	3,746	3,740	0.42
● ***Wāqf*** Gr=4039	2,467	0.37	2,219	2,250	0.34

Note: Gr is the number of quotations in the manuscripts used in the analysis to which the code is grounded.

Wāqf can support financing SDGs

The New Urban Agenda (NUA) adopted in 2016 includes the Quito Declaration on Sustainable Cities and Human Settlements for All and an implementation plan. NUA confirms member states' commitment to sustainable urban development as a critical step for a sustainable society through a comprehensive and coordinated method at the global, regional, national, subnational, and local levels. Implementing NUA contributes to localizing the 2030 Agenda and its 17 SDGs, including Goal 11 of making cities and human settlements inclusive, safe, resilient, and sustainable (UN-HABITAT, 2016).

Not all countries can finance actions for actualizing SDGs. Kharas and McArthur (2019) estimated that since 2015, governments worldwide had spent about $21 trillion per year on SDG-related sectors, such as health and education. Most of the spending is in

high-income countries. Meanwhile, middle- and lower-income countries cannot mobilize resources to finance initiatives to achieve sustainable development by 2030 (Kharas & McArthur, 2019). The report resonates with the findings of Sarangi *et al.* (2018).

Wāqf can support multiple SDGs, including no poverty, no hunger, and drinking water for all. The founder of a *Wāqf* aims to serve the community till the day of resurrection. According to a report that Al Arabiya aired, 1400 years ago, Othman Ibn Affan, a companion of the Prophet (PBUH) and the third Caliphate, bought a water well in Madinah, Saudi Arabia. People fetched water. Today that well irrigates a farm that the Ministry of Agriculture administers (Al-Harbi, 2017) and uses the dividends for charitable purposes. Today, Ibn Affan's *Wāqf* includes hotels and shops in Madinah. It is an example that fits the description that Figure 1 portrayed.

Another example where *Wāqf* supports sustainable development is AlRajhi Endowment established in 1996. The Saudi businessperson Sheikh Saleh bin Abdulaziz AlRajhi established an Islamic *Wāqf* comprising three departments: charity, real estate, and agriculture, where the dividends from the real estate and agriculture finance charitable purposes and costs for operating and maintaining the assets. AlRajhi Endowment is in line with the organizational structure of *Wāqf* that Figure 1 presented earlier. The endowment targets the poor, orphans and widows, the students, and avail health services. The agriculture department applies environmental-friendly production practices, such as solar energy and organic production techniques (Alrajhi Endowment, 2019).

Another example showing the linkages between *Wāqf* and sustainable development is the Centre for Endowments that the ruler of Dubai established. It administers a broad collection of *Wāqf* projects, including but not limited to hotel rooms, taxis, stocks, parking lots. The dividends finance various purposes, including medical research, science, technology, and innovation; training and skills development and youth projects (Mohammed Bin Rashid Global Center for Endowment Consultancy, 2019)

Figure 3 shows the linkages between *Wāqf* and the 17 SDGs. SDGs in red are human rights, while those colored in green are investments. Sustainable communities are about institutional frameworks and partnerships. When the researchers examined the co-occurrence of SDG 11 against SDGs 16 and 17, the c-coefficients were 0.73 and 0.8, respectively, Table 3. Sustainable communities are sensitive to the environment. The c-coefficient of the co-occurrence between SDG 11 and environmental SDGs, i.e., 12, 13, 14, and 15, was 0.68 for each. Sustainable cities are fair. The co-occurrence c-coefficient between SDG 11 and SDGs 1, 2, 3, 4, 5 and 7 are 0.73, 0.73, 0.69, 0.77, 0.68 and 0.68, respectively, Table 3. Sustainable City is economically active and productive. The c-coefficients of co-occurrence between SDG 11 and SDGs 8, 9, 10, and 12 are 0.72, 0.77, 0.69, and 0.68, respectively, Table 3.
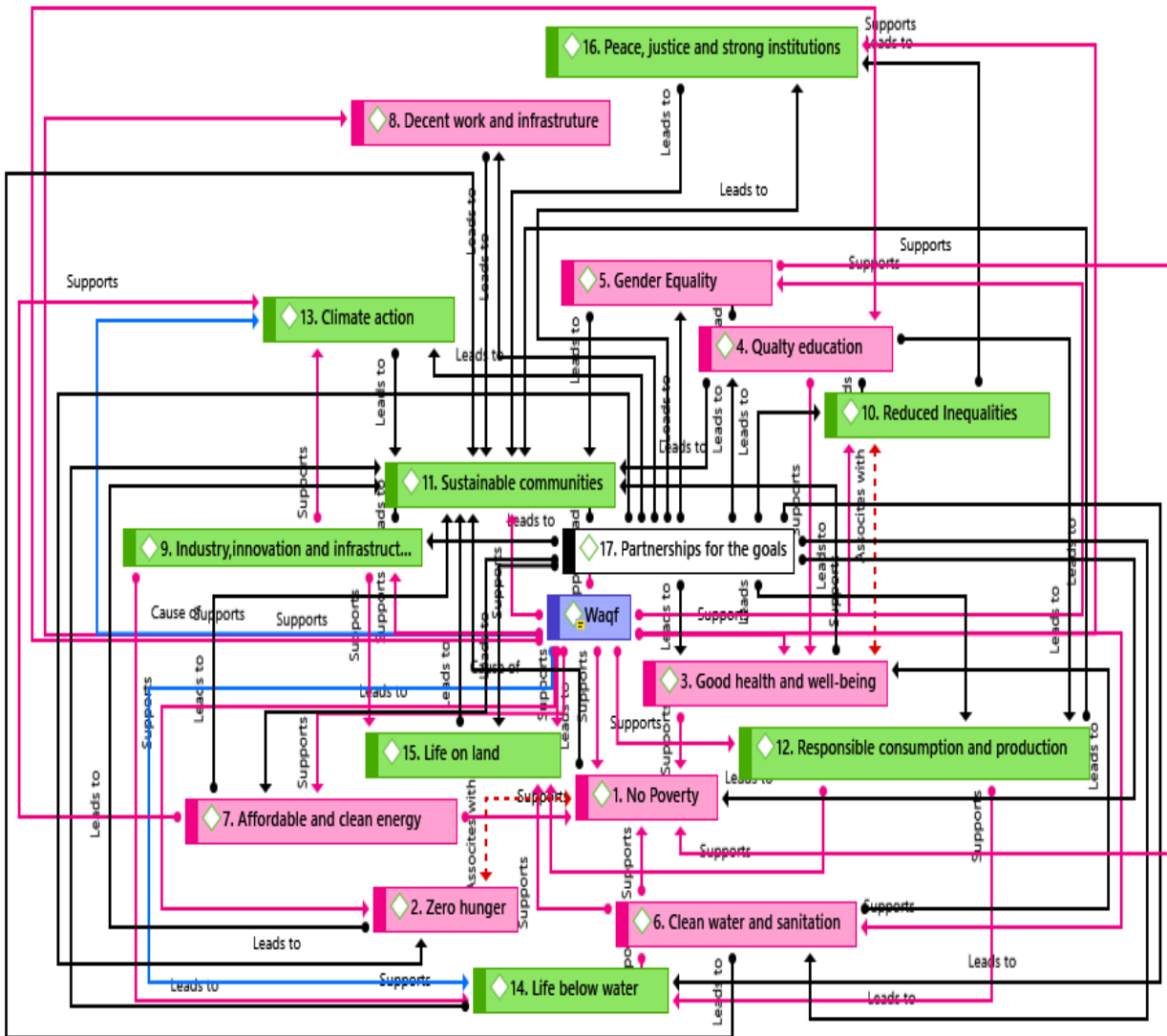
Figure 3. Linkages between *Wāqf* and the 17 SDGs

Both Figure 2 and Figure 3 show that *Wāqf* supports the sustainable city and all 17 SDGs. It is about an agreement between the founder and the institutions of society. It explains the linkage between *Wāqf* and both SDG 16 and SDG17, as the figure depicts. *Wāqf* supports and leads to achieving sustainable communities, i.e., SDG 11, by promoting social justice through contributing to achieving No Poverty; Zero Hunger; Good Health and Well-being; Quality Education; Gender Equality; and Clean water and sanitation. *Wāqf* can drive a city to be a productive and economically prosperous metropolis by initiating economic growth by contributing to Decent work and infrastructure; Industry, innovation, and infrastructure; Reduced inequalities; and Responsible consumption and production. *Wāqf* projects can contribute to conserving the environment by financing initiatives that actualize Affordable and clean energy; Climate action; Life below water, and Life on land. Both the *Wāqf* system and SI have a positive impact on economic, social, and environmental development. The number of quotations that connect sustainable development with *Wāqf.*

Table 3: *Co-occurrence SDG 11 with other SDGs*

Dimension	SDGs	● 11. Sustainable communities Gr=4566	
		count	coefficient
Social Equity	● 1. No Poverty Gr=4,015	3,633	0.73
	● 2. Zero hunger Gr=4,009	3,630	0.73
	● 3. Good health and well-being Gr=3,812	3,432	0.69
	● 4. Quality education Gr=4,249	3,823	0.77
	● 5. Gender Equality Gr=3,753	3,376	0.68
	● 6. Clean water and sanitation Gr=3,806	3,395	0.68
Economic Growth	● 8. Decent work and infrastructure Gr=3,948	3,560	0.72
	● 9. Industry, innovation and infrastructure Gr=4,183	3,804	0.77
	● 10. Reduced Inequalities Gr=3,867	3,449	0.69
	● 12. Responsible consumption and production Gr=3886	3,430	0.68
Conserving the Environment	● 7. Affordable and clean energy Gr=3,816	3,399	0.68
	● 13. Climate action Gr=3,797	3,376	0.68
	● 14. Life below water Gr=3,785	3,371	0.68
	● 15. Life on land Gr=3,785	3,375	0.68
Institutional Framework	● 16. Peace, justice and strong institutions Gr=3,977	3,599	0.73
	● 17. Partnerships for the Goals Gr=4,374	3,972	0.80

Note: Gr is the number of quotations in the manuscripts used in the analysis to which the code is grounded.

Table 4 suggests that *Wāqf* and SI support the 17 SDGs. The counts and coefficients are comparable to those of Table 2.

Table 4: *Wāqf and SI support the 17 SDGs*

SDGs	● Social Innovation Gr=7,740		● *Wāqf* Gr=4,039	
	count	coefficient	count	coefficient
● 1. No Poverty Gr=4,015	3,511	0.43	786	0.11
● 2. Zero hunger Gr=4,009	3,511	0.43	787	0.11
● 3. Good health and well-being Gr=3,812	3,319	0.40	799	0.11
● 4. Quality education Gr=4,249	3,470	0.41	1,163	0.16
● 5. Gender Equality Gr=3,753	3,324	0.41	715	0.10
● 6. Clean water and sanitation Gr=3,806	3,342	0.41	763	0.11
● 7. Affordable and clean energy Gr=3,816	3,344	0.41	764	0.11
● 8. Decent work and infrastructure Gr=3,948	3,509	0.43	725	0.10
● 9. Industry, innovation and infrastructure Gr=4,183	3,741	0.46	739	0.10
● 10. Reduced Inequalities Gr=3,867	3,359	0.41	788	0.11
● 11. Sustainable communities Gr=4,566	3,493	0.40	998	0.13
● 12. Responsible consumption and production Gr=3,886	3,385	0.41	769	0.11

● 13. Climate action Gr=3,797	3,320	0.40	766	0.11
● 14. Life below water Gr=3,785	3,320	0.40	764	0.11
● 15. Life on land Gr=3,785	3,322	0.40	764	0.11
● 16. Peace, justice and strong institutions Gr=3,977	3,533	0.43	735	0.10
● 17. Partnerships for the Goals Gr=4,374	3,739	0.45	897	0.12

Note: Gr is the number of quotations in the manuscripts used in the analysis to which the code is grounded.

A scheme to revive *Wāqf* for sustainable development

The revival of the *Wāqf* is possible when the State applies the following interlinked measures.

1. Establish an enabling environment by reviewing policy, financial, legal, and organizational arrangements.

2. Revize processes, including audit, knowledge management, quality assurance.

3. Support activities that include pilot projects and awards.

4. Set a system for monitoring and evaluation.

At the strategic level, aligning *Wāqf* with SDGs requires that the trustees of *Wāqf* have the capacity for strategic planning, asset management, cash flow analysis, risk management, and financial planning. Identifying socio-economic priorities and needs require proper policy dialogue with key stakeholders to enlighten both the public and policymakers of the relevance and adequacy of *Wāqf* to achieve SDGs. This strategic alignment requires an institutional review to assess the capabilities, needs, and gaps. Besides, setting business and operational plans is crucial to monitor financial effectiveness and Key Performance Indicators. The institutions managing *Wāqf* must grow from the culture of philanthropy into a mindset business model.

In terms of business model innovation, there is a need to articulate the value proposition for *Wāqf* to elaborate and apply criteria for effectiveness, efficiency, and sustainability. The value proposition requires sense-making and a visioning process to ensure fulfilling unmet needs and thus developing and capturing value. Many modalities are available, including new financial products like *Sukuk* for investing in health care facilities and infrastructures, such as renewable energy.

At the organizational level, the *Wāqf* institutions must build knowledge management capability to learn from best practices and adopt professional knowledge in asset administration and risk management. Professional executive and certified training in *Wāqf* management necessitate building human capital in operational and financial management. Besides, civic intelligence needs development through valuing public goods and re-thinking the redistribution of wealth.

Technological innovation is crucial for reviving *Wāqf* to assume its role as an alternative financing mechanism. It means availing alternative possibilities and economies of scope and scale through harnessing Information and Communication Technologies like Fintech and blockchain and apply crowd financing. Also, sharing knowledge and leveraging innovation networks is critical to building the dynamic and innovative capabilities of the

Wāqf institutions.

In sum, revitalizing *Wāqf* requires setting conditions and ensuring enablers to enhance the organizational capacity of *Wāqf* institutions. It entails instilling a new organizational culture and new processes for strategic planning, knowledge management, financial management, and audit, investing in the human capital to evolve knowledge workers who can capture and add value.

Discussion

Cities are where humanity will win the battle for SDGs (Tavares, 2016). In the Arab region, municipalities struggle to get ends meet. Financing development is a challenge in the Arab world (Najam, 2002; Sarangi et al., 2018), thus requiring an alternative. *Wāqf* is a practice known in the Arab and Muslim worlds. It is a unique, value-based financial mechanism that historically has contributed to community development (Sait & Lim, 2005, 2006a).

It is crucial to find and harness indigenous, value-based, and community-based funding models to face the budget and financial constraints challenging cities and municipalities in the Arab region. *Wāqf* model culturally inspires that, and presents alternative possibilities for resourcing the public sector and achieving SDGs.

The results show that the *Wāqf* business model links to community-initiatives and crosses institutional boundaries and sectors to foster the SDGs. There is a correlation between *Wāqf* and SI in terms of the 4Ps of innovation space, i.e., Product, Process, Position, and Paradigm (Al-Jayyousi, 2017; Satell, 2017b). *Wāqf* is an innovative funding mechanism because it depends not on a government or private sector budget but civil society and the public.

Wāqf can support multiple SDGs, including the goals related to poverty alleviation, water-food-energy security, and socio-economic development. There are clear linkages between *Wāqf* and the 17 SDGs. It seems there is a remarkable association between sustainable communities and institutional frameworks and partnerships that are conditions and enablers for SDGs. Also, the analysis shows linkages between sustainable communities and the environment as reflected in the c-coefficient of the co-occurrence between SDG 11 and environmental SDGs, i.e., 12, 13, 14, and 15, was 0.68 for each. Results show that sustainable cities are fair and economically active, and productive.

Conclusion

To achieve the SDGs at the national level, it is a *sine qua non* to accomplish them locally. Municipalities and local administrations depend on a central government budget, which often suffers from a deficit. *Wāqf* is the needed alternative to contribute to financing development at the local level, as it is a practice known in the Arab and Muslim worlds. It is a unique, value-based financial mechanism that historically has contributed to community development.

The social, economic, and environmental crises are symptoms of market and policy failure. Adopting innovation policies to promote social cohesion and responsible growth requires locally-rooted solutions that local knowledge and culture inspire.

SI evolved as a new social application to meet social needs superiorly compared to contemporary solutions. In Europe, the USA and Canada, Latin America, and Asia,

successful SI models met marginalized population groups' needs.

The analysis suggests that *Wāqf* is an SI model and could support the Arab states' efforts to achieve the 17 SDGs. There are successful and sustainable cases of *Wāqf* in Saudi Arabia and UAE that the paper presented. However, for *Wāqf* to assume its role as a mechanism for financing development, the national governments must establish the circumstances that assure enablers to improve the organizational capacity of *Wāqf* institutions. It requires introducing new administrative culture and innovative practices for strategic planning, knowledge administration, financial management, and audit, investing in human resources to evolve knowledge workers skilled in capturing and adding value. The emerging technologies like blockchain and fintech offer new possibilities to develop new business models for promoting innovations in the *Waqf* model.

Endnotes

[1] The researchers included 50 documents, such as papers, reports, and the like as data coded for analysis, but not all of them were used in drafting the mansucrit.

[2] *āl Āḥādyṯ* are the sayings of the Prophet that his companions circulated and documented. They cover a wide range of topics including, but not limited to honoring parents, seeking knowledge, choosing a wife death, patience, the bliss of Paradise, and providing a helping hand.

[3] *Wāqf* is, to certain extent, similar to trust funds, where an asset belongs to a trust, held by the trustees for the beneficiaries.

[4] It is a term meaning *Wāqf* in North Africa.

References

Al-Harbi, M. (2017). *The story of "The Cessation of Osman bin Afan" and his 1400-year-oldwell.* AlArabyia. https://www.alarabiya.net/ar/saudi-today/2017/05/28/ قصة-وقف-عثمان-وبئره-النابعة-منذ-1400-عام

Al-Jayyousi, O. (2001). 'Dublin Statement and Islamic Principles'. In Farouqi and Bion (Ed.), *Water Resources Management and Policy*. United Nations.

Al-Jayyousi, O. (2012). *Islam and Sustainable Development: New Worldviews*. Routledge. https://www.routledge.com/Islam-and-Sustainable-Development-New-Worldviews/ Al-Jayyousi/p/book/9781409429012

Al-Jayyousi, O. (2017). *Integral Innovation*. Taylor and Francis. https://books.google. com.bh/books/about/Integral_Innovation.html?id=wCIIDwAAQBAJ&source=kp_ cover&redir_esc=y

Alrajhi Endowment. (2019). *Alrajhi Endowment | Solidarity and Development.* About Us. http://www.rajhiawqaf.org/ar/Pages/Default.aspx

Christensen, C. M., Raynor, M. E., & McDonald, R. (2015). *What Is Disruptive Innovation?* Harvard Business Review. https://hbr.org/2015/12/what-is-disruptive-innovation

Edwards-Schachter, M. E., Matti, C. E., & Alcántara, E. (2012). Fostering Quality of Life through Social Innovation: A Living Lab Methodology Study Case. *Review of Policy Research*, *29*(6), 672–692. https://doi.org/10.1111/j.1541-1338.2012.00588.x

El-Kholei, A. O. (2019a). Are Arab cities prepared to face disaster risks? Challenges

and opportunities. *Alexandria Engineering Journal*, *52*(2), 479–486. https://doi.org/10.1016/J.AEJ.2019.04.004.

El-Kholei, A. O. (2019b). Ibn Khaldun's 'ilm al 'umran: a model for planning the sustainable city in the Arab region. *Archnet-IJAR: International Journal of Architectural Research*, *13*(2), 276. https://doi.org/10.1108/ARCH-01-2019-0004

El-Kholei, A. O., & Zaibet, L. (2010). Land Policy in Africa: North Africa Regional Assessment. In *Land Policy Initiative*. AUC-ECA-AfDB Consortium. https://www.uneca.org/sites/default/files/PublicationFiles/regionalassesment_northafrica.pdf

Fang, K., Heijungs, R., & De Snoo, G. R. (2015). Understanding the complementary linkages between environmental footprints and planetary boundaries in a footprint. *Ecological Economics*, *114*(April), 218–226. https://doi.org/10.1016/j.ecolecon.2015.04.008

Ford, C. (n.d.). *An Introduction to Design Thinking: Process Guide*. Retrieved July 26, 2019, from https://dschool-old.stanford.edu/sandbox/groups/designresources/wiki/36873/attachments/74b3d/ModeGuideBOOTCAMP2010L.pdf?sessionID=573efa71aea50503341224491c862e32f5edc0a9

Friese, S. (2019). *Qualitative data analysis with ATLAS.ti* (Third Edit). SAGE.

Ghanem, I. (2015). *al Awqaf wa al Moujtam'a wa al Siyassah fi Misr (Waqf, Society and Politics in Egypt)* (Second). MADARAT for Research and Publishing.

Hoornweg, D., Sugar, L., Freire, M., Anderson, C., Bhada, P., Trejos, C. L., Dave, R., Lee, M., Claudia Lorena Trejos, R. D., & Lee, M. (2010). *Cities and Climate Change: An Urgent Agenda*. http://siteresources.worldbank.org/INTUWM/Resources/340232-1205330656272/CitiesandClimateChange.pdf

Howaldt, J., Butzin, A., Domanski, D., Kaletka, C., Davies, A., Dhondt, S., Kesselring, A., Kopp, R., Millard, J., Oeij, P., Rehfeld, D., Schaper-Rinkel, P., Schwarz, M., Scoppetta, A., Wagner-Luptacik, P., & Weber, M. (2014). *Theoretical Approaches to Social Innovation, A Critical Literature Review*. https://www.si-drive.eu/wp-content/uploads/2014/11/D1_1-Critical-Literature-Review.pdf

Kharas, H., & McArthur, J. (2019). *How much does the world spend on the Sustainable Development Goals?* https://www.brookings.edu/blog/future-development/2019/07/29/how-much-does-the-world-spend-on-the-sustainable-development-goals/

Kuran, T. (2001). The Provision of Public Goods under Islamic Law: Origins, Impact, and Limitations of the Waqf System. *Law & Society Review*, *35*(4), 841–898. https://doi.org/10.2307/3185418

Lopez, J. (2915). *Types of Innovation*. Constant Contact Tech Blog. https://techblog.constantcontact.com/software-development/types-of-innovation/

Meadows, D.H., Meadows, D.H., Randers, J. and Behrens III, W. W. (1972). *The limits to growth: a report to the club of Rome*. Potomac Associates - Universe Books.

Meadows, D. (n.d.). *Leverage Points: Places to Intervene in a System*. Academy for Systems Change. Retrieved July 26, 2019, from http://donellameadows.org/archives/leverage-points-places-to-intervene-in-a-system/

Meadows, D. H., Meadows, D. L., & Randers, J. (1992). *Beyond the limits: global collapse*

or a sustainable future. Earthscan Publications Ltd.

Mohammed Bin Rashid Global Center for Endowment Consultancy. (2019). *AWQAF*. Mohammed Bin Rashid Global Center for Endowment Consultancy. http://www. mbrgcec.ae/

Mulgan, G. (2007). *Social Innovation, What it matters and How it can be accelerated*. http://eureka.sbs.ox.ac.uk/761/1/Social_Innovation.pdf

Najam, A. (2002). Financing Sustainable Development: Crises of Legitimacy. *Progress in Development Studies*, *2*(2), 153–160. https://doi.org/10.1191/1464993402ps036xx

O'Neill, D. W., Fanning, A. L., Lamb, W. F., & Steinberger, J. K. (2018). A good life for all within planetary boundaries. *Nature Sustainability*, *1*(2), 88.

Paul, R., & Elder, L. (2019). *Distinguishing Between Inferences and Assumptions*. The Foundation for Critical Thinking. http://www.criticalthinking.org/pages/distinguishing-between-inferences-and-assumptions/484

Phills, J. A. J., Deiglmeier, K., & Miller, D. T. D. (2008). Rediscovering social innovation. *Stanford Social Innovation Review*, *6*(4), 34–43. https://www.researchgate.net/publication/242511521

Richmond, B. (2018). *The "Thinking" in Systems Thinking: How Can We Make It Easier to Master?* System Thinker. https://thesystemsthinker.com/the-thinking-in-systems-thinking-how-can-we-make-it-easier-to-master/

Rockström, J., Richardson, K., Steffen, W., & Mace, G. (2018). Planetary Boundaries: Separating Fact from Fiction. A Response to Montoya et al. *Trends in Ecology & Evolution*, *33*, 233–234. https://doi.org/10.1016/j.tree.2018.01.005

Sachs, J. D. (2012). From Millennium Development Goals to Sustainable Development Goals. *The Lancet*, *379*, 2206–2211. https://doi.org/10.1016/S0140-6736(12)60685-0

Sager, M. (2015). *Third International Conference on Financing for Development*. https://www.un.org/esa/ffd/ffd3/wp-content/uploads/sites/2/2015/04/Business-Forum-Summary.pdf

Sait, S., & Lim, H. (2005). *Waqf (Endowment) and Islamic Philanthropy* (No. 7; Islam, Land & Property Research Series).

Sait, S., & Lim, H. (2006a). *Land, Law and Islam: Property and Human Rights in the Muslim World*. UN-HABITAT and Zed Books.

Sait, S., & Lim, H. (2006b). Land, Law and Islam. *Property and Human Rights in the Muslim*. http://www.globalprotectioncluster.org/_assets/files/tools_and_guidance/housing_land_property/By Themes/Rule of Law/Land_Law_Islam_Property_Human_Rights_2006_EN.pdf

Sarangi, N., Taha, H., Zein, S., & Salha, A. (2018). Overview of Financing Sustainable Development in the Arab Region. In N. Saab & A.-K. Sadik (Eds.), *Financing Sustainable Development in Arab Countries Overview of Financing Sustainable Development in the Arab Region* (pp. 17–53). AFED Arab Forum for Environment and Development. http://www.afedonline.org/webreport2018/1.pdf

Satell, G. (2017a). *The 4 Types of Innovation and the Problems They Solve*. Harvard

Business Review. https://hbr.org/2017/06/the-4-types-of-innovation-and-the-problems-they-solve?referral=03759&cm_vc=rr_item_page.bottom

Satell, G. (2017b). The 4 Types of Innovation and the Problems They Solve The 4 Types of Innovation and the Problems They. *Harvard Business Review Digital Articles*, *6/21/2017*, 1–6. https://hbr.org/2017/06/the-4-types-of-innovation-and-the-problems-they-solve

Segarra-Oña, M., Peiró-Signes, A., Albors-Garrigós, J., & Miguel-Molina, B. De. (2017). Testing the Social Innovation Construct: An Empirical Approach to Align Socially Oriented Objectives, Stakeholder Engagement, and Environmental Sustainability. *Corporate Social Responsibility and Environmental Management*, *24*(1), 15–27. https://doi.org/10.1002/csr.1388

Seidel, J. V. (1998). Qualitative Data Analysis. In *The Ethnography : A User's Guide*. Qualis Research. www.qualisresearch.com

Stafford-Smith, M., Griggs, D., Gaffney, O., Ullah, F., Reyers, B., Kanie, N., Stigson, B., Shrivastava, P., Leach, M., & O'Connell, D. (2017). Integration: the key to implementing the Sustainable Development Goals. *Sustainability Science*, *12*(6), 911–919. https://doi.org/10.1007/s11625-016-0383-3

Steffen, W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M., Biggs, R., Carpenter, S. R., de Vries, W., de Wit, C. A., Folke, C., Gerten, D., Heinke, J., Mace, G. M., Persson, L. M., Ramanathan, V., Reyers, B., & Sörlin, S. (2015). Planetary boundaries: Guiding human development on a changing planet. *Science*, *347*(6223), 1259855. https://doi.org/10.1126/science.1259855

Tavares, R. (2016). *Forget Nations: Cities Will Transform the Way We Conduct Foreign Affairs*. World Economic Forum | Cities and Urbanization. https://www.weforum.org/agenda/2016/10/forget-the-nation-state-cities-will-transform-the-way-we-conduct-foreign-affairs

Turner, G. (2008). *A Comparison of the Limits of Growth to Growth with Thirty Years of Reality*. https://www.manicore.com/fichiers/Turner_Meadows_vs_historical_data.pdf

UN-HABITAT. (2011). *Hot Cities: battle-ground for Climate Change*. www.unhabitat.org

UNHABITAT. (2016). *Habitat III*. Urban Agenda. https://habitat3.org/the-new-urban-agenda

Waage, J., Yap, C., Bell, S., Levy, C., Mace, G., Pegram, T., Unterhalter, E., Dasandi, N., Hudson, D., Kock, R., Mayhew, S., Marx, C., & Poole, N. (2015). *Governing the UN Sustainable Development Goals: interactions, infrastructures, and institutions*. https://doi.org/10.1016/S2214-109X(15)70112-9

Wedell-Wedellsborg, T. (2017). *Are You Solving the Right Problems?* Harvard Business Review. https://hbr.org/2017/01/are-you-solving-the-right-problems

تسخير التمويل القائم على القيمة لتحقيق أهداف التنمية المستدامة: نموذج الابتكار الاجتماعي للبلديات العربية

لولوة. بودلامة²، أحمد عثمان الخولي¹*وعودة راشد الجيوسي²

¹قسم الموارد الطبيعية والبيئة، كلية الدراسات العليا، جامعة الخليج العربي، مملكة البحرين

²قسم الابتكار وإدارة التقنية، كلية الدراسات العليا، جامعة الخليج العربي، مملكة البحرين

*بريد الكتروني: aelkholei@agu.edu.bh

*https://orcid.org/00003641-7445-0001-

المُستَخلَص

مـن المسـتحيل تحقيـق أهـداف التنميـة المسـتدامة على المسـتوى الوطنـي دون تحقيقهـا محليـاً. فـي المنطقـة العربيـة، تواجـه البلديـات تحديـات لسـد الفجـوة الآخـذة فـي الاتسـاع بيـن النفقـات والإيـرادات. إن تأميـن نمـوذج للتمويـل المسـتدام على الصعيـد المحلـي لـه أهميـة قصـوى. يعتبـر «الوقـف» نموذجـاً للتمويـل القائـم على القيمـة، ويمكـن أن يوفر فرصـاً جديـدة للتمويـل المسـتدام لتحقيـق أهـداف التنميـة المسـتدامة محليـاً. وهـو يتفـق مـع الشـريعة الإسـلامية ومقبـول اجتماعيـا. وتبحـث الورقـة مـا إذا كان الوقـف، بوصفـه وسـيلة تمويـل، نموذجـا للابتـكار الاجتماعـي وإمكانيـة تمويـل التنميـة على المسـتوى المحلـي. طريقـة البحـث المطبقـة فـي هـذه الورقـة هـي طريقـة نوعيـة. جمـع المؤلفـون أكثـر مـن 50 مقالـة منشـورة، وكتبـاً، وتقاريـر تغطـي الواقـف والابتـكار الاجتماعـي. وتحـاول الورقـة إقامـة وشـرح الروابـط بيـن الوقـف والأهـداف الإنمائيـة المسـتدامة. وتوضـح الورقـة إن الوقـف هـو نمـوذج للابتـكار الاجتماعـي. ويمكنـه تمويـل المبـادرات البلديـة التـي تسـاهم في تحقيـق أهـداف التنميـة المسـتدامة، وتكشـف النتائـج عـن الروابـط بيـن الوقـف والابتـكار الاجتماعـي لأنهمـا يسـاهمان فـي التنميـة المسـتدامة فـي المسـتوطنات البشـرية. وعـلاوة على ذلـك، فـإن كلا منهمـا يلعـب دورا حاسـما فـي تعزيـز العدالـة الاجتماعيـة، وتخفيـف حـدة المشـاكل الاجتماعيـة والبيئيـة، وإعـادة توزيـع الثـروة. إن الوقـف هـو نمـوذج تمويـل قائـم على القيمـة يفـي بشـروط وخصائـص مفهـوم الابتـكار الاجتماعـي حيـث يعتبـر الوقـف آليـة مفيـدة لتمويـل التنميـة ودعـم تحقيـق أهـداف التنميـة المسـتدامة فـي المـدن والبلديـات. ولتسـخير إمكانـات الواقـف كممكّـن لتحقيـق أهـداف التنميـة المسـتدامة، هنـاك حاجـة إلـى الابتـكار فـي البنـاء تنظيمـي ونمـوذج الأعمـال لضمـان الشـفافية والمسـاءلة والتعلـم المؤسسـي.

الكلمـات الدالـة: الوقـف، جـدول الأعمـال الحضريـة الجديـد، الحكومـات المحليـة، الإدارات المحلية.