



Urban Sustainability and the Role of Islamic Wealth in Mega-OIC Cities: Implications for SDGs

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INTRODUCTION

Urbanization is increasingly dominating the global discourse. Studies show that two-thirds of the global population will live in cities by 2050 (UN 2019). Meanwhile, more than 52% of the 1.8 billion population of the 57 Organization of the Islamic Cooperation (OIC) countries live in urban areas as of 2020. This figure represents an increase of more than 8% compared to the year 2000 (SESRIC 2019). In 2020 (see Table 7.1), five of the world's largest 20 cities are located in OIC member countries

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Table 7.1 Largest 20 cities in the world from 1950 to 2030 (forecast), OIC cities highlighted

1950	1970	1990	2010	2020	2030 (forecast)	
New York	12,338	Tokyo	32,530	Tokyo	38,323	Tokyo
Tokyo	11,275	Osaka	18,389	Delhi	21,935	Delhi
London	8361	Osaka	16,191	Mexico City	20,132	Shanghai
		New York	15,272	Shanghai	19,980	Mumbai
Osaka	7005	Mexico City	8831	São Paulo	19,660	Beijing
Paris	6283	Los Angeles	8378	São Paulo	19,660	Mumbai
Moscow	5356	Paris	8208	Osaka	19,492	São Paulo
Buenos Aires	5098	Buenos Aires	8105	Mumbai	19,422	Mexico City
Chicago	4999	São Paulo	7620	New York	18,365	Dhaka
Calcutta	4513	London	7509	Los Angeles	10,883	Dhaka
Shanghai	4301	Moscow	7106	Seoul	10,518	Cairo
Los Angeles	4046	Chicago	7106	Buenos Aires	10,513	Osaka
Mexico City	3365	Calcutta	6926	Cairo	9892	Dhaka
Berlin	3338	Rio de Janeiro	6791	Delhi	9726	Calcutta
Philadelphia	3128	Janeiro	6603	Rio de Janeiro	9697	New York
Rio de Janeiro	3,026	Nagoya	6036	Paris	9330	Karachi
Saint Petersburg	2903	Shanghai	5811	Moscow	8987	Buenos Aires
		Mumbai	5811	Nagoya	8407	Calcutta
				Rio de Janeiro	12,374	Chongqing
					15,233	Guangzhou
					15,726	Calcutta
					19,996	Osaka
					19,976	Osaka
					19,885	New York
					19,885	New York
					23,865	Mexico City
					23,865	Mexico City
					24,239	Lagos
					24,502	Cairo
					27,374	Dhaka
					27,797	Karachi
					27,797	Karachi
					27,797	Karachi

1950	1970	1990	2010	2020	2030 (forecast)			
Mumbai	2857	Jakarta	Los Angeles	12,160	Guangzhou	15,174	Chongqing	17,574
Detroit	2769	London	Manila	11,891	Istanbul	15,099	Buenos Aires	17,380
Boston	2551	Beijing	Moscow	11,461	Kinshasa	14,118	Manila	16,956
Cairo	2494	Philadelphia	Chongqing	11,244	Manila	13,942	Istanbul	16,756

Source: United Nations Stats

(Dhaka, Cairo, Karachi, Lagos, and Istanbul). This has increased from one OIC city from 1950 to 1970 (Cairo), two in 1990 (Cairo and Jakarta), and four in 2010 (Dhaka, Cairo, Karachi, and Istanbul). By 2030, four mega-OIC cities will be among the 10 largest cities in the world, up from two cities today. Each one of these cities will host population of more than 24 million inhabitants, 10 times the population of Cairo in 1950.

This booming growth of mega cities in OIC countries or more generally in the world creates a set of urban planning and sustainability challenges unprecedented in human history. According to UN data (UN 2019), 67 cities in the world had populations of more than 5 million inhabitants in 2018, up from 18 in 1970, and this number is expected to grow to 109 by 2030. The cities of more than 5 million inhabitants were housing 1 in every 25 persons living on earth in 1970; they are housing one in every 9 persons today and will be housing one in every 7 by 2030. In the fastest-growing cities, this proportion is expected to increase in the next decade.

DEFINING SUSTAINABILITY OF MEGACITIES IN OIC COUNTRIES

Mega-OIC Cities

There is no formal definition of megacity in the economic literature, but the word generally refers to urban areas with a permanent population above 10 million inhabitants. By extension, the cities of the 57 member states of the Organization of Islamic Cooperation (OIC) with population above 3 million inhabitants are still referred to as mega-OIC cities in this chapter due to the fast growth observed.

Demographic Pressure in Mega-OIC Cities

The demographic expansion of OIC cities has not been uniform over the last decades. Figure 7.1 presents the average growth rate between 2000 and 2020 of the 35 largest OIC cities in 2020, all having a population over 3 million inhabitants in 2020. In a sample of 35 cities, 80% of them (28 cities) have an average annual growth rate of over 2% in the period 2000–2020 and the average growth rate of the overall OIC population over that period (SESRI 2019). These 28 cities have therefore added an impressive 50% total population to their urban area in a period of 20 years.

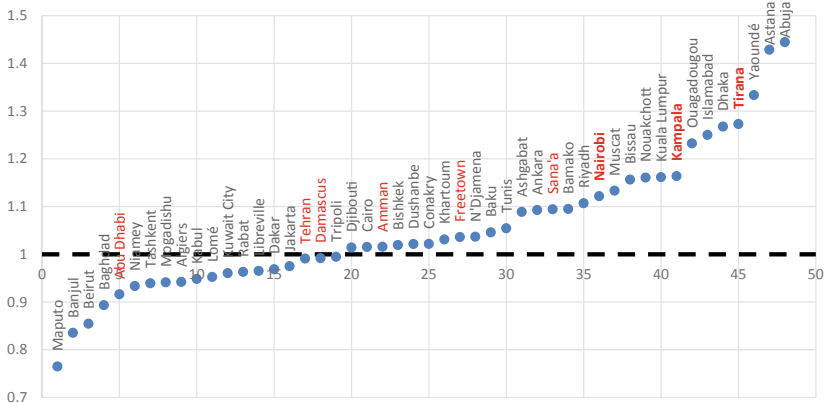


Fig. 7.1 Population growth 2000–2020 of largest OIC cities (> 3Mn inhabitants in 2020) (*Source* United Nations Stats)

Defining Urban Sustainability in Megacities

Adopting a people-centric agenda, and in reference to the UN definition of sustainable development as a development that promotes “prosperity and economic opportunity, greater social well-being, and protection of the environment,” this chapter proposes the definition of sustainable urban development in mega-OIC city context as **the most efficient and resilient path to provide housing, employment, and access to basic services for all urban dwellers**. By efficiency and resilience, the definition refers both to the economic and environmental dimensions of the sustainability agenda. Based on universal housing and access issues (i.e., access to employment and basic services) on the other hand, this definition focuses on the socioeconomic dimensions of sustainability onto the basic social requirements of individuals. Derived into operational strategies, this definition focuses on the planning efforts coupled with two dimensions: land-use strategies first, for the efficient and resilient provision of housing, employment, and basic services at all locations required in the city grid, and transportation planning on the other hand, to move urban dwellers and goods between these locations. This echoes the targets 11.1 and 11.2 of the Sustainable Development Goal 11.¹

¹<https://sustainabledevelopment.un.org/sdg11>.

THE MAIN DIMENSIONS OF URBAN SUSTAINABILITY ISSUES IN MEGA-OIC CITIES

Access to Adequate Safe and Affordable Housing

According to most recent data on percentage of population living in slum areas in the OIC countries (UN Stats, April 2020), slums and informal settlements are prevalent in mega-OIC cities. Statistics are available in 39 countries, mainly in Arab, South Asia, and sub-Saharan African regions. The data available show that the level of deprivation of urban residents in OIC countries is very acute and of great concern. With more than half of their population leaving in slums and informal settlements, 21 OIC countries out of 39 in the sample have extremely high deprivation rates, which run the risk of being compounded by environmental and social unrest risks. In 7 countries, more than 70% of the population live in slums. Only 10 out of 39 OIC countries for which data are available have a percentage of population living in slums below world average (33.3% of the urban population living in slum areas).

Access to Safe, Affordable, Accessible, and Sustainable Transport Systems

Beyond access to housing and basic services, access to transport is seen as the other main requirement to support inclusive, safe, resilient, and sustainable cities. OIC country performance in terms of access to safe, affordable, accessible, and sustainable transport for all varies markedly. In particular, a great divide is observed between low-income and high or middle-income countries in urban transport infrastructure stocks: despite numerous success stories of metro systems (Kuala Lumpur, Dubai, Istanbul, and Cairo), Bus Rapid Transit systems (Jakarta, Istanbul, Tehran, Tabriz, and Shiraz) or Light Rail systems (Rabat, Casablanca, Algiers, Oran, Tunis, Lusail, Dubai, etc.) in middle-income OIC countries, no mega-OIC city in low-income countries in OIC regions has been able thus far to develop a mass urban transit system (metro, tramway, or BRT system) to serve the growing mobility needs of their massive urban populations. Even in lower-middle-income countries, the provision of public transport options remains scanty and only few exceptions have managed to launch, with the support of international financial institutions, massive public transport projects in recent years. The detailed analysis of this public transport infrastructure gap, and the resulting access

gaps to sustainable mobility for urban dwellers, is beyond the scope of this chapter, but it is important to add to that acute infrastructure gaps the compounding effects of efficiency of the transport services, environmental performance of the transport systems, and road safety issues, which are discussed, for example, in Sum4All (2017)

Sustainability Issues in Mega-OIC Cities and Current Policy Interventions

Sections “[Access to Adequate Safe and Affordable Housing](#)” and “[Access to Safe, Affordable, Accessible and Sustainable Transport Systems](#)” have briefly exposed current concerns related to the poor performance of mega-OIC cities in providing access to housing, employment, and basic services for all urban dwellers. These concerns are further aggravated by two urbanization challenges which are commonly found in developing countries: (i) the demographic pressure, discussed in section “[Demographic Pressure in Mega-OIC Cities](#)” with an unprecedented growth in urban population in these cities that will continue over the next decades and (ii) the fast-paced urban sprawl that is observed in these cities with car-centric urban planning that drives city expansion over ever-expanding city boundaries.² On the other hand, central or local public administrations do not remain idle against the issues faced and typically use the instruments mentioned in Table 7.2 to control the related social, environmental, or economic issues, within the limitations of their available resources. Not all of these measures are found that lead to positive short-term and long-term impacts however, and this is briefly discussed in the table.

The dominant policy actions in developing countries, including OIC countries, are traditionally found in public investment programs and traditional land-use taxation. The last section of this chapter will discuss the application of these instruments in relation to the topic of this chapter.

²A detailed description of the urban sprawl phenomenon is beyond the scope of this paper, but classical works on this phenomenon can be found in the literature: Whyte et al. (1958) and Harvey and Clark (1965), etc. It is important also to note that urban sprawl is not a uniform outward growth of urban settlements but rather the extensive suburbs are generally of much lower density than the historic cores (Cox 2020). Therefore, the geographic expansion of cities happens at an even faster pace than the demographic growth in some contexts.

Table 7.2 Typical policy and public intervention instruments to address sustainability issues in mega cities

Typical instruments used in mega-OIC city context	Short-term impact	Long-term impact
Traditional land-value taxation (developed sites)	Positive efficient and progressive tax collection, non-distortionary	Positive (with risks) Efficient tax to fund public improvements but possible capital flight
White-land taxation	Positive progressive tax collection	Neutral Perceived as penalty rather than incentive to develop
Affordable housing schemes	Positive Addresses housing supply shortfalls and creates employment	Mainly Negative low livability, uncontrolled city expansion, aggressive resettlements
Public investment in infrastructure	Negative Resettlements, congestion Positive Employment, value creation, city attractiveness	Positive urban sustainability Negative Sprawl, land predation/speculation, public debt, environment

Source Authors

The Funding Gap

While there is no global consensus on a methodology to precisely assess the funding requirements to meet individual SDG targets, an interesting attempt to quantify these investment needs by compiling numbers from multiple sources can be found for SDG-11 in UN-Habitat (2020). The main data source is the Global Infrastructure Outlook published by the G20 which builds on a top-down econometric approach using panel data to draw inferences on infrastructure investment. The Global Infrastructure Outlook uses two main inputs: (i) the forecasted infrastructure investment in each country derived from recent history, with growth in investment occurring only when there is a substantial change to country's economic and demographic fundamentals; (ii) an investment need forecast which is derived from the performance of their best performing peers (i.e., in the same income bracket), after controlling for differences in the characteristics of each country.

UN-Habitat then crosses the Global Infrastructure Outlook results with data from the McKinsey Global Institute, United Nations Sustainable Development Solutions Network, and UNCTAD to fine-tune the

total investment gap forecasts. Results from this UN-Habitat estimation show that the total investment needed to meet all SDGs is estimated at \$38 trillion for the decade 2020–2030, a figure which can hardly be commented due to its aggregate nature. However, a very interesting outcome of UN-Habitat (2020), developed using a sample of developing cities and using the data sets presented above, is an estimate of individual investment requirements at the level of a typical city based on the city size and characteristics to meet SDG 11 targets by 2030. The results indicate that for a small city in a developing country, total average annual costs can be expected of around \$20–50 million. For a medium-sized developing city, the costs range from around \$140 million to more than \$500 million. And large developing cities, which is the category of concern in this chapter, can expect an average annual cost from around \$600 million to over \$5000 million, with average results being in billions of USD per city and year.

THE ROLE OF ISLAMIC ETHICAL WEALTH TOWARD MEGACITIES DEVELOPMENT: REVIEW OF BEST PRACTICES

Against the backdrop of the first section of this chapter, where the present-time sustainability issues of mega cities in OIC countries are discussed, this section will draw some lessons from best practices of ethical wealth in funding mega cities development and addressing sustainable development needs of large cities. The review will start by discussing urban planning considerations of Islamic cities in the history and the role played by ethical wealth in supporting the development of these cities. A brief comparative analysis with other historical setups will then be discussed to compare especially the historical urban development context of mega-OIC countries to other developing countries. The third part of this section will finally propose a taxonomy of the main channels through which Islamic ethical wealth has the potential to positively impact the urban development path of the mega-OIC cities in the post-industrial era and draw lessons from best practices.

Islamic Ethical Wealth in the Development of Cities: A Brief Historical Perspective

From pre-urban times to post-industrial era, cities and urban settlements have been formed by human societies originally inclined to nomadic and

agricultural life for specific functions which can generally be characterized around three essential elements: an administrative and military element (the “stronghold”), a religious element (“the temple”), and a commercial element (“the market”). While historians would argue that the religious and law and order imperatives have dictated the early formation of cities, it is evident that in modern days, with few exceptions, the economic functions have become the primary character of mega cities, including in OIC countries: the most common feature of the largest cities in each country remains that they are “economic capitals” and as a result, millions or tens of millions of workers and their families, in some instances, agglomerate in their urban areas extending over thousands of square kilometers in search of employment and the promise of a (relatively) safe comfortable living.

However, cities have a history and have become the lively result of multiple transformations through ages, sometimes in periods of peace, sometimes in periods of war. Even if the study of the genesis of cities, or more particularly of mega-OIC cities is beyond the scope of this chapter, looking at the historical formation and transformation of Islamic cities and comparing it to post-industrial cities may shed light on the available options for solving their sustainability issues. In particular, it is important to discuss how religion and power historically played an important part in shaping Islamic cities, even if the modern manifestation of this role is subdued today. In a fascinating review of waqfs and urban structures in Ottoman Damascus, Van Leeuwen (1999), for example, provides an interesting history of how Muslims transfigured the city of Damascus after its conquest in year 635. The choice of the location of the Mosques and the institution of endowments to fund the religious activities as well as other public services determined the urban landscape of the city up until modern times. In a more generic account of the role of waqfs in shaping cities, Deguilhem (2008) mentions that:

Waqf increasingly influenced and shaped numerous infrastructural aspects in cities in the Islamic world as well as in the daily lives of individuals living in the cities from the early Islamic centuries up through the medieval period to modern and contemporary times. Along with the expansion of Islam in newly-founded settlements and cities or its advent within already-existing inherited urban centres, the endowments played a major role in determining the physical configuration of cities due to the addition of Islamic edifices and complexes in the urban landscape or the adaptation

of existing ones in the form of mosques, madrasas, dâr al-hadîth, dâr al-qurân, zâwiyas, ribâts, bîmâristâns, soup kitchens, etc., the great majority of which were financed by waqf revenues. This income accrued to the endowments mostly by the rent of commercial buildings which belonged to the endowments such as boutiques, bakeries, artesian workshops, caravanserai, coffeeshouses, bathhouses, etc., or plots of agricultural land such as orchards, vegetable gardens, etc. (Page 928)

Even if scholarly attention has been mostly dedicated to major mosques (for Friday prayers) or religious edifices, it is interesting to note that the organization around Islamic edifices is also observed around secondary mosques, as explained, for example, by González Gutiérrez (2015) in the city of Madinat Qurtuba in Muslim Spain. The religious functions and activities of the city become therefore not only a manifestation of the urban life of its Muslim dwellers, but they have remained constant through centuries one of the most determining drivers of the urban development patterns. In parallel, the administrative functions of the cities, especially during Imperial times, required the institution of central buildings for the exercise of the judicial or executive powers of the state, which also played a role in shaping the administrative quarters, but their impact in shaping the overall development of cities may be limited to the central districts where these functions were generally agglomerated.

Comparative Analysis of the Historical Urban Development of Cities in Islamic and Other Developing Countries

The global discourse on the spatial organization of cities and megalopolis in regional or urban development studies has been dominated since the advent of the twentieth century by the study of European, North American, or East Asian contexts. The classical theories of urban sociology developed by Marx, Engels, Durkheim, Simmel, or Weber, for example, all theorize the structure of the cities against the backdrop of social relationships in the European context with specific cultural and social models that are hardly replicable to other parts of the world. Park and Burgess (2019), in their seminal work “the City” published in 1925, propose the paradigm of the “concentric ring theory,” and more than thirty years later, Mumford (1961) is credited for his effort to define and describe what a “Megalopolis” is and will become. Among the classical authors of the twentieth century, Max Weber (1966) could be credited, in his seminal

book “the City” first published in German and translated in 1958, for the effort extended to study Asian, Jewish, or Muslim cities and comparing them to European contexts. However, this comparison merely serves the purpose of contrasting “Occidental urbanism” with “Oriental urbanism” with the intention of reinforcing the legitimacy of the sociological paradigms that he proposes for the former. Therefore, it is very difficult to find, from among the authoritative authors of classical economic or social studies of the last century, relevant references to depict what urbanization and spatial organization processes characterize the structural transition of major urban centers in Islamic countries from periods of administration under Muslim rule (e.g., during Ottoman times) in pre-industrial era, to post-independence context with mega cities of several million inhabitants as discussed in the first section of this chapter.

In the absence of such knowledge in the literature, this chapter will briefly mention below three stylized facts about mega cities in Islamic countries that characterize their historical urban development patterns and which played a part in their modern time structures.

First and foremost, as described, for example, in Abu-Lughod (1980), the “chief contrast with cities generated under other legal systems” would be that Islamic cities have been structured around “communal settlements” or quarters attributed to supra-individual groups related to “kinship, descent, common origin or function.” In other words, the Islamic city was always by definition a multi-polar city, where each quarter, each district, was “administered” by some form of informal local authority and where the relationships between dwellers were dictated by a strong social interaction sometimes preceding the state rules. Until today, it is not uncommon therefore to travel across Islamic cities in the world and still find reminiscences of the Dyers district, the Sharqawa or Maghariba district, or the Jewish district, for example, with a spatial organization that has survived history (although the social organization has not in most instances). The quarters are bounded by what Eickelman (1999) calls “*Qaraba*,” which could be translated by kinship, that he defines as “the exchange of visits on feast days and on other occasions, by assistance and participation in the activities connected with births, circumcisions, wedding and funerals, graduation from school or memorization of the Qur’ân. The “heads of household (...) share certain minimal collective responsibilities,” and the administration of the quarter responds to unwritten communal rules that are transmitted from generation to generation. Eickelman (1999) therefore concludes that critics of Weber toward

Oriental cities and Muslim cities, in particular, that he blames for lacking the formal organization into urban communes (*Gemeinde*) and therefore being merely cities in an economic sense are at best idealistic, at worst biased and ethnocentric, and therefore should be rejected and denied.

Secondly as described shortly in the previous section of this chapter, the religious buildings played a central role in the spatial organization of towns and urban centers, and until today, codes of urbanism still give a high importance to the Mosque and the educational institutions.

Thirdly, as described, for example, in Van Leeuwen (1999), the waqf institution is presented as a determining factor in the growth and structure of Muslim cities which is absent (or secondary) in the Occidental cities but which has hardly survived to modern times (under colonial rule or in independent countries). Today, waqfs play therefore only a marginal role in shaping cities while they use to be of central importance, in particular, for example, under Ottoman rule.

Other theories attempt to analyze urban development patterns of Islamic cities by contrasting them to European or North American cities, but such studies generally refer to sociological or cultural factors to attempt to explain the relative difference in the fate of urban centers in the Islamic world which used to be the most advanced from an economic development perspective and are today lagging behind. For example, Bosker et al. (2013) try to find in religious practice a relevant instrument to describe the relative dip in economic performance of Islamic cities. In this sense, such studies even if econometrically correct fall into ethnocentric bias when identifying model variables.

This being said that even if comparatively the structure of cities in Islamic countries and in other sociological contexts varies markedly as briefly exposed above, in particular in relation to the religious institutions established in the Islamic cities, it is evident that these differences have been overshadowed by the most determining factor shaping the development of large cities since the second half of the twentieth century: the dominance of cars and motorized vehicles as primary transport mode. A substantial body of knowledge has been developed in regional studies and urban planning studies to analyze the advent of cars and the way this has profoundly changed the structure and shape of cities, especially suburban developments, but it is probably sufficient for the scope of this chapter to mention the main channel by which this revolution happened: the standards of road and street construction. As Southworth and Ben-Joseph (2013) puts it: “Each era of urban expansion has had its own

conceptions of the good city, its own processes and standards for city building.” And since the domination of the car in urban transport has been a universal phenomenon over the last century in all large cities across the globe, urban planning has developed across all geographies along one main dimension: the road and street network. The colonization of most developing countries by European powers has then led to the rapid diffusion of the dominant models of urban planning in Western Europe to most parts of the world, and accordingly very little marked differences remain between the urban planning of Islamic cities and their Western counterparts today. The next section will question whether this is welcomed or regretted historical fact.

The Positive Impact of Islamic Ethical Wealth on the Urban Development Path of the Mega-OIC Cities in the Post-industrial Era

In summary, the previous two sections have established that: (i) during pre-industrial era, the structure of Islamic cities was in stark contrast to the structure of Western cities, mainly in consideration of the polycentric nature of Islamic cities along communal subdivisions by kinship, origin, function or else, and in consideration of the primary role of waqfs and religious institutions in shaping city development, and (ii) this contrast has gradually disappeared in the course of the industrial and colonial era, and car-centric street and road design standards have subsequently dictated urban planning considerations.

At the same time, it was established in section “[The Main Dimensions of Urban Sustainability Issues in Mega-OIC Cities](#)” that mega-OIC cities are not sustainable, and in particular due to unsustainable transport planning and lack of provision of adequate housing. Three categories of policy instruments offer the opportunity to address these issues (tax instruments, non-tax incentive measures, and regulatory instruments), but massive public investment is also required and a recent study has established that for large developing cities, the annual investment effort required to transform the sustainability performance of the mega cities and achieve the SDG targets is in the range of billions of dollars of sustainable public or private investment (UN-Habitat 2020).

This chapter proposes now to discuss the role that Islamic Ethical Wealth can play in this context, both in light of the historical role it played in shaping cities in the pre-industrial era and in light of the financing gaps identified which are far beyond the capacity of the public sector and

local governments. Building upon Banister (1998), the implementation issues are addressed at four levels: decisions relating to the use of existing resources; decisions relating to new development; decisions relating to transport; and decisions relating to increasing resource efficiency³ within urban areas.

*The Role of Islamic Ethical Wealth in the Use
of Resources in Megacities*

Islamic Ethical Wealth plays a dual role with regard to the use of existing resources in mega-OIC cities:

- High net-worth individuals and families are often the largest property owners in the mega-cities, having heavily invested in land or real estate assets throughout recent decades, or having maintained their ownership of family properties and land assets despite incapacity (or absence of will) to develop them into “positive use”;
- At the same time, being the largest capital owners and having access to private finance, High net-worth individuals and families have the greatest potential to fund the regeneration of brownfield areas within cities, both on their own land and on the land of third parties.

The scale of the challenge is unprecedented due to the booming real estate prices in the fastest-growing cities. Doubling of land prices in less than a decade is observed in some contexts due to massive demographic pressure and due to supply and offer dynamics, and as a consequence, a large number of owners decide to hold land and property for long periods, even if not turned into productive use, to maximize value instead of developing it for housing or commercial activities. Land vacancy across OIC mega cities has not been studied to the authors’ knowledge but some examples offer good insights into the scale of the challenge. In the Kingdom of Saudi Arabia (KSA), for example, and as discussed in Zakaria et al. (2019), the issue is of magnitude, and as a consequence, KSA’s Council of Ministers approved a White Land Tax in November 2015. Under the new law, owners of empty plots of urban land designated for

³Banister (1998) mentions energy efficiency but we chose to extend the thinking on resource efficiency in general i.e. including water and food in particular which pose great challenge in the developing context of mega-OIC cities.

residential or commercial use will have to pay a tax of 2.5% of the value of the land each year.

Yet the tax instrument faces implementation issue, and beyond tax contributions, Islamic Ethical Wealth should lead the way in putting to use the extended land banks instead of speculating on their value appreciation. The waqf structure in particular, and the historical uses of it as discussed in the second section, is particularly adapted to turn these lands into productive assets, and some best practices have been recently implemented. Ali et al. (2016) mention the example of Penang State Islamic Religious Council which successfully enhanced value of waqf real estate developments through the implementation of nine housing project developments using the *ijarah* concept in Malaysia. The *Abraj-Al-Bait* project in Makkah al Mukarramah and *Awqaf Al-Rajhi* developments in the main cities across Saudi Arabia are other examples of multi-billion dollar investment by private waqfs into brownfield real estate developments in city centers. The second mechanism identified, still with the same objective of regenerating city centers into denser and more efficient uses to enhance the sustainability of cities, is to establish public-private partnership to mobilize private funding of Islamic Ethical Wealth for the regeneration of vacant or derelict lands inside city boundaries. Multiple forms of partnerships exist including the setup of joint ownership structures where public land or public property is privatized and collateralized at incentivized rates to leverage on debt funding of the real estate projects for social uses. The governance of such structures is, however, a major challenge.

The Role of Islamic Ethical Wealth Relating to New Developments

Referring here to the historical role waqfs (hence Islamic Ethical Wealth) played in shaping Islamic cities, it is legitimate to ask how Islamic Ethical Wealth should in present-day mega cities be invested into new urban developments. The funding requirements estimated to meet the urban sustainability challenges of mega-OIC cities have been briefly mentioned in section “[The Funding Gap](#)” above: for large cities, experts expect an average annual cost from around \$600 million to over \$5,000 million to meet SDG 11 targets by 2030. A significant proportion of these costs is required to fund new sustainable projects. In particular, social housing projects house the millions of urban dwellers that are deprived from housing and basic social needs. The first role of Islamic Ethical Wealth relating to new developments is therefore a financing role for

social and affordable housing schemes. The channels and financing instruments through which this financing should be mobilized differ, however, from country to country.

In the context of less mature markets, Islamic Housing Micro Finance (HMF) schemes or waqfs are called upon to provide temporary solutions until financial markets develop. In fact, issues such as ownership rights, legal and regulatory frameworks, ineffective land registration systems, or high transaction costs are found to significantly impede the capacity to raise finance for social housing in the countries studied (Shirazi et al. 2012). This echoes Renaud (1999) which also concludes that in undeveloped housing systems, the financing of basic urban infrastructure and the adoption of adequate urban planning regulations and policies should be given priority over financing of housing sector.

The second role of Islamic Ethical Wealth this chapter calls for, in relation to new developments, is to support the resilience of urban areas. The historical context of Islamic cities mentioned in sections “Islamic Ethical Wealth in the Development of Cities: A Brief Historical Perspective” and “Comparative Analysis of the Historical Urban Development of Cities in Islamic and Other Developing Countries” has described the importance of communal or sub-communal settlements/quarters, bounded together by central waqf buildings (mosques or educational institutions) and kinship “*Qaraba*” relationships, in the original shaping of cities. This has been lost in time to the benefit of alternative urbanization patterns, especially car-centric developments toward ever-expanding city boundaries. This chapter recommends that Islamic Ethical Wealth is channeled toward the most sustainable urban developments along three dimensions at least: environmental and “sociocultural” resilience, density, and inclusiveness. Through environmental resilience, the objective is to address long-term environmental concerns of cities and avoid the damaging tendency of low-quality buildings for social uses and affordable housing which bring major challenges of refurbishment and regeneration at the end of their useful life. Through “sociocultural resilience,” the objective is to revive the “heart and soul” of quarters in the cities, or even develop it with the help of historical and religious ties, to build again the cohesion and solidarity at the level of the quarter which characterized Islamic cities in their glorious past and helped address social issues (unemployment, poverty, etc.) as well as maintain attachment to the land over generations (an efficient way to tackle suburban migrations). At the same time, it is demonstrated that density is one of the most important characteristics

of sustainable cities and massifying urban centers are critical to deliver sustainable mobility and address socioeconomic needs of the urban populations. Finally, inclusiveness refers to sharing economic outcomes fairly across society and creating opportunities for all. This inclusiveness is reinforced with kinship and through the establishment of “trust networks” at the local level. Islamic Ethical Wealth has a critical role to play in this, and this will be further developed in the last section of this chapter.

The Role of Islamic Ethical Wealth Relating to Transport

The main urban sustainability challenges relating to transport are to encourage reduction of the motorized travel needs and the use of sustainable transport modes, such as public transport or non-motorized modes of travel. Islamic Ethical Wealth has here a critical role to play. In particular, massive investment in public transport is often beyond the reach of local governments in low-income countries or lower-middle-income countries as discussed in section “[The Main Dimensions of Urban Sustainability Issues in Mega-OIC Cities](#)”. This situation was faced by Islamic empires in the past, and it is reported, for example, that Ottoman-era Turkey lacked a budget for public infrastructure and to fill the infrastructure gaps, more than 35,000 private foundations, known as *Vakif* in Turkish, funded public work projects and municipal services, from water systems and schools to hospitals, bridges, and roads.

The local governments also face difficulties to implement major innovations in sustainable mobility that have the potential to transform the future of cities. Islamic Ethical can help bridge the gaps. In particular, it can provide financing and grants to local operators, invest in buses or minibuses, provide free transport or transport at subsidized rates, improve viability of public transport (e.g., by investing in metro station naming rights), and provide funding to public transport innovations such as car-sharing systems. In addition, the transfer and sale of private lands owned by high net worth individuals or families to the municipalities for public transport projects should be encouraged or facilitated (with tax or non-tax incentives). Land acquisition is indeed a major obstacle to the development of public transport in megacities, and Islamic Ethical Wealth has a role to play to address this issue.

*The Role of Islamic Ethical Wealth in Increasing Resource
Efficiency in Megacities*

Finally, the role of Islamic Ethical Wealth in increasing resource efficiency, in particular energy efficiency, in mega-OIC cities is comparable to its role relating to sustainable transport: the objective is at the same time to support through funding innovations and public investments (through public-private partnerships, for example) in sustainable energy and at the same time, at a more micro-level support through donations or lending the transition from polluting to environmental friendly resource uses.

**PRACTICAL CONSIDERATIONS OF THE FINDINGS
FOR THE REALIZATION OF THE SDG AGENDA**

The previous sections of this chapter have provided an overview of the scale of the urban sustainability challenges faced by mega-OIC cities and the main dimensions of interventions that are recommended. The scale of the challenge is such, and the timeline before 2030, the target year for achievement of the SDG agenda, is so tight that the window of action is now and the interventions must be of massive scale: billions of dollars in annual investments are required in each megacity to achieve SDG 11 alone, the main SDG related to urban sustainability.

Islamic Ethical Wealth has a multi-dimensional role to play in helping local governments achieve the ambitious targets. The recommendations on the role Islamic Ethical Wealth should play to support the transition to sustainable urban development in mega-OIC cities can be looked at from the perspective of the financing instruments or interventions available, or as this chapter has proposed, from the perspective of the type of interventions and various roles that can be played. The following four roles have been identified, building upon urban planning literature:

- support through brownfield developments and use of vacant land/properties
- support through new developments
- support through the development of sustainable transport
- support through the increased efficiency in the use of resources.

While these interventions, from an analytical perspective, can be easily understood and justified, this chapter further hypothesizes that these

interventions are not common approaches in the context of the SDG agenda and are often overlooked. And the question must be asked of why Islamic Ethical Wealth role is most commonly understood, in the context of the sustainable development agenda, as a philanthropic or humanitarian financier of social responsibility projects and not as a key player in the development agenda. Three hypotheses can be made at this stage and should be subject to further research.

First, the question of the governance systems in place for the urban areas can be asked. In the distant past, Islamic cities were ruled in a cohesive manner by a mix of formal and informal leadership systems. The formal leadership system that we could qualify by top-down system generally consisted of an administrative system appointed by the central regime for each governorate, under different varieties according to the ruling systems: governors, emirs, beys, deys, etc., would administer on behalf of the state the major localities of the Islamic Empire, collect the taxes, and depending on the military organization, be directly or indirectly responsible for the security and state affairs. But at the same time, such centrally appointed administrators would have never succeeded in running, sometimes at times of wars, famines or social unrest, major urban areas distant by several days or weeks from the capital of the empire without a strong local support. And this local support that helped especially control the suburban and agricultural areas feeding the cities respected historical traditions of each country and people administered. The “Elders,” the chiefs, or even the “heads of households” only (as Eickelman 1999 puts it) shared collective responsibility and self-administer sometimes entire quarters of the urban area without the need for intervention from the local authority. This sub-communal self-administration has almost disappeared in present-day cities. Some remains of these systems can be seen, for example, in Arab cities where the “Omda” (Mayor) of each quarter can still be seen in Cairo or Jeddah, for example, or the Cheikh (Elder) of a tribe or of a given profession can be met. But their role is very limited and is relevant only for the settlement of local disputes or some ceremonies. Building back these informal responsibility systems, and empowering wealthy families to play a more central role in the governance of cities and quarters, seems crucial to deepen their role in the transition to more urban sustainability. In a way, the governance system would need to be reformed therefore to put back in the driving seat the individuals that have most leverage to support the sustainable transition of mega cities.

The second hypothesis relates to the financialization of the real estate and land markets. This chapter has discussed the central role of land-use planning in managing sustainability of mega cities. It must be recognized that urban planners have generally failed in mega-OIC cities over the last decades in creating the conditions for resilient and liveable cities for the present and future generations. And this explains in part the unsatisfactory performance of mega-OIC cities in terms of economic, social, and environmental sustainability. Beyond the car-centric and centrifugal development strategies that have been very detrimental as nobody would challenge today to the future of these cities, one of the main reasons why the urban planners have failed to design and implement sustainable urban master plans has arguably been the poor management of land banks and real estate property markets. This leads to the unfortunate situation today where major cities and urban areas know exactly what to do to transform the city into sustainable cities (in particular through providing sustainable mobility and massifying developments), but lack the means to do so because of the unavailability of land to build the public infrastructure required to deliver the sustainability promise: the land acquisition costs and resettlement costs of massive public transport projects often exceed the investment cost of the infrastructure itself. But urban planners are not the only one to blame. The upper social classes have heavily invested—and sometimes without realizing via pension funds, investment vehicles, or shares of Real Estate Operating Companies (REOC)—into available land and properties in urban areas creating ever-increasing boom-bust cycles in land and property markets and unprecedented city expansions that have completely transformed urban structures for decades to come (modern-day examples would be the cities of Dubai or Istanbul for example). Yet, land, in its legal, historical, or even in its accounting nature, is not expected to change hands frequently. In fact, the mere possibility of allowing buying and selling land and making profit out of this in cities where every single square meter has a crucial importance for the generations to come could be questioned. Even without going to that extreme, the question of the financialization of land and property markets and the direct impact this has on sustainable development prospects of cities must be studied.

Finally, a third perspective remains the question of incentives. Based on the estimates of purchasing power, a present-day estimate of the waqf of Uthman ibn Affan in the city of Madinah at the time of the Prophet (PBUH), a well that he is reported to have purchased for 20,000

dirhams, is in the range of only USD 50–70,000 based on Zarra-Nezhad (2004) in present-day US Dollars. Yet, it is well known that this waqf has created enormous amount of wealth which has been continuously redistributed in part to poor and orphans and reinvested in part since its inception, leading to a situation today where the waqf owns expensive property in the city of Madinah and is endowed with large sums of money.⁴ The specific feature of waqfs as productive assets, and the corresponding investment and management challenges that arise to generate the best economic outcomes out of their use, is an important subject from a behavioral economics perspective. Questions must be asked as to the social and moral incentive frameworks that would entail more investment from wealthy individuals into waqf structures supporting sustainable urban development, and on a wider scale, other sustainable development projects, and at the same time, proper attention must be given to the anthropologic and legal challenges that have caused their derelict in recent generations.

CONCLUSION

By 2030, four mega-OIC cities will be among the 10 largest cities in the world, up from two cities today and none in 1990. Each one of these cities will be home for more than 24 million inhabitants, the majority of which living in slums or informal settlements. In just 10 years, between 2020 and 2030, these mega cities are expected to see a population increase, through natural growth or migrations, of 3 to 8 million inhabitants each. Another three mega-OIC cities are increasing their population by more than 2.5 million each during the same period. Relatively smaller large OIC cities, between 1 and 10 million inhabitants, also see rapid growth and expansion trends and overall, by 2050, an expected 68% of the OIC population will live in urban areas, a large proportion of which in the largest urban areas of each country. On many accounts, these trends are not sustainable. This chapter has proposed a new approach to analyze the urban sustainability challenges for mega-OIC cities. Adopting a people-centric agenda, and in reference to the UN definition of sustainable development as a development that promotes

⁴Some unverified sources report that this Waqf generates today up to USD 50 Mn in revenue every year (see: <https://millichronicle.com/2019/04/did-you-know-the-third-caliph-uthman-bin-affan-owns-a-hotel-and-a-bank-account-in-madinah/>).

“prosperity and economic opportunity, greater social well-being, and protection of the environment,” this chapter proposes the definition of sustainable urban development in mega-OIC city context as the most efficient and resilient path to provide housing, employment, and access to basic services for all urban dwellers. The stylized facts presented show that the current performance of mega-OIC cities in meeting urban population needs for access to safe and adequate housing or to sustainable systems is not satisfactory. Due to booming demographics and urban sprawl, this performance is expected to further deteriorate over next decades. To face these unprecedented challenges, public administrations use a variety of instruments which are found to bring limited positive impacts, especially in the long term. The funding gaps estimated also amounting to billions of dollars per city and per year are such that public administration alone cannot face the urban sustainability challenges identified.

In this context, and informed by Islamic history, Islamic Ethical Wealth is found to have a critical role to play to address the challenges. This role can be looked at from a financing perspective only, or as this chapter proposes, from the perspective of all support roles that can be played by Islamic Ethical Wealth and which are classified into four categories: support through brownfield developments and use of vacant land/properties, support through new developments, support through the development of sustainable transport, and support through the increased efficiency in the use of resources. The use of waqfs in shaping future sustainable cities is exemplified. The chapter concludes by analyzing why, while these interventions from an analytical perspective and based on the historical context of Islamic cities can be easily understood and promoted, Islamic Ethical Wealth role in addressing sustainable urban development issues in the context of the SDG agenda is marginalized and overlooked. Three hypotheses are proposed: the question of the governance systems in place in the mega-OIC cities, the question of the financialization of the real estate and land markets, and the question of incentives. Further research is needed along these three dimensions to unlock the great potential of Islamic Ethical Wealth in shaping sustainable and resilient cities for all by 2030 and beyond.

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