Ibn Khaldun’s ‘ilm al ‘umran: a model for planning the sustainable city in the Arab region

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Abstract

Purpose – Sustainable development is an attempt to achieve three competing aims: economic development, social justice and environmental conservation. Localising sustainable development in the Arabian city might require a framework that originates from its reality manifested in the region’s history, culture and religion. Ibn Khaldun’s model seems suitable for planning a sustainable city in the Arab world. The purpose of this paper is to discuss suitability of Ibn Khaldun’s writing to localising sustainable development in the Arabian cities.

Design/methodology/approach – The paper used a qualitative research methodology. The researcher investigated the writings of Ibn Khaldun and other scholars who studied his work to derive lessons for planning the sustainable Arab city.

Findings – Many of Ibn Khaldun’s concepts lost their accuracy, meanings and intentions in the course of translating his work. Ibn Khaldun’s writings can be the source from which scholars, planners and city administrators derive lessons to assure the sustainable development of human settlements, particularly in the Arab region. The writings of Ibn Khaldun are relevant to the Arab countries. His writings are sensitive to the realities of the Arab world, including geography, environment, history, religion and culture. His writings can support efforts for localising sustainable development in the Arabian cities.

Originality/value – Interrogating Ibn Khaldun’s writings can enable scholars, planners, architects and city administrators to elaborate and implement plans for the sustainable Arabian city. The findings of the paper assure that Ibn Khaldun’s analysis is suitable for addressing the urban ills of the contemporary Arabian metropolis as they were in his time.

Keywords Sustainable development, Ibn Khaldun, Arabian human settlements

Paper type Conceptual paper

Introduction

In his book titled The Secret World: A History of Intelligence, Andrew (2006) argued that understanding the past is the only way to understand the present. Kennedy (2017) concluded that changes in global economic balances since 1500 AD are among the reasons responsible for the rise and fall of great empires. He identified economic transformations, technological advances and military conflict as the reasons that led to the rise and fall of great empires. These factors are the outcomes of utilising the state’s productive economic resources, i.e., nature and labour.

Since the dawn of civilisation, the role of cities has evolved from being just a seat of governance to a market place, a site for manufacturing and a centre of innovation. Many cities in the Arab region, such as Damascus, Aleppo and Alexandria, have existed before the birth of Jesus Christ. Not all cities founded and developed in the same era were able to continue to thrive in today’s metropolis. The ruins of Palmyra and Babylon are signs of the rise and fall of great empires in the Middle East.

Tavares (2016) noticed that major metropolitan areas, such as New York and London, are economic and political powerhouses. His observation extends to metropolitan areas in developing countries. For example, he reported that in “Latin America, São Paulo state alone

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is richer than Argentina, Uruguay, Paraguay, and Bolivia combined. Guangdong in China is wealthier than Russia or Mexico” (Tavares, 2016).

The World Commission on Environment and Development (WCED, 1988) prepared a report titled “Our Common Future”, which concluded that environmental problems would emerge in urban areas. As cities contribute to wealth and prosperity, also they are among the reasons for environmental damage. Cities occupy about 2 per cent of the surface of the earth. They are responsible for approximately 70 per cent of the emitted greenhouse gases (GHGs) (UN-Habitat, 2011). Sources of GHGs include manufacturing, transportation and thermal power plants that use fossil fuel.

In the report mentioned above, WCED (1988) introduced the concept of sustainable development. It is a concept that attempts to balance and integrate three conflicting goals: economic development, social justice and environmental conservation and regeneration. Sustainable development is a generic concept that entails a trade-off between economic development, social justice and environmental conservation. The UN Agenda 2030 and its 17 Sustainable Development Goals are both opportunities and challenges (Caprotti et al., 2017). Planning a sustainable city is a challenge (Campbell, 1996).

Culture and heritage are among the drivers for sustainability (Bullen, 2007; Licciardi and Amirtahmasebi, 2012). For example, the European Union’s Horizon 2020 research and innovation programme is supporting the rural regeneration through systemic heritage-led strategies programme. The resilience of European rural settlements is one of the six components of the programme. The component aims to enhance the role of cultural and natural heritage for developing resilience against threats resulting from climate change and assuring that all development initiatives are risk informed. Accordingly European rural communities can be prepared to face disasters, and in the meantime, encourage economic growth, generate jobs and sustain livelihoods through better access to health and education, and last but not least, foster the responsible ownership of cultural and natural heritage in rural settlements (Anon, 2019). A resilient community is a sustainable settlement.

Several reports indicate that the development of the Arabian cities might not be sustainable (El-Kholei and Wahbi, 2010; Serageldin et al., 2012). Excluding cities of the Gulf Cooperation Council, many Arabian cities lack proper physical infrastructures, including sanitation systems and roads. All cities of the Arabian world are subject to drought and water shortage. Many cities in the Arab region experience degraded air quality because of traffic congestion and dust. Cities in countries that are experiencing militant conflict, such as Libya, Syria, Iraq and Yemen, as well as the Palestinian occupied land, cannot be on a path towards sustainable development as they lack peace and security.

Contextualising the concept of sustainable development in the Arab region requires rooting it into the environmental sphere and founding it on the realm of local culture including language, traditions, values, religion and the like. Based on the author’s experience in the Arab world, the concept of sustainable development lies in official documents submitted to international organisations such as the United Nations. The need to apply the principles of sustainable development resonates with the words of those whose livelihoods depend on healthy ecosystems. For example, a peasant complains that the yield of the land is not as it used to be in the past or a fisher who complains that some species do not exist anymore. These examples indicate intergenerational discontinuities, i.e., temporal discontinuities, indicating that the development of their settlements is not sustainable.

In the developed countries, the planning theory has been transforming in response to developments of the capitalist system and the resulting cultural and social transformations (El-Kholei, 2015, 2018). This is not the case in the Arab world. In Egypt and the Arab region at large, there is a team of design professionals that believed that modernity and westernisation are synonymous (Elshahed, 2018). Their works are signs of failed architecture (Ashour, 2016). For that reason, another team of design professionals, including Hassan Fathy, Ramses Wissa
Wassef and Abdelbaki Ibrahim, argued for revisiting heritage and elaborating development models that are in accord with local culture, traditions and values (Al-Naim, 2008; Nu’Man, 2016; Faqeh, 2017). Their works proved to be adequate to the local context and sensitive people’s needs. Accordingly, localising sustainable development in the Arabian city will require revisiting writings that interrogated reasons for the rise and fall of some Arabian cities.

Atop of this literature is the writings of Ibn Khaldun. The paper aims at revisiting Ibn Khaldun’s writings to derive lessons for planning the sustainable development of human settlements. ‘Ilm al ‘umran is a mosaic of different areas of knowledge that can be conducive and appropriate for planning sustainable human settlements. “Besides, his contributions help the development of social institutions. He presents ‘umran as an ideology that includes all the elements of sociology and anthropology. Society is the main subject, and it focusses on ‘umran studies. “Umran consists of studies of ecology, political, rural and urban society, economic sociology, and knowledge sociology” (Binti Adnan et al., 2018, p. 269).

Next, the researcher reviews Ibn Khaldun’s writings and written literature, assessing his contributions to various fields of science to derive lessons from the past to frame future interventions. The paper’s first objective is to prove that ‘ilm al ‘umran is not about urbanisation or sociology per se, but a framework that encompasses these and other subjects that Ibn Khaldun examined. The paper’s second objective is to induct lessons for planning the sustainable Arabian human settlement.

Literature review: Ibn Khaldun’s contributions

Although Ibn Khaldun was a typical scholar of the fourteenth century, he was not only an enlightened genius but also way ahead of his times. In terms of historical analysis, Ibn Khaldun was able to make the distinction between city dwellers and nomads. His historical inquiry highlighted the city as the interplay of economic, social, political and environmental forces. He highlighted sociological aspects, which would lead to future events as many as 400 years before Auguste Comte’s “invention” of sociology (Hassan, 2006). The following subsections review other scholars’ investigation of Ibn Khaldun’s writings. The headings of these subtitles are the codes the author used in the analysis.

Inductive logic

Ibn Khaldun is like a kaleidoscope. His writings can function simultaneously, as they involve modern logic, which rests on rationality, are in line with traditional logic that is rooted in the rule of religion and combine reason and religion in a post-modernist logic (Boukraa, 2008). His contributions to philosophy, histography and research methods are indisputable. Al-Jubouri (2005) and Mahdi (2015) agreed that Ibn Khaldun relied on criticism, observation and comparison of an examination when inquiring historical events. It is by comparing the text with the subtext that Ibn Khaldun was able to clarify and critique written and told stories (Al-Jubouri, 2005; Mahdi, 2015). “Ibn Khaldun’s attention to group identity is one reason why his understanding of human beings is vital to a creative synthesis of tradition and (post) modernity” (Katsiaficas, 1999, p. 45).

Ibn Khaldun did not follow the Aristotelian model of inquiry (Al-Wardi, 2009; Abdullahi and Salawu, 2012). He did not use a deductive approach; instead, he employed an inductive tactic where falsification was the method used for verifying facts mentioned in the news and stories that he examined. Ibn Khaldun wrote that the rules of habit, and the norms of politics and societal conditions, are the means a scholar requires for conducting a historical inquiry.

Geography and environment

Ibn Khaldun used geography and environment as one of the essential notions to explain how events took place and illustrate their outcomes. He used the work of al-Idrisi,
an Arabian Geographer and Cartographer, to explain how events developed and then unfold. Ibn Khaldun wrote, “true history tells us about human social life, which is the world’s environment, and the nature of that environment as it appears from various events” (Al-Jaubouri, 2007, p. 18). The world map is an integral piece of *Muqaddimah*’s section on geography (Chapter 1: “Second Prefatory Discussion” and its “Supplement Note”). While Ibn Khaldun’s body of work kept growing throughout his lifetime, Kahlaoui’s investigation was about the history of the geographic text and how the latter would ultimately help to better view the elaboration of *Muqaddimah* as a whole (Kahlaoui, 2008).

**Sociology and economics**

Ibn Khaldun was among the first scholars to point out that social conflict, division of labour, and class struggle are the driving forces behind economic growth. In his inquiry of the tension between Berber and the Arab, he noticed the expansion of Islam in North Africa happened through bloody conflict that continued even after the Berber had embraced Islam as a religion. However, the Berber adopted dissident religious opinions, which fuelled the confrontation to the extent that Tunisia and eastern Algeria were known as *Ifrigiya*, at that time, an adjective describing the land of differences based on the verb *frq* (Ibn Khaldun, 2004 *The Introduction: The virtue of History*, pp. 91-92).

Abbadi (2004) and Beik and Arsyianti (2006) argued that Ibn Khaldun contributed to the science of economics. He examined numerous economic issues, including public finance, taxation, market equilibrium and the like. In the area of public finance, Ibn Khaldun claimed that rising taxes are indicators of the end of the state. He also noticed that a decrease in government revenues is the result of a decrease in government expenditures, leading to a recession. He realised that labour is the prime source of value. Ibn Khaldun discussed demand and supply. He noticed that demand, wage rate and hoarding commodities affect prices. Ibn Khaldun also observed that if all markets in an economy are in equilibrium, then a specific market must also be in equilibrium – a phenomenon that Léon Walras proved mathematically in 1874 (Abbadi, 2004; Beik and Arsyianti, 2006). Ibn Khaldun perceived the linkages between the economy and governance. He warned rulers of injustice and excessive taxes when he wrote: “The lack of kindness from the ruler is a lack of tax and injustice that will initiate the destruction of *al ‘umran*” (Ibn Khaldun, 2004, Chapter 1-3-43, Injustice permits the destruction of *‘umran*, p. 477).

Hassan (2006) and Abdullahi and Salawu (2012) claimed that Ibn Khaldun discussed sociological ideas before Comte, Durkheim, Tonnies and Marx. Abdullahi and Salawu (2012) argued that western sociology does not pay him the deserved recognition for his contributions on an account of Eurocentrism. It is imperative that today’s sociologists and social scientists get involved and become familiar with Ibn Khaldun’s concepts and thoughts (Hassan, 2006; Abdullahi and Salawu, 2012).

Since trade is crucial for both the economy and the society, therefore public administration and international relations are intrinsic to Ibn Khaldun’s analysis. He introduced the concept of *‘asabiyah* (Ibn Khaldun, 2004, Chapter 1-2-8, *‘Asabiyah* is in the binding by kinship, descent or whatever its meaning, p. 256), the dynastic cycles and the relationship between religion and power, as Kalpakian (2008) argued, reflect the contemporary concepts of identity, the hegemonic cycle and the notion of “civilisations”. Ibn Khaldun’s ideas existed before Machiavelli’s *The Prince* was published (Kalpakian, 2008). Sidani (2008) reviewed Ibn Khaldun’s concept of *‘asabiyah* to understand the latter’s contributions to leadership research. Ibn Khaldun’s concepts of leadership dynamics in a non-western cultural setting, as the *Muqaddimah* outlines, are valid in the context of both the Middle East and North Africa (Sidani, 2008).

**Ibn Khaldun’s definition of ‘umran**

In 2008, Amri provided a scientific explanation of Ibn Khaldun’s concept of *‘umran* as well as its historical and linguistic origins. He argued that *‘umran* is a dynamic process. It is
probably for that reason that Ibn Khaldun adopted a qualitative research methodology where observation was his research method. Ibn Khaldun differentiated between 'umran badawi (nomads) and 'umran hadari (urbanites). He also traced the transformation of 'umran badawi into 'umran hadari which is considered the value of Ibn Khaldun’s sense of 'umran, i.e., the society in today’s terms (Amri, 2008).

Once we have reviewed scholars’ appraisal of Ibn Khaldun’s contributions to the epistemology of sustainability, we are ready to examine his thoughts of 'ilm al 'umran. For Ibn Khaldun, 'umran is the sphere within which members of a society cooperate to advance knowledge, culture and justice. 'Umran is about a healthy environment, prosperity and accomplishments. 'Umran associates itself with history and prosperity. 'Umran is the output of cooperation of the members of the society, where ethics is considered central. A proper institutional framework of a society is a sine qua non for 'umran (Binti Adnan et al., 2018). An institutional framework of any society consists of the family, economy, government, education and scientific research.

_Ibn Khaldun’s interest in cities_

When Ibn Khaldun arrived in Cairo, the Mamluks ruled Egypt, as well as today’s Palestine, Jordan, Lebanon and Syria. He taught at al Azhar. Sultan Barquq, the Ruler of Egypt at that time, appointed him as professor of jurisprudence at the Quamhiiyah college. Five months later, the Sultan appointed Ibn Khaldun as the Chief Judge of the Mālikī rite. Ibn Khaldun spent his time educating, writing and reviewing his Muqaddimah (Issawi, 2018). He visited Mecca on a pilgrimage, then travelled to Damascus, and the cities of Palestine, including Hebron and Jerusalem to gain more knowledge about the eastern Arab region.

Cairo was a prosperous city. He wrote “I saw the metropolis of the ear, the garden of the world, the gathering place of the nations […] the palace of Islam, the seat of dominion […]” (Issawi, 2018). He described Cairo in the following words: “He who has not seen it does not know the power of Islam” (Issawi, 2018).

Based on his trips, visits and experiences, Ibn Khaldun described the city as being part of a sedentary environment, where people live in luxury. He came to this conclusion by comparing 'umran badawi (Bedouin) to 'umran hadari (urban). Bedouins live in harsh conditions and must work hard, while city dwellers are laid back and relaxed.

_Methodology_

The researcher used a qualitative research methodology. He investigated Ibn Khaldun’s writings and that of other scholars who studied his work. Next, the author coded the data. The codes included Ibn Khaldun’s education, research methodology, historical inquiry, contributions to economics, sociology, public management and political sciences, as well as the use of geography and environment. The author used Atlas.ti version 8, which is a qualitative data analysis software, to code themes and investigate relationships and linkages. The author explored relationships between codes, thus developing a conceptual model. To assure the validity of the conceptual model, the author generated a co-occurrence table to examine the conceptual model against data. The co-occurrence table exhibits the strength of these relationships. These co-occurrences are the joint frequencies of quotations between two codes. For each joint frequency, there is a coefficient that ranges between 1 and 0. The coefficient is the likelihood or probability that the two codes will occur together. The following equation exhibits the formula used to calculate the coefficient per co-occurrence:

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

where $c$ is the coefficient per co-occurrence between two codes; $n_{1-2}$ the shared quotations from the texts that are common between the two codes; $n_1$ the number of quotations from the
texts per Code 1, such as sociology, for example; and $n_2$ the number of quotations from the
texts per Code 2, such as public management.

The author then interprets these results using intuition and perception. Note that
misleading results can appear because of misuse of citations, misnaming of codes or other
subjective factors. For this reason, the author had to re-read the cross-code citations for a
proper and accurate explanation.

Results
The first result is that *al umran* is development. It is not urban, or civilisation as some
scholars translated. *Ibn al ‘umran* is not sociology. The works of many scholars, who
examined the concepts of Ibn Khaldun, were not translated properly, and probably that is
the reason why he did not receive the acknowledgement he deserves. Those who translated
Ibn Khaldun’s work probably missed the linguistic divisions of the Arabic language,
including phonetics, phonology, morphology, syntax, semantics and pragmatics. For example, van Ditmarsch (2008) criticised Ibn Khaldun’s logic and epistemology from
the viewpoint of modern modal logic. However, he acknowledged the differences between
the English and French translations of *Muqaddimah*. He wrote “my apologies for not being
familiar with the distinctions intended in the originally used Arabic terminology. The
translation of the Arabic term corresponding to ‘ability to think’ or ‘réflexion’ is *fu’ad*. This is
the singular of *af’ida*, for heart” (van Ditmarsch, 2008, p. 288). According to *Magam’a
al-Ma’anni al-Gama’a*, an Arabic-Arabic dictionary, *fu’ad* is the heart (Qalb); mind (akl); or the
ability to think and reason (moutawqid al zehn).

According to *Magam’a al-Ma’anni al-Gama’a*, *al umran* is neither urban nor civilisation.
*al ‘umran* is a noun. Its verb is ‘*Ummar* which means to develop a stretch of barren land.
Thus, ‘*immar* means to transform a place into a home for people to live. The verb also
means retrofitting an old building. In Arabic, the word ‘*ummara* is architecture, and the
term “*Takhteet umrani*” is planning human settlements. The dictionary continues to
define ‘*Umran* as a noun, i.e., the activities, such as cultivation, manufacture and trade
which lead to successful business and development of societies.

After examining Ibn Khaldun’s Prolegomena, we can conclude there are three themes or
concepts, i.e., groups of codes, which govern ‘*ilm al ‘umran* (Figure 1). The first theme, which
is in blue, is Ibn Khaldun’s education and experience, and his research methods. The second
theme is in orange. It consists of Ibn Khaldun’s historical research and the use of geography

![Figure 1](image_url)

Source: The Researcher (2019)
and environment to explain how events developed and evolved. Finally, the third theme in red consists of the economy, public management and political science, and sociology. The dependent concept in the analysis is 'ilm al-'umran which is the science of sustainability and lies at the centre of the concepts of the third theme.

*Ibn Khaldun’s education, experience and inductive logic*

Ibn Khaldun studied the Quran and memorised it. He learned Arabic linguistics, literature, and poetry, which enabled him to understand the Quran. He also received an education on the Hadith (Prophet Muhammed’s words), Islamic Sharia (law) and Islamic Fiqh (Jurisprudence), receiving a certificate in each of these disciplines. Ibn Khaldun studied mathematics, logic, epistemology and philosophy also, as he indicated in his autobiography (At-ta’rīf bi Ibn Khaldūn). He criticised Aristotle’s deductive logic and argued for inductive logic as an alternative to historical inquiry. Furthermore, in his historical inquiry, he falsified stories to reveal the truth.

Ibn Khaldun served rulers and was able to detect reasons for the rise and fall of empires. With his critical thinking, and the ability to observe and analyse causes and consequences, he identified the driving forces and pressures leading to the rise or the failure of a state.

*The historical inquiry, and the use of geography and environment*

The second set of concepts includes his approach for historical inquiry using both geography and the environment. Ibn Khaldun believed that human beings depend on their environments, such as rivers, mountains and coastal areas. The natural environment must enable humans to sustain life. Furthermore, Ibn Khaldun wrote that following variations in the climate and the richness of given regions, an environment affects the character of human beings, their appearance and customs (Ibn Khaldun, 2004, Chapter 1-1-2 The second introduction, The share of ‘umran in land with reference to seas, rivers and regions).

Accordingly, he penned his analysis of historical events and used the maps of al-Idrisi, in addition to his observations of people living on the mountains vs those living in coastal areas to explain differences in their behaviour. He argued that geography could explain historical events as natural resources that a weak empire holds attracts invaders. He argued that living in luxury weakens the state, thus leading to its eventual decay and fall. According to the translator’s notes, “One of these is a principal reason why even great historians occasionally err, namely, their ignorance of changes in the environment within which history unfolds” (Rosenthal, 1969, p. 846).

Ibn Khaldun’s observation on the role of environment in the rise and fall of an empire extended beyond physical elements of the environment and natural resources. He argued that living in a sedentary environment, i.e., the comfort zone, is among the reasons responsible for weakening a state. He observed that living in a sedentary environment associates with sedentary culture, and both correlate with the economy and people’s customs.

Ibn Khaldun (1969) acknowledged that “physical circumstances and environment are subject to changes that affect later generations” (Third Prefatory Discussion, pp. 123-125). His statement indicates the understanding of temporal discontinuities. Once an intergenerational discontinuity occurs, development cannot be sustainable.

*Public administration, economics and sociology*

The third set of concepts includes Ibn Khaldun’s contributions to political science and public administration. He defined concepts used in public administration and political sciences, such as the caliphate and ‘asabiyah (group feeling) (Issawi, 2018). Kalpakian
(2008) and Sidani (2008) highlighted Ibn Khaldun’s contributions to public administration and political sciences.

He began his political career immediately after graduation to serve the Tunisian ruler. He served rulers in Algeria, Morocco and Iberia where he negotiated a peace agreement with Pedro, the ruler of Seville. His autobiography shows how he developed his shrewd political skills throughout prison time, occupying posts at the upper echelon of the government, and exile.

He was an asset to any ruler in North Africa, as he shared good relations with the Berber. However, his peers envied him, and he was subject to prison and exile because of the rise and fall of dynasties in North Africa. He wrote his book The History of the World and left Tunis to Alexandria, Egypt. Tumour, the Turco-Mongol conqueror, invaded Syria in 1400 AD and besieged Damascus. Ibn Khaldun was visiting the city at that time. Tumour requested to bring him Ibn Khaldun. He asked Ibn Khaldun to explain his concepts of caliphate and ’asabiyyah, in addition to describe the cities and the geography of North Africa (Issawi, 2018).

To Ibn Khaldun, both public administration and political sciences associate with markets and society at large. Although he was not trained to be an economist, he contributed to the field of economics, as Abbadi (2004) and Beik and Arsyianti (2006) indicated. Ibn Khaldun’s contribution to sociology is undeniable as both Hassan (2006) and Abdullahi and Salawu (2012) argued.

Discussion
Defining sustainable development
For development to be sustainable, natural resources need to be intact and preserved for the use of future generations. It is a development process that addresses the issue of temporal discontinuity, i.e., intergenerational discontinuity. It is a process that satisfies the needs of the present generation and acknowledges the right of future generations to a healthier environment.

Sustainable development calls for balancing the economic growth of a community, achieving social equity and protecting the environment. At the centre of sustainable development is good governance, which requires citizen participation, thus leading to enabling and empowering the people to be in control of their natural resources and the future of the community. Good governance is about accountability and transparency; the rule of law; inclusiveness; responsiveness, and efficiency and effectiveness.

Sustainable development is the function of the state. The state is the product of society at a certain level of its development to deal with its internal contradictions (Engels, 2004). Among these contradictions are the property contradiction, i.e., the contradiction between the market value and use value of a property, and the capitalist-democracy contradiction, which is the need to have a state to avail public goods but not assure the rights of labour while protecting the natural resources from wastes and exploitative uses (Foglesong, 2016). However, the state is the tool of the bourgeoisie for domination and assures the processes of capital accumulation. The state here serves the interests of the politically dominant class who control and own the means of production. This form of development becomes unsustainable.

Elements of Ibn Khaldun’s model for sustainable development
According to Ibn Khaldun, the advantage of human beings is their ability to think and reason. Human beings can observe, analyse and decide. They can generate knowledge necessary for their living and protection. Human beings can domesticate animals, cultivate land, manufacture weapons and the like. He wrote that innovation in work and construction forms the causes of power and advancement, while inaction, inertia and sufficiency in imitation without the use of the mind usually lead to weakness and corruption of states (Ibn Khaldun, 1969).
Like apes, lions and wolves, human beings are social animals who live in tribes and clans. 'Asabiyyah is more than kinship ties. It binds people into a social unity, i.e., community, which is known in Arabic as jamma'a. 'Asabiyyah assures social solidarity. In nomadic societies, 'asabiyyah is strong and associates with savageness. It begins to fade out as the community transforms into an urban society. Ibn Khaldun argued that 'asabiyyah is the driving force behind a fierce community conquering a civilised empire, such as the case of the Moguls invading Baghdad and thus ending the reign of the 'Abbasiya State in 1258 AD.

Ibn Khaldun wrote that when human beings agree to cooperate to satisfy their basic needs, then “human 'umran” evolves into a dynamic society in which social regulations govern their behaviour. ‘Umran is about a culture of sharing and cooperation that advances crafts, sciences and knowledge. ‘Umran could be badawi (Bedouin) or hadari (urban). It involves the residence and the dwelling and is also about fulfilling needs. Thus 'ilm al ‘umran is not sociology as many scholars believe.

Ibn Khaldun argued that 'umran has attributes including, but not limited to, the rise and fall of nations over time. Human beings, crafts, states, rulers and so forth transform because of the structure and nature of humans that anthropologists contemplate, and the structure of social action that sociologists study.

'Ilm al umran is a model for sustainability. 'IIm al ‘umran is a confluence of different disciplines and specialisations. Sociology, economics, history, geography and environment and public administration and political sciences are streams that meet the estuary that feeds knowledge conducive to development.

Ibn Khaldun’s 'ilm al ‘umran is a model for sustainable development. It is both multi-disciplinary and dynamic (Figure 2). It consists of the following five elements:

1. public administration (mulk);
2. rule of law (Sharia);
3. sociology;
4. geography and environment; and
5. economy.

Figure 2.
Elements of Ibn Khaldun’s model for the sustainable Arab city

Source: The Researcher (2019)
The co-occurrence counts between 'ilm al 'umran on the one hand, and economics, geography and environment, public management and sociology on the other, as Table I exhibits, is 20, 16, 21 and 21, respectively. The coefficients are 0.53, 0.59, 0.57 and 0.41, respectively. These results indicate that economics, sociology and geography and environment are central to a sustainable city. Protecting natural resources from pollution and wasteful use is essential for a sustainable city. The second crucial element for the sustainability of the city is public management, as it affects the use of natural resources and the functioning of the market forces, both in turn affect the society. Ibn Khaldun warned that a divided society result from inequities, and thus invites invaders. The third element contributing to the sustainability of a city is its economy. The prosperity of a city is the outcome of both its governance and management on the one hand, and its initial endowments on the other. The last element affecting the sustainability of the city is its social solidarity. In the several trials to generate Figure 1, sociology seemed to be visually close to 'ilm al 'umran.

Public administration and the rule of law. Once one of these elements gets a push, other elements will gain momentum, and the model is in motion. To Ibn Khaldun, the state is responsible for public administration. The legitimacy of the state is the result of implementing Islamic law, i.e., Sharia (Ibn Khaldun, 2004, The first book, p. 129). The strength of the state depends on the people, and thus it is of utmost importance to develop and maintain both social solidarity (‘asabiyah) and justice (adl). As mentioned earlier, climate and natural resources are crucial for development. Adopting principles of good governance in public administration is essential. Principles of good governance include shura, i.e. participation, the rule of law, inclusiveness, efficiency and effectiveness, transparency and accountability and responsiveness. Public administration is responsible for implementing the law, assuring social justice, protecting natural resources and facilitating market forces. Once the state abandons one of these responsibilities, the model losses momentum, slows down and comes to a complete halt. The society will experience social injustice, and a rise in taxes. If the administration implements the law selectively, then the fall of the state is unavoidable. For Ibn Khaldun, the root cause behind the fall of an empire is living in luxury, i.e., a sedentary environment.

'ilm al 'umran is about good governance, which is at the crux of planning for sustainable development. Ibn Khaldun derived lessons from political science and public administration. He wrote that the wealth of the state, i.e., the ruler and his entourage, must be within the country (Chapter 1-3-41: Wealth of the Sultanat the centre of the country, p. 473). In the early stages of evolution of a state, the ruler distributes the revenues of the state to those who help in consolidating his authority. In the next stage, the ruler and his entourage begin to enjoy wealth and power. Once the state starts to age, the ruler starts to be isolated from the heartbeat of the street and depends on soldiers to counter any revolution that sparks because of vast injustice being meted out as a result of

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| 'ilm al 'umran   | 20            | 0.53                  | 16                             | 0.59                                 | 21                      | 0.57                      | 21              | 0.41                 | –                | –                      

Source: The Researcher (2019)
excessive taxation. Ibn Khaldun argued that the state is at the centre of the capital market and the origin of ‘umran. If the state does not ease money circulation, then recession would be the outcome – the state must pump money into the markets to ensure full employment – Ibn Khaldun seems to favour Keynesian economic thought.

Sociology. ‘Ilm al ‘umran is about social equity. Ibn Khaldun concluded that injustice initiates the destruction of al ‘umran. He defined injustice as the usurpation of property, product or moral right. One of the most terrible forms of injustice is forced labour. Monopolistic practices are signs of inequity and bias. Injustice is the reason for people leaving the city and is, therefore, counterproductive. People are reluctant to work and be productive. Furthermore, not securing property rights is one of the reasons responsible for market imperfections and failures, such as externalities in the form of air pollution, the release of wastewater to fresh water bodies and the like. For Ibn Khaldun, an inverse relationship exists between ‘umran and injustice.

Geography and environment. Ibn Khaldun was also unusual in his knowledge of geography and the nature of the earth, his knowledge of medicine, and how epidemics spread; it became evident in the separation and the immediately after construction of the backward countries, and the number of dead and famines. He explained the positive relationship between environmental quality and ‘umran. He also wrote that improved air quality enhances human morality. Ibn Khaldun made the connection between the character and colour of human beings as well as their environment and the climatic zone where they live, which lead to different languages, cultures, beliefs, set of values and so forth. He reached this finding by comparing the Sudanese, who enjoyed lightness, escapades and music, to those living by the coastal areas, and others living in the snowy hills and mountains. He wrote that those who live by the sea enjoy the lights and warmth of heat, unlike those living at higher elevations where it is cold. Ibn Khaldun also pointed out the importance of productive natural resources, such as soil and fresh water, for ‘umran (Ibn Khaldun, 2004, Chapters 1-1-2 to 1-1-4, pp. 151-194).

Economy. ‘Ilm al umran is about economic development. Ibn Khaldun prescribed reasons for economic depression. According to him, when the state is in its early stages of evolution, taxation is implemented for a few reasons, but it also collects plenty of money in revenues and encourages production, thereby raising incomes. In its later phases, the state becomes weak, and collects too much taxes for a variety of reasons and thus productivity declines. The state in its early stages of evolution focusses on the necessities, but once the state begins to spend to satisfy patterns of conspicuous consumption, then the state raises taxes. Excessive taxes often lead to recession, and thus the breakdown of ‘umran. He wrote that if the government increases collected taxes, then the country would become weak, and susceptible to external threats. He also warned that the state has no business to compete with producers and merchants as it can lead to market imperfections – the state possesses monopolistic powers in the market in which producers and traders cannot compete.

Ibn Khaldun described the situation of unsustainable development. He wrote that when countries breakdown, astrologers and beggars flourish. The hypocrites and opportunists are on the forefront. Lies prevail over honesty and rumours spread like wildfire. The wise lose their voices, and words lose their meanings. Friends become enemies and enemies become friends. Estimation is biased and not based on proper measurement; people mix the unmixable. On the streets, there are suspicious faces. Dreams are scarce, and hope dies. When states collapse, fear prevails and people flee to their sects; there is a stronger cohesion among tribes. The situation then turns to immigrant projects. It turns the country to a travel station and homes to memories. Memories turn into tales (Ibn Khaldun, 2004, Chapters 1-3-11 to 1-3-14, pp. 330-335).
As a Muslim Scholar, Ibn Khaldun believes that human beings are responsible for their fate. Allah speaks to the Muslim person through the Quran, informing him that he shares this land with other species. It is written that “there is no animal on land, nor a bird flying with its wings, but are communities like you. We neglected nothing in the Scripture. Then to their Lord, they will be gathered” (6:38). Islam asks Muslims to conserve. It is written in the Quran that “O Children of Adam. Dress appropriately at every place of worship, and eat and drink, but do not be excessive. He does not like the excessive” (7:31). Allah also tells Muslims that “corruption has appeared on land and sea, because of what people’s hands have earned, to make them taste some of what they have done, so that they might return” (30:41). Islamic faith encourages the conservation of nature and protecting the environment from wastes and pollution.

Traditionally, the Middle East and North Africa had an effective system for managing natural resources. For example, himā is a land management system well known in the Middle East and Africa. A himā is collectively managed and dedicated to grazing. It is a protectorate where the community prohibits overgrazing activity. Before Islam, a himā was the property of powerful men of the clan/tribe. Following the widespread of Islam, the function of himā transformed to become a property dedicated to the well-being of the community (Gari, 2006; Kilani et al., 2007; Ibrahim et al., 2013). People living nearby the himā share its use and collectively manage it. Himā is an adequate system for protecting natural resources and supporting social solidarity (‘asabiyyah).

Development is central to the Islamic faith, which Ibn Khaldun studied. The Prophet (PBUH) said “if Muslim cultivates an implant or a transplant, so he, a bird or a person or beast feeds on it; then it counts as a charity”. He also said, “who revives a barren land, he can keep it”. Omar Ibn al Khattab, the second caliphate, ordered the repossession of land that the owner did not fully develop. The owner responded by saying that the Prophet (PBUH) gave him this parcel of land. Omar replied, “he gave it to you to develop it for the common good not to keep for speculative purposes”.

Lessons from the past, options for the future

The writings of Ibn Khaldun are relevant to the Arab world. His writings are sensitive to the realities of the region, including religion and culture. He experienced the rise and fall of dynasties. Ibn Khaldun’s rational induction and observation form the basis of his findings. Thus, his writings are also appropriate for our time. Ibn Khaldun’s understanding of the social reality of the Arab region as well as its culture qualifies his writings to be appropriate for the region.

The contemporary intellectual challenge for Arab scholars interested in the sustainable Arabian city lies in revisiting Ibn Khaldun’s writings and enquiring about the reasons responsible for the rise and fall of states to derive lessons, and then elaborate plans for the sustainable development of Arabian settlements. These lessons are essential for economic development and internalising external effects to mitigate market imperfections, avail public goods, achieve social justice and most fundamentally transform contemporary institutional frameworks to be conducive to sustainable development.

For human settlements in the Arab region to be sustainable, economic development must satisfy the needs of the people, and not support the luxurious life of the few at the expense of the majority. In the first introduction to the first book, pp. 137-140, and Chapter 1-3-52 on ‘umran requires planning, Ibn Khaldun (2004) stresses the importance of Islamic law and ethics as well as the role of cultural and social values and traditions in planning the city. He also points to the importance of conservation and social solidarity, justice, availing health services and encouraging scientific research and education. Based on the above results and discussion, if the cities of the Arab region are to be sustainable, then their administrators and planners must follow the recommended interventions that Figure 3 exhibits.
According to the analysis, city administrators and planners must:

(1) Adopt and apply principles for good governance.

Ibn Khaldun emphasised the role of good governance in initiating the development process and implementing it through the Islamic *Sharia* that dictates participation. The rule of law and justice are the basis for governance, i.e. *mulk*. “Allah commands justice and goodness, and generosity towards relatives. Moreover, He forbids immorality, and injustice, and oppression. He advises you, so that you may take heed” (16:90).

Ibn Khaldun showed how the institutional framework is another element crucial for assuring sustainable development. He analysed the reasons for the decline and prosperity of human settlements. His main finding was *'asabiyyah*. He argued that Islam was not the basis for the state in his time and the past. It is the nature of the social life that was the basis of the Arab state in his time and the past, and probably even today.

Sustainable development of Arabian cities requires institutional transformation. It also requires the breaking of old habits. For example, to deal with climate change, humans must take mitigating measures and adapt to the new realities. In the *Quran*, it is written that “God does not change the condition of people until they change what is within themselves” (13:11).

(2) Achieve social justice.

Justice is the basis for governance. “And when you judge between people, then rule with justice” (4:58). In this regard, Arabian settlements need to revive and re-invent old modalities that contribute to social justice, such as *Waqf*. Today, the majority of *Waqf* projects involve building mosques.

In many cases, the revenues of *Waqf* are less than the expenditures, which is a situation that could be addressed by restructuring the system and its products. Today, Mohammed Bin Rashid Al-Maktoum Center for Endowments supports a wide array of *Waqf* initiatives. They contain hotel rooms, taxis, stocks, parking lots, and so forth. The proceedings finance various purposes, including medical research, science, technology and innovation; training and skills development and youth projects and the like (Mohammed Bin Rashid Global Center for Endowment Consultancy, 2019).

(3) Protect the environment.

Arabian settlements must use natural resources to meet the needs of the present generation, and then recover and regenerate products and materials for the benefit of future generations. Arabian societies must promote the practices of the circular economy, i.e., reuse products, reduce resource consumption and waste generation, recycle wastes, and recover energy.

Respecting the carrying capacity of ecosystems supports both environmental and social justice. The condition for such sustainable development involves

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Figure 3.
Ibn Khaldun’s *'ilm al 'umran* model for sustainability

Source: The Researcher (2019)
adopting and applying principles of good governance. Ibn Khaldun argued for the association between the development of ideas and concepts on the one hand and the surrounding environment and available natural resources on the other. He extended his argument to present a relationship between morals and ethics, and the generated ideas. Thus, protecting the environment is an activity that is carried out not only for serving social justice and maintaining the sustainability of economic development but also for taking moral and ethical responsibility.

(4) Mitigate market imperfections, and encourage the transformation towards a green economy.

As Panayotou (1992) argued, environmental degradation is the sign of both market imperfection and failures. Many buyers and sellers, perfect information and free entry and exit are among the conditions for perfectly competitive markets. The market is in a state of imperfect competition when one of these conditions is absent. The government must mitigate market imperfections, and cope with externalities through land uses and zoning, in addition to availing public goods, such as security and clean air.

City administrators and planners of Arabian cities must encourage the urban economy to adopt practices of the green economy, which recognise the supporting role of all ecological processes. It is a form of assurance for sustainable development. It is inclusive of some features of the local level such as eco-tourism. Green economy is a framework for both the circular and bio-economy that focus on resource use (D’Amato et al., 2017).

Conclusion, recommendations and implications

While translating his work, many of Ibn Khaldun’s concepts lost their accuracy, meaning and intention. Ibn Khaldun’s analysis is as good for addressing the urban ills of the contemporary Arabian city as it was in his time. Ibn Khaldun’s writings can inspire contemporary Arab scholars to elaborate a model for the sustainable development of human settlements based on the present social reality.

Ibn Khaldun observed the rise and fall of Arab dynasties in his time and the past, and in the east and west. He concluded that ‘umran is the function of history, collaboration and conduct and wealth. There is always a need for a societal framework, which consists of the government, family, education and scientific research, economy and religion and media for a society to flourish and sustain its prosperity. This institutional arrangement is a requirement for the proper management of the development process, thus balancing the three components of sustainable development. Ibn Khaldun indicated that for ‘umran to flourish, there is a need for good governance, economic growth, social justice and protection of natural resources from waste and irrational use.

Sustainable development of Arabian cities starts with the people. They are responsible for setting the development agenda and determining who administers their city. It is through the community and its social cohesion, i.e., ‘asabiyyah, that the public assures that state plans are in their interest. The people must be in control of their natural resources and the future of their community. No development will be sustainable without an observant, enlightened and empowered public.

The state must be responsible for initiating economic development, achieving social justice and protecting natural resources from irrational use and pollution – the legitimacy of the state emerges from the rule of law and the acceptance of the public. In short, as Ibn Khaldun argued, adopting and applying principles of good governance is central to ‘umran, i.e., development.

It falls upon both researchers and practitioners to continue developing the above-proposed planning model. It is a holistic, integrative, inclusive and participatory planning model. The proposed planning model is sensitive to local culture, values, traditions and the carrying
capacity of ecosystems. The proposed planning model evolves from the social reality and the context within which planners work. Planners must stop working for the people, and start working with them. The model is suitable for the Arabian cities, and probably to cities in developing countries at large.

Planners must acknowledge the political dimension of their profession. They must assume their role as apolitical technical experts. They must not be confined only to the technical aspects of planning, but extend their role to be community mobiliser and coalition builder to plan in the face of power and special interests.

To play such a role, planners must build their analytical capacities for technical actions; their intersubjective skills for communicative actions; and their critical competencies to acknowledge their bias to serve the community properly. They must enlight the public – enlightening the public is a step towards empowering them to be in control of their destiny.

The proposed planning model requires institutional transformation where an independent entity is responsible for organising the practice of designing the built environment. The proposed entity can serve as an association that represents the field of urban planning and architectural design in the Arab world with chapters in each country. The mandate of this professional association is to advance architectural design and urban planning practices through leadership in building capacities, research, advocacy and ethical conduct.

The institutional framework requires rethinking the research topics where both scholars and practitioners must implement pilots that investigate past practices, such as Waqf and hima and develop them for contemporary uses. These pilots can then be scaled-up into policies and lessons for educating future generations.

References


About the author
Ahmed O. El-Kholei is Professor of Urban Planning since 2002. He taught and served as a researcher and instructor at different institutions in the USA, Egypt and Bahrain. He worked as a consultant for international organisations, and regional and national agencies including the World Bank, UNDP, UN Environment, UN ESCWA, CEDARE and the LAS. He delivered technical assistance and training on various issues including urban and regional planning, spatial national planning, environmental management and disaster risk reduction and housing and community development. His research interests include planning theory, methods and models, disaster risk reduction, innovation and smart cities, and sustainable urban development. Ahmed O. El-Kholei can be contacted at: aelkholei@agu.edu.bh

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