

UNDERSTANDING LIVEABILITY: RELATED CONCEPTS AND DEFINITIONS

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ABSTRACT

The rapid unplanned urbanization of metropolitan areas has manifested number of challenges in terms of infrastructure, energy consumption, health care, waste management and resilience. Thus, forming “liveable” city for its citizens is an aspiration of the policy makers, designers and city planners. Yet, a detailed exploration of the concepts of liveability and liveability indicators has not been carried out. Thus, to this end, this paper advocates to define liveability and related concepts. For that an exhaustive literature synthesis has been conducted which simultaneously follows two different paths to define liveability. Firstly, it has reflected number of direct definitions from indexed literature related to liveability and contrasting the definitions of associate fragments of accustomed concepts such as sustainability and urbanization misapprehended as liveability. Secondly, a definition for liveability was derived through considering the liveability indicators of different liveability indexes According to the indicators, liveability represents social and economic approach. Yet, the concepts of sustainability was based on social, economic and environmental aspects when discussed along with liveability. Hence, Liveability is the balanced and favourable living conditions within a geographical area and liveable cities are such centralized communities with comparatively high population to the rest of the region. The policy making, planning, and political authorities need to ensure the balance of the habitats by defining liveability to reflect the social, economic aspects emerged through the existing indicators and the environmental focus of sustainability concepts.

Keywords: *Liveability; Liveable City; Liveability Index; Urbanisation.*

1. INTRODUCTION

As an integral part of urbanization, cities have a main role in providing social and economic wellbeing to its inhabitants (Mori and Christodoulou, 2012). As a result of this, cities have become centres of consumption of energy and material, greenhouse gas production, generation of waste and pollutants of water and air. The ecological footprints of cities have extended far beyond the physical boundaries of cities due to the emissions, consumptions and human activities resulting in negative impacts on the surrounding rural, regional and global ecosystem. Furthermore, cities are associated with uncontrolled and unplanned development, waste management, traffic congestion, crime and complicated access to resources (Peris-Ortiz *et al.*, 2017).

This brings out the urgent need of rethinking our approaches to design, construct and operate the cities in order to make them ‘liveable’ to its inhabitants. Thus, policy programs, business initiatives and political strategies have been designed to increase the

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livability of cities (Kaal, 2011). Liveability has been characterized as “a discursive frame that both enables and legitimates entrepreneurial policy initiatives” (McCann, 2004) and as a discourse which enables the individuals to take decisions regarding their consumptions despite the overall responsibilities and ethical usage (Hankins and Powers, 2009). With the emergence of the concepts of liveability over the recent past becoming more than a conceptual objective of policy making, political propagandas but a method of reflecting the quality of the urban lifestyle (Uitermark, 2009). Liveability is used in number of contexts including in the field of planning, community development, transportation and resilience. Greenwood (2008) emphasized that the ideologies of liveability enhanced competitiveness in the economy, provision of more transportation choices, and promotion of reasonable and affordable housing, value communities and neighborhoods and coordinate and influence policies and investment.

This paper is focused on defining liveability and liveable cities by exploring the existing literature on parallel and divergent contexts such as urbanization and sustainability. The liveability indexes that are used in different countries, cities and environments is discussed throughout paper.

2. PROCESS OF SYSTEMATIC LITERATURE REVIEW

The systematic procedure to identify, select and critically evaluate a clearly formulated question through literature, is known as a systematic literature review. Hence, an evidence based set of items were selected through the process known as Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) for the critical identification and selection of the related literature. According to that 376 items were selected through database searches using the key words; “liveability/livability”, “liveable cit*/ livable cit*” and “liveability ind*/livability ind*”. There were 313 records once the duplications were removed and 178 records were screened after reading of the abstracts. Lastly, 9 indexed journal articles were eligible after the full text review to define liveability. In order to define liveability, firstly, the concept was clarified by reviewing already defined concepts such as sustainability and urbanization. Secondly, unlike definitions of liveability in various context were considered to derive key components of liveability to apprehend the concept better.

3. UNDERSTANDING LIVEABILITY

Due to the novelty of the concept of liveability, exact definition of the concept is challenging to pinpoint. Therefore, this paper attempts to compare and contrast few concepts within which the word liveability is mentioned, to apprehend liveability.

3.1 LIVEABILITY VS SUSTAINABILITY

In order to best define the concept of liveability, it is apt to be contrasted against a related prevalent notion: sustainability. Sustainability is a vague concept, which is comparatively hard to comprehend by people and practically challenging to instrument at small scale as it is conceptualized in global scale to fortify the well-being of the next generations (Chazal, 2010). The principles such as use of renewable energy reduce the carbon footprint, reduced emissions within the environmental adjustment capacities and recycling are available for sustainability (Innes and Buhor, 2000; Sanford, 2013), but then the extent to which they should be executed is not defined firmly. Thus, the long-term approaches to achieve sustainability is subjective and convenient. In contrast,

liveability has more immediate concerns which are localized compared to the long term and globalized perspective (Evans, 2002). The tree pillars of social, economic and environmental sustainability are addressed in health, economic, cultural and environmental concepts of liveability (Bijl, 2011). Thus, the two concepts are focused on the social well-being, yet with a different scope. The policy makers, local authorities, investors, designers are more conscious in developing liveable communities than sustainable communities since liveability is more tangible, immediate and attainable.

Nonetheless, there are co- benefits of planning sustainable and liveable cities and complementary for environment, urban planning, and public health sectors. In order to maximally, fructify the benefits of sustainability concepts to the liveability, an effective collaboration of the public and private sector and a consistent polices for urban development need to be attained (Rayner and Howlett, 2009; Holden, 2012). Thus, the common notion emerged comparing the characteristics of sustainability through its definition provides that despite the differences in the scope in terms of time and boundaries, the goal is the well- being of the society.

3.2 LIVEABILITY VS. URBANISATION

The word liveability generally associated with urbanization since well-developed infrastructure, increased opportunities in the society for publicly available healthcare, jobs of diverse disciplines denotes liveable surroundings. However, it is questionable if liveability is limited to the characteristics of an urbanized environment. Urbanization has been defined as a superficial growth in the environment in response to, increased human activities in social, political and economic grounds over the encompassing physical boundaries of communities (Sudhira *et al.*, 2007; Ramachandra *et al.*, 2014). Currently, there are 34 cities which have a population over 10 million (UNDESA, World Urbanisation Prospects, 2011). Out of the world’s population, 54% lives in cities or similar urban areas as reported in 2014. However, from 2050, world population living in urban areas will be increased by 3 billion (UNDESA, 2011). According to Figure 1, the urban population is at the highest level in less developed regions. It can be assumed that the rapid urbanization in developing region is due to the positivity of the opportunities that are available in cities.

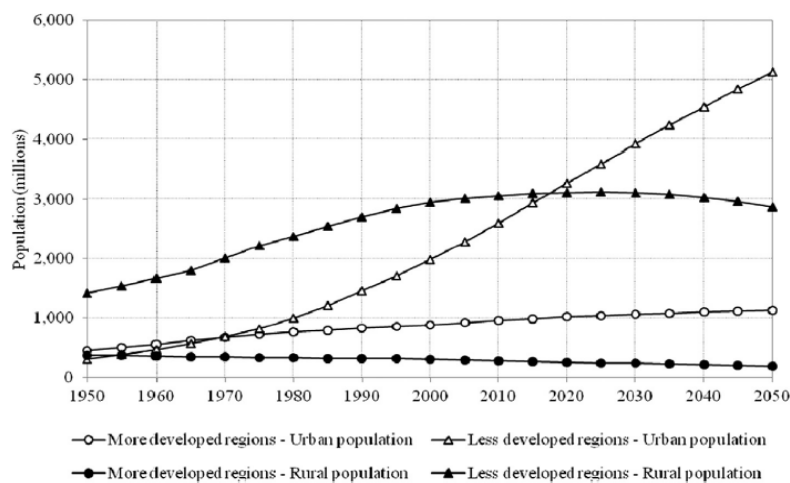


Figure 1: The growth of population in the world over 100 years of time (Source: Adapted from United Nations Department of Economic and Social Affairs, 2015).

Thus, it is unfair to interpret that liveability is represented through the urbanisation because the physical infrastructure of a city is not the mere factor that attracts people. Therefore, there is a requirement to distinguish the key characteristics of liveability to accommodate a planned and controlled urbanisation. In Section 3.3 direct definitions of liveability has been listed down to identify how the defining has been done to different contexts.

3.3 LIVEABILITY AS DEFINED IN OTHER LITERATURE

The three definitions considered in Table 1 has been developed for three different purpose. The first definition provides a scope to implement a series of policies to improve the living conditions of aged population in United State of America. The second definition is provided by the local authorities in Australia to benchmark developing cities against the developed cities. The third definition is a scientific definition quoted from an indexed journal.

Table 1: Definitions for liveable cities in different contexts

Definition	Keywords
“A liveable community is one that is safe and secure, has affordable and appropriate housing and transportation options, and offers supportive community features and services” (AARP, 2011).	safe and secure, housing, age in place, personal independence
“...the degree to which a place supports quality of life, health and wellbeing.... broad terms, liveable cities are healthy, safe, harmonious, attractive and affordable. They have high amenity, provide good accessibility and are environmentally sustainable...” (Australian Cities Report, 2013; Major Cities Unit, 2013, pp. 139)	quality of life, safe harmonious, high amenity, environmentally sustainable
“...liveable and healthy neighbourhood is one that is safe, attractive, socially cohesive and inclusive, and environmentally sustainable; with affordable and diverse housing linked by convenient public transport, walking and cycling infrastructure to employment, education, public open space, local shops, health and community services, and leisure and cultural opportunities” (Lowe, Chirombo, and Tompkins, 2013)	safe, environmentally sustainable public transport housing cultural opportunities

The most evident fact from the above three definitions is that liveability is quality of life. Yet, it is subjective to the habitats within the entity. The elements such as housing, safe and security, environmental sustainability are commonly available in the latter two definitions. The gravity on supportiveness of the community features are high in the first definition since it has been defined for aged people. Form that it is confirmed that the liveability requires to be defined based on the special needs of the habitants and the fulfilment of those needs will make the liveability increased in the perception of the habitants.

3.4 LIVEABILITY COMPREHENDED THROUGH LIVEABILITY INDICES AND INDICATORS

3.4.1 Liveability Indexes

The methodical constant identification, learning and implementation of the best practises and ways to improve cities through learning through other cities, is considered as city benchmarking (Badland *et al.*, 2014). The liveability indicators are used for city benchmarking (Herrman and Lewis, 2015). The liveability indexes consist of liveable indicators shortlisted, used, and updated over a period, which provide a basis to apprehend liveability (Lin *et al.*, 2009). The Global Power City Index (The Mori Memorial Foundation, 2011), EIU Liveability Index (Economic Intelligence Unit, 2011) and the Quality of Living Index (Mercer, 2011) are some of the globally recognised liveability indexes. Consequently, the selection of the indicators of liveability is based on the purpose, the indexes are designed for. For an instance Economist Intelligent Unit’s Liveability Index is focused to benchmark cities to reflect their suitability for investments. Alternatively, the Quality of Living Index by Mercer focus the liveability to the foreign employees. The Global Power City Index is focused on comparing liveability of different regions and influence policy development. Hence, the urban liveability is defined according to the context that is being under study.

3.4.2 Liveability Indicators

In the process of apprehending the concept of liveability, the indicators from various indexes are identified in Table 2. In order to improve the reliability of each indicator number of literature sources such as reports, World Bank Records, journal papers and web articles have been cross-examined.

Table 2: Liveability indicators

Liveability Indicator	Mentioned sources
Stability	
Occurrence of trivial crime	Evans (2002); Mitchell (2005); Van, <i>et al.</i> (2010); Jalaladdini and Oktay (2012); Miller <i>et al.</i> (2013); Sanford (2013); EIU (2018)
Occurrence of violent crime	Jalaladdini and Oktay (2012); Sanford (2013); EIU (2018)
Risk of terrorism	McCann (2004); Mitchell (2005); Timmer and Saymoar (2005); EIU (2018)
Risk of political conflict	Capon (2007); Perogordo (2007); Gleeson <i>et al.</i> (2010); EIU (2018)
Risk of civil unrest	Forum for the Future (2010); Pierson, <i>et al.</i> (2010); EIU (2018)
Healthcare	
Accessibility to private health facilities	Van, <i>et al.</i> (2010); Zhao (2010); AARP (2011); Centers for Disease Control and Prevention (2011); Dempsey <i>et al.</i> (2012); EIU (2018)
Standard of private health facilities	Centers for Disease Control and Prevention (2011); Dempsey <i>et al.</i> (2012); Holden (2012); EIU (2018)
Accessibility to public health facilities	Van, <i>et al.</i> (2010); Zhao (2010); The Population Division: DESA - United Nations (2014); Abdelbaset and Mahmoud (2015); EIU (2018)
Standard of public health facilities	Connecticut’s Legislative Commission on Aging (2014); EIU (2018)

Liveability Indicator	Mentioned sources
Accessibility of over-the-counter drugs	Centers for Disease Control and Prevention (2011); Dempsey <i>et al.</i> (2012); EIU (2018)
Common health indicators	Capon (2007); EIU (2018)
Culture & Environment	
Humidity/temperature rating	Evans (2002); McCann (2004); Mitchell (2005); Timmer and Saymoar (2005); Sanford (2013); The Population Division: DESA - United Nations (2014); EIU (2018)
Uneasiness of climate to tourists	Perogordo (2007); Holden (2012); Jalaladdini and Oktay (2012); Miller <i>et al.</i> (2013); Sanford (2013); Abdelbaset and Mahmoud (2015); EIU (2018)
Cultural accessibility	Li <i>et al.</i> (2009); Forum for the Future (2010); EIU (2018)
Level of suppression	Zhao (2010); AARP (2011); Centers for Disease Control and Prevention (2011); Jalaladdini and Oktay (2012); Sanford (2013); EIU (2018)
Presence of corruption	Dempsey <i>et al.</i> (2012); Miller <i>et al.</i> (2013); Sanford (2013); EIU (2018)
Food and Beverages	AARP (2011); Centers for Disease Control and Prevention (2011)
Sporting accessibility	Sanford (2013); Connecticut's Legislative Commission on Aging (2014)
Availability of consumer goods and services	Van, <i>et al.</i> (2010); Zhao (2010); AARP (2011); Holden (2012); EIU (2018)
Social and religious restrictions	Elysia (2008); Zhao (2010); Sanford (2013); Connecticut's Legislative Commission on Aging (2014)
Education	
Accessibility of private education	Zhao (2010); AARP (2011); Centers for Disease Control and Prevention (2011); Holden (2012); Miller <i>et al.</i> (2013); Sanford (2013); EIU (2018)
Standard of private education	Holden (2012); Jalaladdini and Oktay (2012); The Population Division: DESA - United Nations (2014); Abdelbaset and Mahmoud (2015); EIU (2018)
Public education indicators	Abdelbaset and Mahmoud (2015); Capitanio (2017); EIU (2018)
Infrastructure	
Standard of road network	Zhao (2010); AARP (2011); Centers for Disease Control and Prevention (2011); EIU (2018)
Standard of public transport	Van <i>et al.</i> (2010); Zhao (2010); Dempsey <i>et al.</i> (2012); Holden (2012); Miller <i>et al.</i> (2013); Sanford (2013); EIU (2018)
Accessibility to quality housing	Abdelbaset and Mahmoud (2015); Kashef (2016); Capitanio (2017); EIU (2018)
Standard of energy provision	Dempsey <i>et al.</i> (2012); Holden (2012); Jalaladdini and Oktay (2012); Miller <i>et al.</i> (2013); Sanford (2013); EIU (2018)
Standard of water provision	Holden (2012); Miller <i>et al.</i> (2013); The Population Division: DESA - United Nations (2014); Abdelbaset and Mahmoud (2015); EIU (2018)
Standard of telecommunications	Li <i>et al.</i> (2009); Forum for the Future (2010); Gleeson <i>et al.</i> (2010); Pierson, <i>et al.</i> (2010); Kashef (2016); EIU (2018)

The stability, healthcare, culture, environment, education and infrastructure are the key determinants of liveability. The scores obtained for the liveability indicators determines the level of liveability of cities. The score for occurrence of trivial and violent crimes,

risk of terrorism, risk of political conflicts and the risk of civil unrest require to be at a minimum to a city to be more liveable. The accessibility to private health facilities, standard of private health facilities, accessibility to public health facilities, standard of public health facilities are key indicators of liveability in terms of healthcare while cultural accessibility, level of suppression defines the liveability in terms of culture. Among the identified indicators the accessibility to quality housing has been mentioned in the majority of the literature sources considered.

4. DISCUSSION: CONCEPT OF LIVEABILITY

Since the aim of this research paper is to understand the concept of liveability, based on the limited indicators listed above can be utilized to clarify the notions of liveability. Figure 2 has been developed based on the different notions emerged during the process of apprehending the concept of liveability.

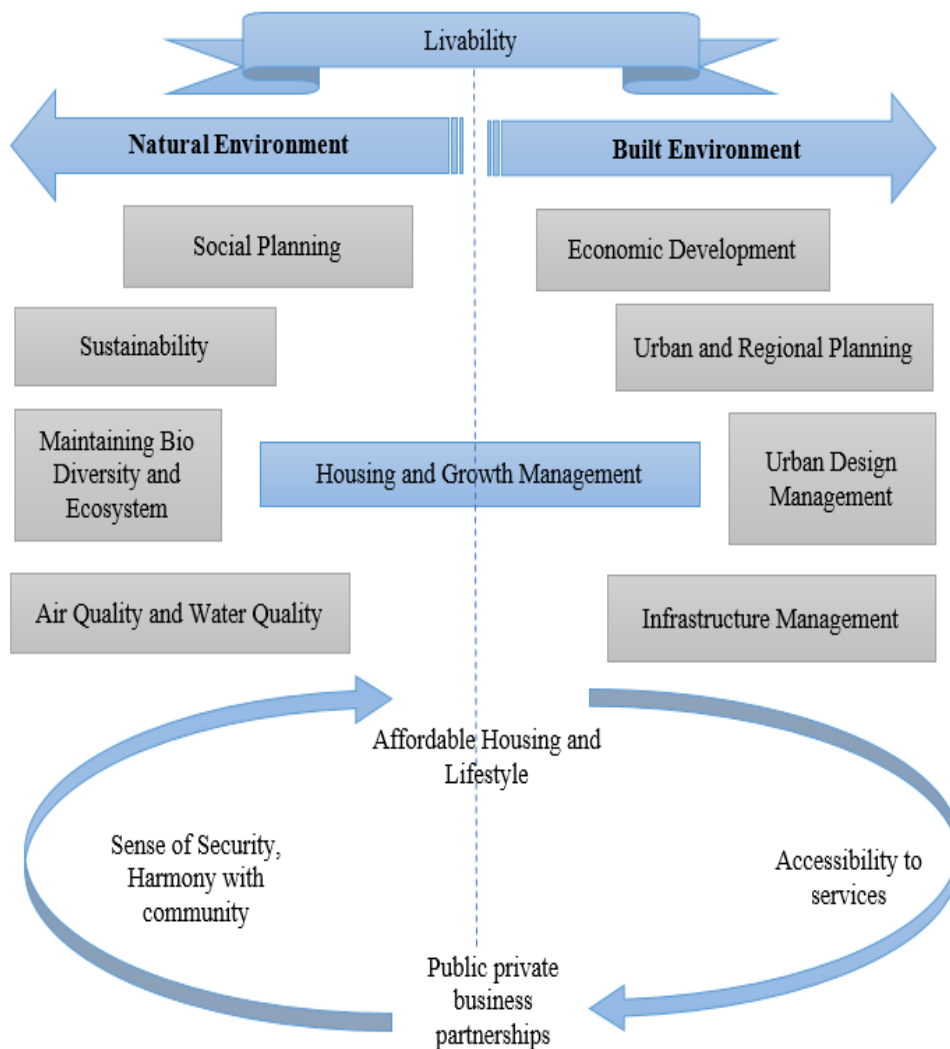


Figure 2: Concept of liveability explained

Nonetheless, developed through the concepts of sustainability, urbanization or resilience, the concept of liveability was broadly identified under the liveability related to natural environment and built environment. The sustainability views highlighted the importance

of considering the liveability within the natural environment as a short term approach, to maintain the ecological sustainability in the long term. Alternatively, the concepts on urbanization stressed upon the liveability in the built environment as a key constituent which needed to be addressed along with the urban sprawl. Hence, liveability is the balanced and favourable living conditions within a geographical area and liveable cities are such centralized communities with comparatively high population to the rest of the region.

Yet, the concepts of sustainability was based on social, economic and environmental aspects when discussed along with liveability. It can be argued that exceling environmental sustainability is not directly beneficial a city if it has not robustly achieved the economic and social benchmarks. Further, the indexes that has been developed with commercial intentions has not stressed out the importance of indicators related to environment. However, when considered in the long- run, the responsibility lies with the policy making, planning, and political authorities to ensure the balance of the habitats by defining liveability to reflect the social, economic aspects emerged through the existing indicators and the environmental focus of sustainability concepts.

5. CONCLUSIONS AND RECOMMENDATIONS

This research highlights the concept of liveability, which includes number of elements, discusses the association among the individuals and the environment that offers a habitation. Despite the fact that, definitions of liveability varied according to the context it is used, the notions such as safety and stability, quality of life, amenities, public transport, infrastructure were emerged in most of the definitions. Some of these indicators are tangible such as amenities and infrastructure while safety, quality of life and alike are intangible. The concepts of sustainability and urbanization are often confused with the concepts of liveability. Nevertheless, the literature provided that liveability is a subset of concepts of sustainability but is defined in the point of view of the individuals. The definition of liveability in the light of urbanisation provides that the cause of urbanisation is not the positive liveability of those cities yet the needs of the public. It was confirmed through the second approach to define liveability. That is through various liveability indicators that are established by different authorities and organisations. These liveability indicators which are measured in region wise or country wise, materialised the concepts of liveability such as stability, environment, culture, economy, healthcare and built environment.

The finding through literature highlighted the importance of defining liveability to the applied context as it facilitates the policy makes to correctly bench mark the status quo of a city with top ranked indexed liveable cities in order to develop rules, regulations and to monitor that. Even the conditions that need to be fulfilled in the built environment will be realized through a better definition of liveability.

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