Managing the Growing Kuala Lumpur Mega Urban Region for Livable City: The Sustainable Development Goals as Guiding Frame

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Abstract

In the last three decades, Malaysia has witnessed fast urban growth and spatial spread at a rate never experienced before, in response to overlapping industrial, social, economic and policy drivers. The paper will analyse the urban spatial spread from the productive towns and cities in the country, in particular, taking the Kuala Lumpur mega urban region as focus to demonstrate the spread of urbanization surfaces and the dimension of modernity among the urban people associated with urban life. The approach taken is the framework of the sustainability science, specifying issues and then taking a transdisciplinary stance to those issues. Data were then gathered from published sources supported by our own field observations of urban land use spread in parts of the Kuala Lumpur mega urban region. Despite the increasingly glittering showcasing of the state of the art development in infrastructures, housing and economic diversity there are challenges that the Kuala Lumpur mega urban region has to pay attention to, to make the city livable. Looking beyond the physical achievements to date there remains to develop what has been discussed lately about grooming the soul of the city, to instil the urbanites with globally accepted values related to what we believe should be the essence of a livable city, such that the urbanites will take responsibility to be with the authority to ensure, for example, cleanliness, safety and making the city more vibrant and attractive.

Keywords

Urban growth • Spatial spread • Urban livability • Productive city • Mega urban region • Kuala Lumpur • Malaysia

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1 Introduction

This paper is to trace the emergence of the Kuala Lumpur mega urban region amidst the growing number of large urban agglomerations in Malaysia today. The study focusses on managing the vibrant growth of the Kuala Lumpur mega urban region with its challenges to the central of the demand of the Sustainable Development Goals (SDGs). Only as far back as the 1960s observers of urbanization and urban Malaysia described the urban centres in the country as mere 'sleepy hollows' with administrative functions and offering limited hopes for modern salaried jobs in the modern market for rural migrants. Persistent in-migration of rural workers to the urban areas contributed to the excess of urban workers in relation to the ability of the somewhat limited urban infrastructures, modern shelters and amenities and jobs, producing a condition of over-urbanization (McGee 1971). Today these sleepy hollows of yesteryears have grown to become 'productive cities' coupling of course development with resource use, to show case Malaysia's attempt at embracing meaningful modernity. Urban regions consisting of urban centres from which modern urban land use spreads out far beyond the boundaries of the original urban centres have become visible on the Malaysian space economy. Indeed, mega urban areas have emerged on the Malaysian urban landscape. The most dominant among these mega urban regions leveraged on the Greater Kuala Lumpur with a population around 8 million in 2010 population census. However, urban land use has diffused to the surrounding peripheries to embrace a large area (by Malaysian standard) about 220 km from south to north and about 80 km east, the mountain range to west, the coast. Today, this Kuala Lumpur mega urban region leads the rest of the rising mega urban areas and agglomerations in Malaysia as a centre of wealth creation through its export industries, educational hub, leading financial services and infrastructural development among others. Indeed, the Kuala Lumpur mega urban region leads in the dimensions of the framework proposed by Wong (2015) for City Prosperity Index-integrating productivity, infrastructure quality of life, equity, social inclusion and environmental sustainability. In the spaces of achievements, there are challenges that need careful management.

The approach taken is the framework of the sustainability science, specifying issues and then taking a transdisciplinary stance to those issues. Data were then gathered from published sources supported by our own structured field observations of urban land use spread in parts of the Kuala Lumpur mega urban region. The secondary data such as population, land use and development plans were gathered from manuscript and published documents by various government agencies to show the transformations of the study area.

2 Urban Growth, Expansion and the Emerging Kuala Lumpur Mega Urban Region in Malaysia

As mentioned above, overlapping drivers have contributed to the emerging and fast growing of the Kuala Lumpur agglomeration into a mega urban region. These overlapping drivers are best situated in the frame of the sustainability science that emphasizes inter-connectivity of ecological, social, economic, political and institutional, local to global links and a more engaging governance (Kates et al. 2001; Komiyama and Takeuchi 2006; Marten 2006). In order to have a more global relevance for Malaysia, the frame has to engage the sustainable development goals that will focus all efforts at achieving sustainability by 2030 (Griggs et al. 2013; Nilsson et al. 2016). The emphasis on the interconnectivity of drivers strongly demands cross-disciplinary approach to the issue at hand. A disciplinary explanation is insufficient to unravel the complex interaction of the influencing drivers to understand the path dependence nature of the Kuala Lumpur mega urban area (Batty 2002; Allen 1996).

2.1 The Spread of Urbanization Surfaces in and Around Kuala Lumpur City

It is widely accepted in the literature that modern towns in Malaysia emerged with the British intervention in the Malay States in the eighteenth century, with the port towns of Penang and Singapore founded earlier, as centres of the British East India Company (British Malaya 1930). The beginning of modern towns in Sabah was linked to the British North Borneo Company whilst towns in Sarawak were associated with the Brooks family who administered the state then. Later on, these townships in the Peninsula were connected by good roads and railway lines covering the whole Peninsula such that by the early twentieth century, a national system of towns had evolved in the Malayan space economy (Lim Heng Kow 1978). In Sarawak, and less so in Sabah, the main rivers provided the easiest route of least resistance.

Independence from the British colonial control for the Federation of Malaya was in 1957, and the Federation was expanded when Singapore, Sarawak and Sabah joined the Federation in 1963. Singapore left the Malaysian federation in 1963. In both Sarawak and Sabah, townships were already vibrant, serving their respective districts but at best then they were, like the towns in the Peninsula, were sleepy hollows, known strongly for their administrative command for stability and security and safety in addition to act as local trading centres.

In 1970, the New Economic Policy with two related prongs was adopted by the country, aiming to eradicate poverty and to restructure the society such that no one race is identified with a particular dominant economic activity as in the past (Malaysia 1971). This policy provided the framework in which the globalization of Malaysian development took roots and functioned. The immediate effect of the policy was seen in the rigorous urbanization strategy of pursuing to develop the

country further. The active nation-state involvement in pushing the country's development has been summarized as the developmental state paradigm (Sundaram and Hui 2014), relegating the private sector to a secondary role at times but playing leading role at other times. Development is pursued with resource use.

By 2010, the national Population Census reported that about 72% of the Malaysian people of 28 million was already urban dwellers, with some states such as Selangor and Penang reaching almost entirely urban. If the authority defined 'urban' is relaxed to include the modern commercial agricultural areas, the rubber estates and the FELDA schemes and the urbanized urban–rural areas, more Malaysians could be categorized as urban then.

In the last two decades, continuous urbanized areas have spread out from major centres merging with smaller towns and new towns forming agglomerations that can be labelled as urban regions. The largest urban region, the subject of this discussion, the Kuala Lumpur mega urban region emerged into dominance based on its status as the national capital. Figure 1 provides a summary of the growth, development and distribution of these urban centres over those 20 years.

There is a need to look at this particular mega urban region with an extended areal urban inclusivity in history, functions and importance (McGee and Robinson 1995; McGee 2009). It has the built-up complexity and the social dynamics befitting its dominant role in the country. Moreover, the urban has become the centre of prosperity to which Malaysians and nowadays migrant workers from the surrounding countries move.





Fig. 1 The land use change in the Kuala Lumpur extended mega urban regions (KLEMUR), 1990–2008

2.2 The Kuala Lumpur Mega Urban Region: Rising to the Fore

The largest urban region as stated earlier in Malaysia centres on the Kuala Lumpur city. It literally stretches from the central mountain spine to the west coast, expanding all round to emerge as a potential mega urban region in the 1980s, covering the diffused urban area from the Bernam river basin in south Perak to the Linggi river basin in Negri Sembilan bounding an area of about 200 km, north—south, and about 40 km east-west, from the mountain spine to the Straits of Melaka with an estimated population today around 9 million people. The Bernam-Linggi embraces the combined drivers to propel the region into a prominent mega urban region in Malaysia in coming years (Fig. 1, earlier).

Historically, the seed to the growing prominence of the Kuala Lumpur mega urban region with extended urbanized area diffusing from the Bernam to the Linggi river valley in the Malaysian urban landscape could be traced back to the rise of tin producing activities in the Lukut-Sungai Ujung area in the Linggi river basin and later on in the Kanching area in the hinterland area of Selangor and also in the Klang valley around Ampang on a larger commercial scale in the early part of the nineteenth century (Khoo 1972). Khoo Kay Kim stated also that from the early twentieth century rubber growing in the areas after the failure of tapioca and coffee ventures became another economic driver to the growth of the urban areas. Khoo Kay Kim observed too that mercantile capitals from the established port town communities of Melaka, Penang and Singapore invested in these commercial activities that promoted the founding and growing of those new towns.

Thus, the townships founded during the British colonial administration time had grown and expanded in the periphery over the decades, prompted by new industrial areas and commercial functions to accommodate the inflows of global investments. Supporting service functions had slowly moved in Hadi et al. (2008). A dominant character of the extended Kuala Lumpur mega urban region is the low density of people in the outer Greater Kuala Lumpur area. Partly, this is the outcome of the availability of all weather roads connecting the kampongs, small towns, regional towns and state capital and of course Kuala Lumpur, about five decades ago and allowing for easy commuting from small towns to Kuala Lumpur.

In terms of social infrastructures, education, industrial concentration and others, the area leads the rest of the urban regions in importance in the Peninsula and in the country. In this leading position, the region can be projected to sustain its importance in decades to come. The sustaining drivers will be the fact that the region houses the national capital at Putrajaya, the largest port at Port Klang and the main industrial areas of the country, and the largest international airport, KLIA in Sepang to the south of Kuala Lumpur. Foreign embassies and heads of some large corporations are firmly established in the region. Not least, foreign visitors, shoppers and tourists in the main will use the region as the entry door to the country.

Moreover, the Kuala Lumpur mega urban region has attracted about 45% of the total people in the Peninsula, and about 34% of the total Malaysian population.

Such a large convergence of people can be related to the available opportunities in the forms of industries, services and retailing.

3 Challenges of the Kuala Lumpur Extended Mega Urban Region

At the core of the Kuala Lumpur, mega urban region remains the challenge of the governance with the relevant and right institutions to work for overall sustainability in line with the call of the sustainable goals, 2030. What sort of governance should be in place in the Kuala Lumpur mega urban region? As it is the urban land use spreads in all directions. This has put into question the overlapping responsible agencies in administering the whole urbanized stretch lying outside of each of the present administration of a town. The existing governing structures within each urban administrative entity cannot cope with the urbanization process to meet the targets of the sustainable goals.

Overall, the Kuala Lumpur mega urban region needs to produce the quality of life commensurate with the region's leading position in the Malaysian urban landscape. This falls within the broader concept of city livability, and it concerns with a search for a new way to come to grip with complex situations in the region, involving complex interactions of factors at the local level—the individuals, families and communities' in their everyday decision-makings that have produced the temporal and spatial growth patterns within the mega urban region in the past.

Thus, a recurrent issue about city growth and development in the region revolves around its sustainability in the context of sustainable development (WCED 1987). The framework has been contested widely but it still stands without rival and therefore remains useful (Dovers 2009). A window to city sustainability is best captured in the future through meeting the sustainable development goals. The concept of city livability, about shaping the city people's quality of life, about the daily lives of city people, about their decision-making, that all contribute to the people's daily life in the region, is a step towards achieving that sustainable goals. We have articulated the concept of city livability, stated in passing above, for Malaysia elsewhere (Hadi et al. 2007, 2011) to capture the essence of city's economic and social vibrancy within the framework of sustainability. The city needs also to be healthy, socially attractive to live in, safe, green with an enabling framework for an ethical living which is necessary in a world often gripped by extreme social, political, economic and weather variabilities.

The Kuala Lumpur Mega Urban Region is shaped by local and global investments to grow, as capital of a fast developing country in a relatively short time. Of the challenges faced by the mega urban region, we have identified about 10 dimensions of challenges; two associated with the environment, two with social sustainability, two with economic sustainability, two spatial with management and institutional need. On the environmental dimension, the Kuala Lumpur mega urban region has to pay attention to both the natural resources and the built environment.

Expanding urban areas means more lands are converted for housing, infrastructures, more minerals especially sands will be extracted for building construction. More water supply and energy have to be made available to meet the increasing domestic, commercial and industrial consumption. In the built-up environment, more needs to be done to control the carbon foot prints through more greening landscape, green buildings, green infrastructures and carbon emission control including wastes from food base to chemical. As the country progresses economically and socially, the invisible chemical dangers are everywhere threatening the health of the people and the ecosystems (Peterson 2013).

Moving next to the economic sustainability dimension, one dimension is to promote sustainability in economic vibrancy to meet the increase in demands for work especially among the youth. The second dimension of the economic sustainability should pay attention also to the small and medium production industries, including those small-scale agricultural producers in the urban region outside the built up area, currently involving a growing number of people. Their role is important in increasing the vibrancy of the industry and also in helping to increase the range of food security and for export products from Malaysia, and consequently providing more jobs. At the local level, the urban communities have been encouraged to engage in urban agriculture with respect to supplementing food productions.

Moving on to the two social dimensions? One direction is on the social infrastructures and the other on the inter-ethnic relations and the nagging issue of inclusivity of all people in development that has troubled Malaysia in its quest for a truly multi-ethnic society living in harmony. With respect to the social infrastructures, there is a need for sufficient affordable housings, efficient services in health care which is getting expensive, access to education from the kindergarten to the institutions of higher learning, training institutes, and centres to give a second chance to the school drop outs, and also for recreation and sports. On the challenges of the inter-ethnic issue, it is more difficult to handle because it leverages on many sensitivities related to religions, cultural norms and habits. The government concept of social inclusivity is useful and it has to be implemented with care. But to date, the Malaysians have not 'gone on killing spree on streets and in open spaces'. However, at issue is that all Malaysians need to embrace the culture of living in harmony to forge the country ahead in the global spaces.

In addition, there are still problems with subregional inequality. The industrial subregions, perhaps, are able to showcase the accumulated wealth compared to other subregions. More opportunities are needed for the poorer subregions to enable the folks there realize their potentials in life. Closely related to the issue of regional inequality is the problem with resource scare subregions. Such subregions need to be pushed out by specific development programs.

4 Looking for Solution

There are options: one, to go on managing it as it is practiced at all levels of administration, or two, to develop partnership between the public, private and the mega urban region citizen. Another option is to develop an entirely new governing structure with shared responsibilities among the whole hierarchy of institutions, stakeholders and the government (Pierre 1999). Certainly, there is a need to decouple development from over use of resources as seen in pursuing of development and urban growth about five decades ago. While researching the Seremban urban area, we argued for an entrepreneurship approach to managing the city (Hadi et al. 2011). If the entrepreneurial approach is cast in a more open multi-level partnerships with shared common core values for a livable extended mega urban region ordered by a more ethical consideration of sharing the wealth, the Kuala Lumpur mega urban region may grow for all people in the area—the native city people, transients and visitors; The social dynamics can then be channelled to realize the promise of city livability amidst a high quality of life.

Through the viewing window of the Kuala Lumpur mega urban region, we hope to showcase a call for a system to manage people—the inhabitants and transient population—visitor from within and outside the Kuala Lumpur, Malaysians going out in their everyday life immersed in the culture of sustainability. Across the social strata and spatial domains, individual Malaysian will act in the interest of the commons to propel a sustainable life in a world full of contestations from the people. There is a need for behaviour change to accommodate considerations for other people. Malaysia now is putting forth to the world communities, the concept of 'moderation', taking the middle path always, neither extremist nor one for oneself. The ideology of moderation fits rather well with the concept of mega urban region livability in which the emphasis is on creating a mega urban region with a quality of life that emanates from the essence of sustainable development.

City well-being should be connected with the well-being of their everyday life about their neighbourhood, their families and individual activities. All can be pursued in a safe environment—safety for individual, family, household, neighbourhood, accessible to work place, to schools, to healthcare centres, to green areas, to sport and to spaces for social interaction and networking. Ease to spatial and social mobility should also be a priority. In the end, what the city people require is a happy atmosphere to bring up their children, free from the grip of fear.

5 Assembling a Framework for Urbanization Sustainability in Malaysia

5.1 The Indicators to Manage the Sustainability—A Guide

As discussed earlier, the Kuala Lumpur mega urban region has to be managed for sustainability. A framework for managing the growing Kuala Lumpur mega urban

region that should serve the current situation and long-term needs of the area is to contain two sets of indicators. One set of indicators should summarize the characteristics of all the visible layout, design, physical as well as human infrastructures, especially for inter and intra-urban mobility, amenities for the locals and also transient population including visitors and tourists. Attention is required to match the increasing number of city people with the availability of open spaces for future requirements as more people are coming to settle in the region. Another set of indicators should embody the humanizing side of the people, containing the people's positive values that will ensure sustainability of the mega city region.

The two sets of indicators are summarized in Table 1.

From the list of possible indicators above, it is asserted that to concentrate mainly on the well-being and the availability of the 'physical' indicators, that is—concentrating on what can be seen physically in the city region, it is insufficient to embed all efforts by the authorities into shaping the city livability and realizing the

Table 1 Two sets of indicators for sustainability of the Kuala Lumpur mega urban region

	Dimensions	Indicators
1	The physical indicators	• Layout of city, design high density or low density, related to mobility
		• Indicators associated with social needs; schools, health centres, hospitals, university
		Sports and green areas
		Retail shops and shopping complexes, wet market
		• Housings
		Amenities; water, energy
		Industries including small and medium industries
		Easy accessibility to information about city condition and well-being
2	Indicators on human values to embed sustainability	Educating individuals and community from being aware to taking action in looking after the city well-being
		• Ethical consideration for the right and needs of fellow human beings, animals and the city environment
		• Upholding the principles of keeping the city always attractive
		• Governing for sustainability—working in tandem with all stakeholders in the city
		Using the accessibility to information about city condition and well-being for taking action
		• Avoiding extremism to preserve the general well-being of city
		• Living in harmony with fellow human beings, animals and the urban environment
		• Upholding the idea of togetherness, always offering helping hands to the needy

broader frame of sustainability. The call for the active role of the urbanites to come forward actively in helping to keep the city region always in top form is necessary. The people living in the region need to lend active supports to the authorities in the urban region to show case always for themselves and for visitors including tourists. All the positive values of the people can help to upkeep the best for the urban region. Thus, the urban region, for example, is always clean, healthy and attractive to all people.

The human and social values should begin with the individuals, transmit through the community and inhabitants of the mega urban region at large. These values can be nurtured through the dialogic model (Appleton 2014) whereby all the people, should in the end, are ever willing to show the mega urban region the best.

6 Managing the Mega Urban Region

Beyond planning for the livable mega urban region, there is a need to manage and govern the region. The main issue is who is to do what, and whether should there be sharing of responsibility in making decisions about many things in the mega urban region. There are options: one, to go on managing it as it is practiced at all levels of administration, or two, to develop partnership between the public, private and the mega urban region citizen. Another option is to develop an entirely new governing structure with shared responsibilities among the whole hierarchy of institutions, stakeholders and the government (Pierre 1999). While researching the Seremban Urban Region, we argued for an entrepreneurship approach to managing the city (Hadi et al. 2011). Given that each city and township in the Kuala Lumpur extended mega urban region house multiple forms of capital that generate the economy serving their respective owners, they will still remain the main player in the city. But if the entrepreneurial approach is cast in a more open multi-level partnerships with shared common core values for a livable extended mega urban region ordered by a more ethical consideration of sharing the wealth, the extended mega urban region may grow for all people in the area-the native city people, transients and visitors; the social dynamics can then be channelled to realize the promise of city livability, showcasing urban citizen living amidst high quality of life.

It has become clear that more Malaysians are now making the urban areas as their home base. Equally clear is the trend that major cities and municipalities in the area stretching from the Bernam river basin to the Linggi river basin are growing out from their periphery into the surrounding rural areas, creating extended mega urban. Such extended urban areas always lie outside the administrative boundaries of existing cities and municipalities but therein lies a number of contested problems such as conflicting land uses, environmental conflict, social issues, transport demand and on assessments (McGee 2009).

The existing urban management with respect to urban services and others end at the city or municipality's administrative boundary. Beyond the boundary, the land comes under a different administrative body. An urgent issue arising from the circumstances is about policy matters. Currently, the Malaysian urbanization policy is more about the urban physical wellness, while the National Physical Plan concentrates more on delimiting the physical boundaries, more for the purpose of development. There is a need for a more inclusive urban policy that will see to it that the extended urban areas will be integrated with the city or municipality's management system.

7 Conclusion

Malaysia is now not only witnessing fast urban expansion but also the rise of urban agglomerations albeit somewhat insignificant in terms of population concentration when compared with, for example, the greater Jakarta into which the entire Malaysian population numbers can fit into. Overlapping drivers for over four centuries support the formation of the area as a huge urbanization areal unit in our spatial imagination.

In relative terms, the Kuala Lumpur mega urban region has become the most vibrant and most important urbanized area in the country. It will continue to attract people of all shades and origins, including foreign workers—legal and illegal. Above all the country has come face to face with layers of problems which are essentially urban in nature. These problems range from aspects of the environment, resources, social, economic, political, physical infrastructural and humanistic consideration. The Kuala Lumpur mega urban region faces all these layers of problems that the Federal, state government and the local authorities are working with researchers and the Institutions of Higher Learning in a partnership that will enhance science to policy outcomes for Malaysia.

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