provided by Elsevier - Publisher Con



Available online at www.sciencedirect.com

SciVerse ScienceDirect

Procedia - Social and Behavioral Sciences 50 (2012) 20 - 29



AcE-Bs 2012 Bangkok ASEAN Conference on Environment-Behaviour Studies. Bangkok, Thailand, 16-18 July 2012

City Competitiveness and Urban Sprawl: Their Implications to Socio-economic and Cultural Life in Malaysian Cities

Jamalunlaili Abdullah*

Faculty of Architecture, Planning and Surveying/ MASMED, Universiti Teknologi Mara, Shah Alam 40450, Malaysia

Abstract

Malaysia officially became an urban nation in 1991. Currently about 65 percent of her population reside in urban areas. In era of globalization much emphasis is given for the cities to become economically competitive. Consequently, the trend of urban sprawl has continued unabated in major metropolitans of Malaysia, whereby most of new developments are located in the periphery. These developments have implications to socio-economic developments and cultural aspects of cities in Malaysia. These impacts, including the flight of the economically marginalized to the suburbs and the declined of cultural aspects of the city are analyzed in the paper.

© 2012 Published by Elsevier Ltd. Selection and peer-review under responsibility of the Centre for Environment-Behaviour Studies (cE-Bs), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia Open access under CC BY-NC-ND license.

Keywords: Globalization; city competitiveness; urban sprawl; socio-economic; cultural.

1. Introduction

Malaysia officially became an urban nation in 1991 when 50.4 percent of the population resided in urban areas (Statistics Department, 1991). The percentage has increased to 65 percent in 2010 and is expected to reach 75 percent in 2020. Closer examination of the data found that most of the population and built up areas growths since 1980 have occurred in areas outside the core city boundaries. This has occurred in the three main metropolitan area of Malaysia, namely the Kuala Lumpur, Penang, and Johor

^{*} Corresponding author. E-mail address: bota65@yahoo.com

Bharu metropolitans. At the same time, globalization and economic competitiveness among nations and cities have caused governments in Southeast Asia, including Malaysia, to focus economic development to existing metropolitan areas in order to make cities become economically more competitive. The inclusion of Greater Kuala Lumpur as one of the key economic areas of Malaysia Economic Transformation Program (ETP) underscores the importance of cities as economic growth engine (The World Bank, 2011). The desire to make Kuala Lumpur as the top 20 cities globally in terms quality of life and economic competitiveness would further propel more economic activities within the main metropolitan areas of the nation.

These two major currents trends have far reaching implications to socio-economic and cultural conditions in urban areas. The desire to compete among cities has led to major economic activities to be concentrated within existing metropolitan areas, leaving rural areas further behind and widening the rural-urban divide. This is in contrast to the equitable and balanced development policies propagated in the regional development policies of the 1960s through mid 1980s. It may have consequences to socio-economic development for the population outside the main metropolitan areas.

The intensification of urban sprawl within the three major metropolitan ares has led to greater growth in urban areas outside the city center boundaries. The implication of this trend is the hallowing effects of city centers whereby greater number of the population resides in the suburban areas rather than the city centers. Those who cannot afford the high prices of housing in city centers would move to the suburbs, widening the socio-economic gaps between suburbs and city centers. In addition cultural activities which were previously abundant in city centers are now less numerous, having shifted to the suburbs or disappeared altogether.

2. Early Development Planning in Malaysia

Since Independence in 1957 through the mid-1980s, economic development planning focused on improving the socio-economic status of Malaysians, especially in rural areas. Programs implemented during the periods included the establishment of FELDA land development schemes during the 1960s until the 1980s, the setting up of industrial estates in the 1980s and 1990s and the development of new towns and satellite towns to distribute developments and urbanization over a wider geographical space. Many new towns were built in areas away from major urban areas in places such as southeast Johor, Hulu Terengganu, southeast Kelantan and interior Pahang. The buzzword then was on balanced and equitable development whereby massive government investments in land development schemes were implemented to reduce regional development disparities among regions. This was done especially to support the two-prong objectives of the New Economic Policy (NEP: 1971-1990) specifically that of reducing poverty and restructuring the socio-economic conditions of the society.

In the Third Malaysia Pelan (1976-80) the objectives of the regional development under the NEP were explicitly stated:

The regional strategy under the NEW Economic Policy (NEP) seeks to bring about closer integration among the States of Malaysia. This will be achieved through redressing economic and structural imbalances among the regions in the country. It will draw and build upon the strengths of each region for agricultural and industrial development particularly in the less developed states, to ensure that regional development contributes towards the national goals for economic development. The underlying aim is equitable distribution not only of income but also of facilities for health, education, utilities, services, housing and most important of all, opportunities for social and economic advancement of the people in accordance with the goals of the NEP).

(Malaysia, 1976, p 199).

In order to reduce the development disparity, various Regional Development Authority (RDAs) namely Southeast Pahang Regional Authority (DARA), Central Terengganu Regional Authority (KETENGAH), Southeast Johor Regional Authority (KEJORA), Southeast Kelantan Regional Authority (KESEDAR), Kedah Development Authority (KEDA) and Penang Regional Development Authority (PERDA) were established (Ghani Salleh 2000). These RDAs have implemented many land development programs in backward areas of the nation. This regional development program was successful in that it had been able to lift hundred of thousands out of poverty, provided agriculture land to the landless, opened new frontiers for agriculture developments and built new towns such as Bandar Al Muktafi Billah Shah and Jengka.

The development strategies of the 1970s and 1980s gave more emphasis towards balancing the socio-economic development of the population especially in relation to the New Economic Policy which was then in place. The restructuring of the economy which favored the Bumiputera had led to massive government funds into areas dominated by the Malays which were mostly in rural regions and less developed states. By and large, it was successful in improving the socio-economic conditions of the rural Malays especially in FELDA settlements.

The four main strategies employed then were resource and new land development strategies, in situ rural development, industrial dispersal strategy, and rural urbanization and growth centre strategy (Ghani Salleh, 2000). The first strategy entails the mobilization of large numbers of people into cleared virgin land which was transformed into agriculturally productive ares. The RDAs developed high level of urban services and other infrastructure to serve the resource based industries in the newly opened areas. The in situ development, on the other hand, modernized existing rural areas through the provision of infrastructural facilities. Its ultimate goal is to increase farmers' productivity and increase their standard of living. Noted in situ rural development include Muda, Kemubu and Besut which are located in less developed states.

The third strategy, the industrial dispersal strategy, encouraged new manufacturing industries to locate in the less developed parts of Malaysia, rather than in developed urban areas such as Kuala Lumpur and Penang. Its objective was to accelerate development in the poorer states through the utilization of the local resources and by providing employment to the Malay population. This strategy goes hand in hand with the fourth strategy, rural urbanization and growth centre strategy. The latter is part of NEP urbanization strategy of encouraging rural to urban migrations among the Malays. It was meant as restructuring the Malay rural communities into more modern and productive communities. Rural urbanization strategy is related to other strategies such as rural industrialization, industrial dispersion and growth centre. It planned and implemented "new towns' programme, particularly in the newly developed frontier regions (Kamal and Young, 1988). This is in addition to primary growth centers of Kuala Lumpur, Penang and Ipoh and intermediate cities such as Johor Bharu, Kuantan and Kota Bharu.

However, the progress of new town development had been rather slow. Some such as new towns in the KETENGAH region managed to attract only 34 percent of the projected population of 85,000 in 1990. Some of the factors cited for the lack of success are competition from more established regions, traditional labour shortages in the newly opened regions, infrastructural deficiencies which cause failure to attract industries and lack of linkages between the new towns and surrounding settlements (Ghani Salleh, 2000).

These new development strategies had positively impacted socio-economic conditions of the population especially the rural Malays who saw their incomes improved. The number of people living under poverty was reduced since many landless farmers were now landowners, thanks to the FELDA and RDAs land resettlement programs. However, due to the lack of success of the rural new town programmes in the frontier regions, most of these people still lived in rural areas. Consequently, not much

changes to their cultural life was evident. Most still worked in agricultural areas and their cultural activities still revolved around rural and agricultural economic activities.

3. The Rise of Manufacturing and Dramatic Urban Growth

The rather severe recession experienced by Malaysia in 1985-86 due to the steep decline of palm oil and rubber prices had forced the government to shift economic strategy by attracting manufacturing firms, especially from Japan to relocate to Malaysia. This occurred before many countries such as Vietnam, China and India opened up their markets to foreign investments. This strategy had a profound impacts on the socio-economic conditions of Malaysians, especially in urban areas and had effects on the cultural of the population as well.

The strategy had worked in that by 1989 Manufacturing had overtaken Agriculture as the biggest sector of the economy, a feat unprecedented in the country. Since many of the manufacturing firms were export oriented ones, they tended to locate in urban areas where port facilities were in existence. Thus, new towns developed in frontier regions in the 1970s started to lose their shines while existing metropolitan areas of Kuala Lumpur, Penang and Johor Bahru started to grow bigger and sprawling..

Many of the Japanese manufacturing firms took advantage of benefits provided by existing urban areas in the more developed west coast cities of the Peninsular, namely modern infrastructural facilities, existence of seaports and airports, and skilled and literate labor force. New manufacturing towns started to spring up in areas around Kuala Lumpur such as Port Klang, Shah Alam and Bangi, around Georgetown including Bayan Lepas, Butterworth, Sungai Petani and Kulim, and around Johor Bahru which include Pasir Gudang and Masai. The arrival of Japanese firms was soon followed by other multinationals from Korea, Singapore, Taiwan , the United States and European nations.

The Spread of Urban Sprawl

The growths of many industrial estates around existing primary cities such as Kuala Lumpur, Georgetown and Johor Bharu had heralded the advent of new towns at the outskirt of these primary cities. The manufacturing plants had attracted droves of job seekers from rural communities to find employment in manufacturing. The term minah karan was soon coined to describe young women from rural areas who worked as factory operators in electronic industries.

These workers required housing and urban services which were soon provided for them. The growth of new urban land developments outside the boundary of existing city centres had led to the growth of new towns in the suburbs that catered to new communities. Many new towns outside the city centres developed rapidly since the late 1980s to cater for the factory workers and others who chose to move to these new urban areas. After the development of Petaling Jaya in the 1950s, other new towns located farther away from Kuala Lumpur started to expand tremendously in the 1990s. In the Klang Valley these include Subang Jaya, Shah Alam, Bangi and Klang while in Penang it includes Bayan Lepas, Minden and Batu Kawan. In the south, new areas opened up in Skudai and Pasir Gudang near Johor Bahru.

The rapid growth in urban areas outside Kuala Lumpur between 1980 and 2000 is shown in the Table 1 below. It found that areas outside Kuala Lumpur grew by between twice to six times faster annually than that for Kuala Lumpur during the 20 years period. More rapid development was found in suburban district farther away from Kuala Lumpur.

Table 1: Population and Average Annual Growth Rate, Selangor and Kuala Lumpur, 1980-2000; Source: Malaysia, Department of Statistic. (2000)

State and		Population		Average	Annual
District			Growth	Rate	
	1980	1991	2000	1980-1991	1991-2000
SELANGOR	1,426,250	2,297,159	3,947,527	4.33	6.02
Gombak	166,059	352,649	553,410	6.85	5.01
Kelang	279,349	406,994	648,918	3.42	5.18
Kuala Langat	101,578	130,090	189,983	2.25	4.21
Kuala Selangor	110,366	123,052	157,288	0.99	2.73
Petaling	360,056	633,165	1,181,034	5.13	6.93
Sabak Bernam	103,261	99,824	110,713	-0.31	1.15
Sepang	46,025	54,671	97,896	1.56	6.47
Ulu Langat	177,877	413,900	865,514	7.68	8.20
Ulu Selangor	81,679	82,814	142,771	0.13	6.05
W.P. KUALA LUMPUR	919,610	1,145,342	1,297,526	2.00	1.39
MALAYSIA	13,136,109	17,563,420	22,202,614	2.64	2.60

It should be noted that the latest 2010 Census showed that the trend still continues. While Kuala Lumpur growth rate had increased slightly to 2.1 percent per annum between 2000-2010, the growth rates of other districts surrounding Kuala Lumpur still were very high, in the 4 to 6 percent range. While Kuala Lumpur population had gone up to 1.55 million people in 2010, it was surpassed by Petaling district which had 1.77 million people. For the first time, Petaling's share of the Kuala Lumpur Metropolitan Region (KLMR) was higher than that for Kuala Lumpur.

The share of the KLMR population attributed to Kuala Lumpur had shrunken from almost half (48 percent) in 1970 to less than a third (27 percent) in 2000. By year 2000, it had gone down to less than a quarter of the whole KLMR (22 percent). Many townships surrounding Kuala Lumpur now have big urban populations. The stretch of townships from Subang Jaya to Shah Alam to Klang now has combined population of 2 million, bigger than that for Kuala Lumpur, the capital city.

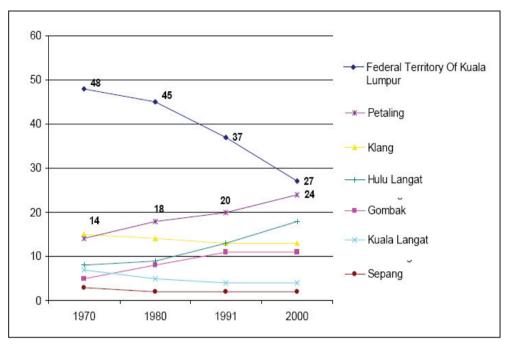


Fig.1. Share of Kuala Lumpur Metropolitan Area Population by District, 1970 – 2000; Source: Department of Statistics, Population Census, 1970, 80, 91 and 2000 cited in Jamalunlaili (2008).

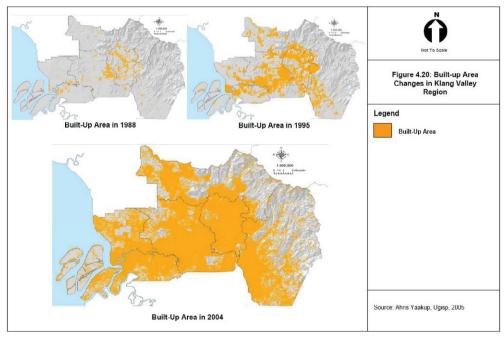


Fig. 2. Built up Areas Changes in KLMR, 1988 – 2004; Source: Ahris Yaakup, (2005)

Figure 2 vividly shows the changes in built up areas in KLMR from 1988 until 2004. The spread started from Kuala Lumpur to the west towards the port which led to the growth of Subang Jaya, Shah Alam, Klang and Port Klang. With the development of Puitrajaya and Kuala Lumpur international Airport to the south, newer development started to appear in the region since late 1990s.

The same phenomenon has occurred in the other two metropolitan regions of Malaysia. In Penang metropolitan region, greater growth could be found in Seberang Perai, which just a couple of decades ago were the rural and suburban districts of Georgetown, the largest city in the region. While the Timor Laut District, in which Georgetown is located, experienced annual growth rates of only 0.39 percent per annum between 1991 and 2000, districts in Seberang Perai had annual growth rate of up to 3.6 percent per annum. As a matter of fact, Georgetown actually had a population decline since 1991, a trend that has never occurred in big towns and cities of Malaysia before. Since year 2000, the population in mainland Seberang Perai exceeded that of the population on Penang island, a trend that continued in the 2010 census. The trend is expected to continue due to the higher land and housing prices in the Timor Laut district.

To the south in Johor, rapid population growth could be found in suburban areas outside Johor Bahru city boundary as evidenced in Table 2 below. While MPJBT size in 1970 was only a tenth of the size of Johor Bahru City, in 2000 the former's population was almost that of the latter's. This is due to MPJBT growth rate of almost six times higher than that of Johor Bahru City. The latest 2010 census showed that MPJBT population (529,074) has surpassed that of the city (497,062). Thus, in Johor Bahru metropolitan region, the biggest urban area is no longer the Johor Bahru city but the suburban areas to north where many new built up areas have sprang up since the 1980s during industrial boom. It should be noted that more than 90 percent of the population within MPJBT do not live within the boundaries of towns in the areas such as Skudai and Masai but rather other suburban areas not within the boundaries of these towns.

Table 2: Population as	nd Annual Gr	rowth Rates	of Local	Authorities,	Johor Bahr	u Metropolitan	Areas,	1970-2000;	Source:
Department Statistics, Census 1970, 1980, 1991 and 2000.									

	Populations				Annual Growth Rates (%)			
Local Authorities	1970	1980	1991	2000	1970-1980	1980-1991	1991-2000	
Johor Bahru City Hall (MBJB)	138,600	247,700	328,436	404780	5.81	2.56	2.32	
Johor Bahru Tengah Municipal								
Council (MPJBT)	13,357	16,567	120,352	364,887	2.15	18.03	12.32	
Kulai City council (MPKu)	31,027*	47,067	70,237	113,171	3.79	3.64	5.3	
Pasir Gudang Local Authority								
(PBTPG)	2,800	8,000	22,657	43,169	10.5	9.46	7.16	
Johor Bahru District Office	83,300*	87,537*	162,789	233,072	1.00	5.64	3.99	
Total	269,084	406,871	704,471	1,115,910	4.13	39.33	31.09	

4. Economic Competitiveness and Effects on Urban Sprawl

The trend of continuing urban sprawl is unlikely to slow down in the near future, at least for Malaysian cities. Globalization and competition among cities throughout the region will likely see major urban developments to be concentrated within existing metropolitan areas. The desire of the Kuala Lumpur to be a top 20 world class city in economic competitiveness and quality of life by the year 2020 (20:20 by 2020) has led to many mega projects launched in the city. These include the redevelopment of Pudu Jail,

27

Sungai Besi old airport and the Kuala Lumpur Financial District, all within the boundary of Kuala Lumpur City Hall. This augurs well with the desire for Kuala Lumpur to maintain its stake as the preeminent city of the nation.

It should be noted, however, that despite the many projects planned within Kuala Lumpur, many other developments will take place in urban areas outside of Kuala Lumpur. The Greater Kuala Lumpur project as one of the twelve economic areas under the Economic Transformation Programs will see much greater and intensive projects to be implemented within the KLMR but outside of the Kuala Lumpur City Hall boundary. The biggest project will be the redevelopment of Sungai Buloh Rubber Research Institute as a mixed development in Petaling District which would bring more people and built-up areas in the district. In addition, various new developments are planned in Sepang, Putrajaya and Cyberjaya to the south of the city. The building of the largest infrastructure project within the KLMR, namely the MyRapid Transit which connects suburban areas around the city to the Kuala Lumpur city center will lead to the opening up of more lands in the outskirt of Kuala Lumpur. The areas opened up for urban development keeps moving farther away from the Kuala Lumpur city center. After Sepang and Hulu Langat, newer areas expected to be opened up for development is likely to be Kuala Langat, made accessible through the opening of South Klang Valley Expressway recently. Its proximity to Port Klang areas are likely to see the areas near Port Klang and Kuala Langat to be developed rapidly in the near future.

To the north, the development of Northern Corridor Economic Region will bring sprawl to newer areas to the south of Seberang Perai and northern Perak. A proposal by AirAsia to build its own airport in the Krian district and the building of the second Penang bridge to the south of existing bridge are likely to hasten the growth of new urban areas in this region. While Georgetown may have its own charm as a UNESCO world heritage city, the intense and newer urban actions are likely to in Seberang Perai Selatan, bringing the sprawl to the south towards northern Perak.

In the other direction to the south of the Peninsular, greater recent developments in the Johor Bahru Metropolitan Region occur to the west of the city, outside the Johor Bahru city boundary. Iskandar Development Region has seen many new developments in areas heading towards Pontian and Port of Tanjung Pelepas near Straits of Melaka. Although Johor Baru is part of the Iskandar Development region area, the development planned within the city areas are of no match to those already implemented in the suburbs to the west; even the new administrative town, Nusajaya, is located in this newer suburbs. More sprawl are expected to be found in this southern metropolitan.

5. Implications to Socio-economic and Cultural of Cities

The above analysis has documented the trend of urban sprawl in the three major metropolitan regions of Malaysia which started to manifest itself since the mid 1980s. The need to make Malaysia competitive economically and to become a high income nation within the next eight years is very likely to see greater urban development in the three existing primary metropolitan regions. As argued previously, the likely pattern to emerge will be that of greater sprawl simply because the areas outside the three city centres offer abundant land for mega projects which would bring more economic revenues. Also due to the fact that Kuala Lumpur competes with other cities in the region such as Singapore, Bangkok and Jakarta for greater foreign investments, more developments are likely to be implemented in the KLMR.

This scenario has implications on the socio-economic and cultural elements of the urban areas. The greater emphasis on concentrating economic activities within the three metropolitan regions will result in less emphasis on equitable and spatially balanced development as practiced during the era of regional planning of the 1960s and 1970s. New town areas in the frontier regions which were developed 20 to 30 years ago would start to lose their shine. Many of them have stagnated over the years and their decline will be hastened during this era of globalization and city competiveness. Regional planning of the early

years where new virgin areas were opened up in frontier regions has been replaced by Economic Development Corridors which mirror the spatial pattern of metropolitan areas with the main city as the anchor. However, it needs to be reminded that most of the developments are likely to be in town and suburban areas outside the anchor city due to abundance of cheaper land and better mass transit and highways networks.

Even within the three metropolitan areas, there is an evidence of a shift in socio-economic pattern of the cities. As land and housing prices increased tremendously, a greater number of the lower and middle income city population have shifted to suburban areas for lower cost of residential properties. Puchong developed rapidly because the landed terrace houses in the town were much cheaper than those in Kuala Lumpur, Petaling Jaya and Subang Jaya. With the recent hike in property prices, even middle income residents who could not afford apartments in Kuala Lumpur and Petaling Jaya have moved farther into the suburbs. With the opening of more land development tracts in Sepang to the south and Klang to the west, greater number of people have shifted to the areas. This has led to a polarization of the socio-economic status within the metropolitan areas whereby Kuala Lumpur would be dominated by the well to- do while the economically marginalized residents would move out farther into the suburbs. The imminent construction of MyRapid Transit and its foray into places way out in the suburbs would provide more incentives for the less affluent city residents to venture farther out. The recent urban renewal development within the Kuala Lumpur City Hall areas such as the KL Sentral project, the Sentul West, KLCC, MidValley and Bangsar South have witnessed the poor in these areas replaced by the well to do population.

In Georgetown on Penang Island, the repeal of the Rent Control Act and its designation as a UNESCO World Heritage City has seen the exodus of the poor tenants who could ill-afford the steep increase of rentals. Many low income earners, especially the Malays, have moved out to Seberang Perai on the mainland due to its cheaper properties. In its place are younger well to do professionals who have taken to refurbishing some of the historical buildings. Many expatriates have also bought high rise units under the Malaysia My Second home program, further pushing up property prices in the city and along the beaches of Batu Feringghi.

In Johor Bharu to the south, the trend seems to be that some Singaporeans buying properties in the Iskandar Development area. However, unlike in Kuala Lumpur and Georgetown, there doesn't seem much exodus of the low income residents into the newly developed areas.

The sprawl and exodus of the lower socio-economic residents have led to some cultural shifts as well. This is very evident in old sections of Georgetown where the Malay enclave has shrunken rather dramatically that even the two main mosque, the Kapitan Kling Mosque and the Leboh Acheh Mosque have difficulty in finding enough congregation for Friday prayers. This was an enclave that through the 1960s was a hive of activities for the Muslims.

The other cultural shift is due to the facts that more people live in town areas in the suburbs where most activities are conducted. The proliferation of shopping malls in the suburbs have led to many sections of the city centres being emptied at night, especially in Georgetown, Johor Baru and even secondary cities such as Ipoh. Cultural activities such as eating out at night are more prominent in suburban areas such as Subang Jaya, Kota Damansara and Shah Alam compared to certain areas within Kuala Lumpur.

It is interesting to note that due to its desire to remain economically competitive and to be the darling of the global business communities, Singapore has relaxed some of its cultural restrictions. The city that looked down on all night partying during Lee Kuan Yee era has advertised itself as a nightlife heaven; the city that banned gambling just a decade ago now boasts of two major casinos.

6. Conclusion

This paper has analyzed the trend of city competiveness and urban sprawl and their implications to socio-economic and cultural of Malaysian cities. While the regional planning of the 1960s and 1970s has sent poor farmers to the government developed new towns in the frontier of less developed regions, the city economic competitiveness of the 21st century has sent the socio-economically marginalized urban residents farther into the developers' built suburban communities. As a consequence, a few city centres became rather unattractive urban enclaves devoid of some culturally significant elements which existed some time ago. In its place have risen the many suburban urban areas taking their positions as new urban enclaves in the ever expanding urban sprawl. With more integrated globalization and competition among cities, the trend is expected to continue in the near future.

References

Ahris Yaakob (2005) Urban sprwal in Kuala Lumpur metropolitan region. Paper presented at national planning seminar, Glenmarie, 25 November 2005.

Department of Statistic Malaysia (2011). Population distribution by local authorities areas and mukims 2010. Putrajaya: Department of Statistic Malaysia.

Department of Statistic Malaysia (2001). Population and housing census 2000. Putrajaya: Department of Statistic Malaysia.

Department of Statistic Malaysia (1992). Population and housing census 1991. Putrajaya: Department of Statistic Malaysia.

Department of Statistic Malaysia (1981). Population and housing census 1980. Putrajaya: Department of Statistic Malaysia.

Department of Statistic Malaysia (1971). Population and housing census 1970. Putrajaya: Department of Statistic Malaysia.

Ghani Salleh (2000). Urbanisation and regional development in Malaysia. Kuala Lumpur: Utusan Publications and Distributors.

Ghani Salleh and C.L. Choguil (1992). New towns in rural regions, a case study from Malaysia, Cities, 9, 139-149.

Jamalunlaili Abdullah (2007), Urban sprawl in Malaysia: evidences from three largest metropolitan areas, *Planning, Journal of Malaysian Institute of Planners*, Vol 7, 2008.

Malaysia (1976). Third Malaysia plan 1976-1980. Kuala Lumpur: National Printing Department.

The World Bank (2011). Malaysia economic monitor: smart cities. Bangkok: The World Bank.