



Urban transport and growth management strategies: A tale of two Southeast Asian Cities at the dawn of the new millennium

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Abstract

Over the last two decades, many Southeast Asian cities underwent unprecedented growth that has led to the degradation of their urban traffic situations. Increases in the ownership and use of motor vehicles led to massive road building programmes adding on to the resultant deterioration in the quality of life within major capital cities. Based on official transport studies which have been completed for both Kuala Lumpur and Manila, this paper aims to compare urban transport characteristics, land use disposition and policies advocated in both Metro Manila and Kuala Lumpur. It is found that both cities attempt to manage their liveability challenge by implementing a public transportation system (the LRT) that could help satisfy increased travel demand and alleviate transport congestion in the cities, and by seeking to develop areas outside the city centres so that they will decrease the need to obtain employment and other urban services in the city centres. The goal of easing traffic congestion by enhancing the public transport modes has not been very successful because of the strong, non-rational value attached to private car ownership. The paper concludes that attitudinal rather than physical change is the real challenge to the management of liveability in the two Southeast Asian Cities.

Keywords: attitudinal change, growth management strategies, private car ownership, public transport system, traffic congestion, urban transport

Introduction

McGee had identified three categories of mega-urban regions in ASEAN (McGee & Robinson, 1995). The categories identified are, firstly, the high-density variant typified by Jabotabek, Metro Manila and Bangkok Metropolitan Area; secondly, the low-density type characterized by the Klang Valley in which growth has occurred through a polynucleated pattern of small towns and smaller suburban centres located along major arterial roads; and thirdly, the cross-border variant exemplified by Singapore in which the dominant node spreads its economic and social activities into adjacent areas.

The expansion of Metro Manila into a mega-urban region has been acknowledged since the early 1970s. Urbanization in the National Capital Region (NCR) has been typified by leapfrogging ribbon developments along major highways. This earlier tendency has been mitigated by the filling-in of vacant areas with the development of large, planned residential, commercial and industrial development projects including mega malls and condominiums. In recent years, the urbanization process has skipped considerable spaces and have created new suburban centres of activity.

In similar vein, although Kuala Lumpur is not a mega-city in the quantitative sense, it is still thought of as a powerful primate city. How both cities attempt to deal with worsening congestion and accelerated urban sprawl will be dealt with in this paper.

Study areas

Metropolitan Manila is located on the delta of the Pasig River in the west extending towards the higher grounds of Marikina Valley and the rugged Sierra Madre mountains in the east. It is bounded by Manila Bay in the west, the larger and fertile plains of Central Luzon in the north, and Laguna de Bay in the south. Metro Manila has a land area of about 636 square kilometres. Physical expansion continues to take place, particularly through the reclamation projects in Manila Bay. Metro Manila occupies only 0.2 percent of Philippines 30 million hectares. Metro Manila's population of less than 2 million in 1950 has increased to 5.9 million in 1980 and subsequently 9.5 million in 1995. The population density for the metropolis has been estimated at 13400 persons per square kilometre, which is way above the national average of 202 persons per square kilometre (MMDA, 1996).

Metro Manila is composed of eight cities and nine municipalities, traditionally subdivided accordingly into an inner core and intermediate core. The inner core consists of the cities of Manila, Pasay, Calookan, Quezon, Makati and Mandaluyong and the municipalities of Paranaque, San Juan, Navotas and Malabon. The intermediate core is composed of Pasig City, Muntinlupa, Valenzuela, Las Pinas, Paranaque, Taguig, Pateros and Marikina. The effect of the rapid urbanization of the metropolis has spilled over to the adjoining municipalities covering an area of 3670 square kilometres, far exceeding the administrative area of Metro Manila. As of 1995, the total population of the metropolitan area is 14.4 million, inclusive of the 4.9 million people in the adjoining areas. It is very likely that the population increase will reach 25 million by year 2015. In the next two decades, the metropolitan region would have to accommodate an increase of some 11 million people; 3.5 million in Metro Manila and 7.5 million in the adjoining municipalities.

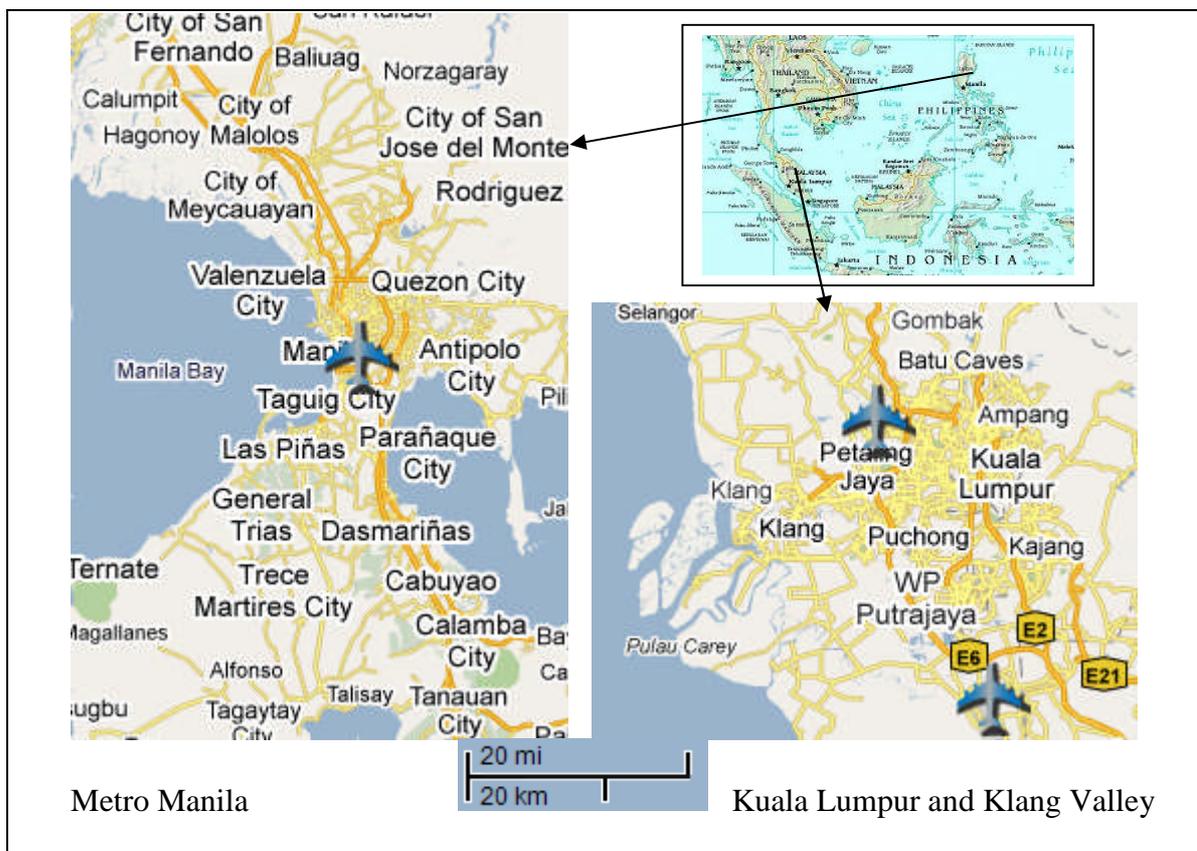


Figure 1. Location of the Metro Manila and the Kuala Lumpur – Klang Valley

The inner core of Metro Manila is bounded by Circumferential Road 4 (C-4), also known as Epifanio de los Santos Avenue or EDSA. This core is characterized by its high intensity development, with incompatible land uses and complex socio-economic problems inherent in a metropolitan centre. The intermediate core, on the other hand, is physically a transition from the inner core to the less urbanized outer area. It is characterised by uniform density residential development and the ongoing trend is the conversion of agricultural and existing open lands to other land uses. This intermediate core is bounded between C-4 and the projected Circumferential Road 6 (C-6). Outside of C-6 is a directionless sprawl of communities and agricultural area. Industrial activity is also noted outside the C-6 mainly along major transport routes. The outer core consists of municipalities beyond the intermediate core, which are located in the provinces of Rizal, Cavite, Laguna and Bulacan.

The Kuala Lumpur Federal Territory covers an area of 243 square kilometres. Besides Kuala Lumpur Federal Territory, four other districts of Petaling, Klang, Hulu Langat and Gombak within the state of Selangor make up the Klang Valley Region. The Kuala Lumpur Metropolitan Region (KLMR) has been used to refer to the entire Klang Valley Region and further includes the Kuala Langat District and the Sepang District where more recent development such as the Kuala Lumpur International Airport (KLIA), the seat of Federal Government at Putrajaya and 'intelligent city' of Cyberjaya are located. It covers a total area of approximately 4000 square kilometres, which is about 40 percent larger than the existing Klang Valley Region area of 2843 square kilometres.

The city of Kuala Lumpur originated as a tin-mining settlement but has developed rapidly in tandem with the country's growth and is the nerve centre today of the Malaysian economy. To the west of Kuala Lumpur is an urbanised corridor punctuated by main development nodes at Petaling Jaya, Subang Jaya, Shah Alam and Port Klang. Petaling Jaya was a new township set up in 1952 as an overspill area to overcome the squatter problems in Kuala Lumpur. Shah Alam, now of city status, was to replace the loss of Kuala Lumpur to Federal control and was designated as the state capital of Selangor. A new southern growth axis is currently being developed as the Multimedia Super Corridor. This is an area of 15 by 40 km and comprises several major development projects mentioned above including Cyberjaya, Putrajaya, High Tech Park and the KLIA.

The Kuala Lumpur Federal Territory, with approximately 1.4 million population, has a third of the KLMR total population of four million. The population of Kuala Lumpur city has since 1980 been growing at only about 2 percent per annum, which is much lower than the national average population growth of 2.6 percent per annum. The population of the KLMR is projected to double at between eight to nine million by the year 2020 while the projected population of Kuala Lumpur city is 1.6 million. The declining population growth rate is in part due to the projected continued trend in net out-migration and in part to the projected decline in natural growth rate.

Travel demand

The Metro Manila Urban Transportation Integration Study (MMUTIS) was undertaken in 1996 with the assistance from the Japan International Cooperation Agency (JICA) (MMUTIS 1998). The 1996 survey interviewed 50500 households spread over Metro Manila and another 8000 households residing in the adjoining areas of the outer core. The information derived from the person trip surveys on the socio-economic characteristics of the population contains important determinants and indicators of trip-making. The growth of travel demand in Metro Manila since 1970 has been significant. The number of motorized trips increased from 10.6 million a day in 1980 to 17.5 million in 1996. Of the 14.4 million residents of the metropolitan region, 5.1 million (or 35%) are employed. As expected for a highly urbanized area, more than 70 percent of employment is in the tertiary sector while only 2.5 percent is in the secondary sector. Slightly less than 19 percent of households own cars, which means 4 cars per 1000 population compared to about 27 for the Philippines. Average household income is P 11,090 a month. About 8.7 percent of households are considered below the poverty line of P 6,520 a month.

However, the socio-economic profile is considerably different between Metro Manila and the adjoining areas. Metro Manila provides more employment opportunities in the tertiary sector

while the outer areas are more in the secondary sector. Metro Manila has more school enrolment in the higher educational level. Car ownership and average household income of Metro Manila residents are higher compared to residents in the outer areas by about 20 percent and 30 percent respectively. More than 40 percent of all vehicles registered in the Philippines are concentrated in Metro Manila. The percentage of car-owning households in Metro Manila has increased from 10 percent in 1980 to 20 percent in 1996. The higher the household income, the higher the car ownership rate. The car ownership rate is slightly lower in the adjoining provinces (refer Table 1).

As population increases, transport demand grows as well. It is revealed in the MMUTIS that the total number of person trips in 1996 is 30.3 million a day for the greater metropolitan area which is composed of 24.6 million motorised trips and 6.3 million of walk trips. About 79 percent of the residents make daily trips. The average number of trips by a person above 4 years old per day is 2.3 trips. Males make more trips than females: trip rates of males and females are 2.6 and 2.0 respectively. Those who belong to car owning households make more trips - trip rate of a person who belongs to car-owning households and non-car-owning households is 2.6 and 2.2 respectively. Those of higher income also make more trips - trip rates of persons who belong to households with less than P 3000 a month and more than P 200000 are 1.8 and 3.1 respectively.

Table 1. Car ownership structure in Metro Manila

Item	Metro Manila		Adjoining areas
	1980	1996	1996
% of car owning households	9.5	19.7	16.9
Average no. of cars per car owning households	1.4	1.3	1.2
% of multiple car owning households (as % to total car owning households)	19.0	20.1	13.3

Source: MMUTIS Person Trip Survey 1996

In 1980, the heart of Metro Manila was within the area cordoned by the EDSA. Today this area is the inner core of the metropolis. Since 1980s, as in other cities within the developed and developing countries, population within the inner core started to move out to the outer areas in search for better living conditions. Commercial and business development followed suit. Population in many areas within EDSA has decreased while those in the outer areas grew rapidly. What used to be the suburban area outside of EDSA has become urbanised. EDSA, South Superhighway and other radial corridors outside EDSA have shown a remarkable increase in traffic volume. With more households opting to live outside Metro Manila, and with jobs and schools getting farther away, the number of trips and trip distances have increased. As a result of suburbanization, both travel distance and travel time have increased throughout the metropolis.

Approximately 98 percent of the total transport demand in Metro Manila are met by road based transportation while the role of the rail transit is yet limited. Public transport use is still high at 78 percent of all trips in Metro Manila (public and semi-public). However, the share of private car use has increased from 16 percent in 1980 to 19 percent in 1996, and that of the taxi has increased from two percent in 1980 to six percent in 1996. It is interesting to note that motorcycle use has never been popular in Metro Manila.

Metro Manila's public transport services are provided mainly by bus, jeepney, tricycle and taxi, while those by rail such as the LRT and PNR commuter services are only insignificant. It is estimated that there are 12900 buses, 69700 jeepneys and 117300 tricycles operating in the metropolitan area in 1996. Of the total operating units, 25 percent of the buses, 18 percent of the jeepneys and 46 percent of the tricycles are operated between Metro Manila and adjoining areas and/or outside Metro Manila. Rapid urbanization has been enabled in part by the operation of these modes.

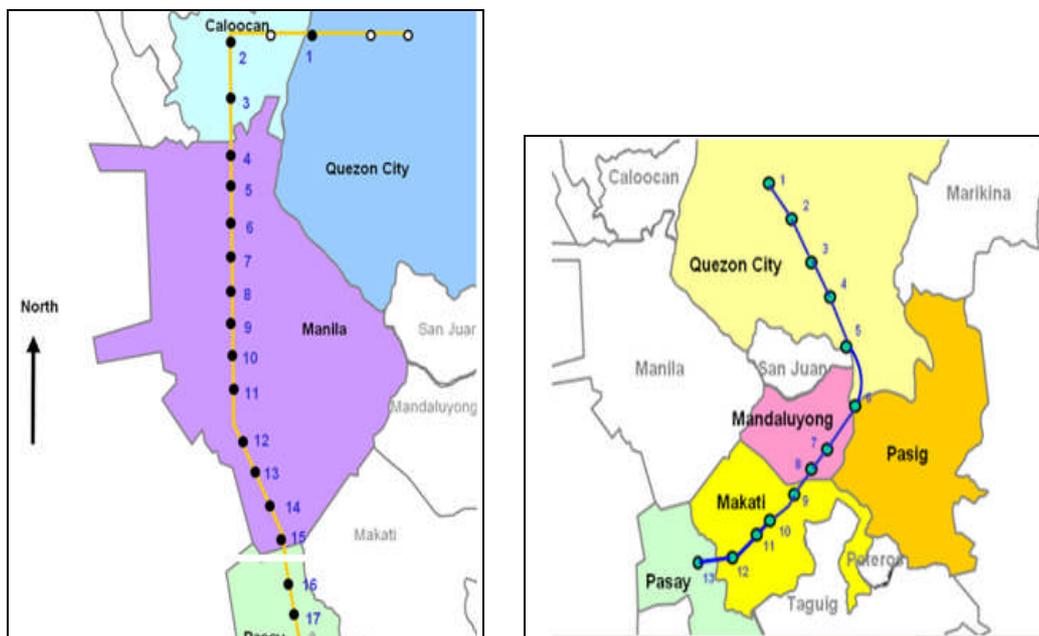
Bus, jeepneys and tricycle operations in the metropolitan area of Manila are complementary rather than competitive. With this, most of the metropolis is served with relatively high levels of

public transport services compared to other developing cities. In addition to the conventional bus and jeepney services, air-conditioned bus services have been expanded from 28 routes in 1983 to 84 routes in 1996. The number of Tamaraw FX, a type of shared taxi operating on fixed routes, has been increasing rapidly due to increased demand for quality public transport services.

The jeepney still holds the position as the most popular mode of transport regardless of trip purpose, i.e. 34 percent of work trips, 46 percent of school trips, 42 percent of private trips and 21 percent of business trips. The bus is relatively well used for work trips (24%) and private trips (13%). Tricycle is popularly used for school trips (21%), business trips (13%) and private trips (12%). The taxi is mainly used for business trips (14%). Car use which has been increasing constantly is for business trips (25%), work trips (20%) and private trips (21%). It is also noted that 10 percent of the school trips are made by car. Rail transport shares 3 percent of transport demand and is used mainly for work trips and school trips. This is high considering that this represents the share of only one Light Rail Transit (LRT) corridor.

Then in 1996, the role of urban rail transit was still limited as the LRT Lines 2 and 3 were still under construction. The 14.5 km. long LRT Line 1, completed in 1985, linking Monumento and Baclaran over once heavily-congested public transport corridors of Rizal Avenue and Taft Avenue, is heavily utilized by an average of 350 to 400 thousand passengers a day. The Philippine National Railway (PNR) commuter service is being rehabilitated to attract more passengers.

Latest statistics from the LRT Authority show that there are 13-14 million passengers using the LRT Line 1 every month, with almost 400,000 on a daily average. The LRT 1 originally had 19 stations from Baclaran in Paranaque to Monumento in Caloocan. Recently, the LRT 1 Yellow Line was extended to link to the MRT. Three more stations were added to the LRT 1 Yellow Line to "connect" the Monumento Station to MRT's North Avenue. These stations are: Balintawak, Roosevelt, and SM North; as of this writing, Balintawak is already functional.

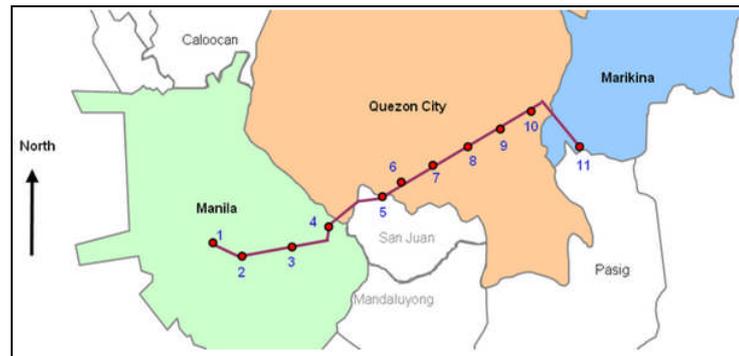


Source: Manila rail transit network map

Figure 2. *The original and extended Manila LRT Line 1*

The Manila Light Rail Transit Line 2 (more known as LRT 2 or Purple Line) has been the main mode of transportation of commuters with destinations along Aurora Boulevard, Araneta Avenue, Marcos Highway, Magsaysay Boulevard, Legarda and Recto Avenue. Unlike the MRT and LRT 1 (which both travels in a north-south route), the Purple Line travels in an east-west manner. Latest statistics from the LRT Authority show that there the passenger count is almost

200,000 daily. The LRT 2 has 11 stations from Recto in Manila to Santolan in the Marikina-Pasig boundary.



Source: Manila rail transit network map

Figure 3. *The Manila LRT Line 2*

Although PNR possess the great opportunity to function as a primary arterial route, the potential capability has yet to be realized due to institutional constraints. On all major corridors, the traffic volume of private car is larger than that of public transport. This is true even for the bus-dominated EDSA and the jeepney-dominated Shaw Boulevard. Private mode accounts for 53.2 percent of total vehicular traffic demand but carries only 21.6 percent of total transport demand in terms of person trips due to low occupancy. On the other hand, bus shares 14.9 percent of the person trip demand but only 3.7 percent of vehicular traffic. The popular jeepney shares 39.1 percent of total person trips and 17.9 percent of vehicular traffic. Traffic congestion has adversely affected public transport services significantly. Travel speed on roads has decreased sharply and travel time has increased tremendously.

Widespread traffic congestion has also been reported on the roads and highways of Kuala Lumpur during peak and off-peak periods. In response to a request from the Malaysian Government, JICA conducted a study referred to as 'A Study on Integrated Urban Transportation Strategies for Environmental Improvement' (SMURT) commencing in 1996 (JICA 1998). A comprehensive survey involving 34,000 households were undertaken yielding an extensive database from which basic travel characteristics could be determined. A total of 8.3 million person-trips are reported to be made daily within the Klang Valley. Around 75 percent of these trips are attracted to and from home. Population within the Kuala Lumpur Central Planning Area (CPA) accounts for only 3.3 percent of the region, whilst travel demand within the CPA accounts for 19 percent of the region. Under the 1984 Kuala Lumpur Structure Plan, the city centre was designated as the principal urban core (CPA) to provide specialized metropolitan services, national and international commercial and business activities, central government activities, specialized comparison and convenience goods shopping for residents.

Considering the regional role of Kuala Lumpur, it is not surprising that other significant person-trip producing areas appear along the major corridors such as the Kuala Lumpur – Klang, Kuala Lumpur – Kajang and Kuala Lumpur – Seremban corridors.

Private vehicle (consisting of motorcycles and cars) ownership in Kuala Lumpur, as obtained from registration figures, is 225031 motorcycles and 514552 private cars. Divided by the population, these average about 164 motorcycles per 1000 population and 211 cars per 1000 population. In broad terms, the distribution of motorised trips by mode indicated that 80.3 percent of trips were by private transport and only 19.7 percent by public transport, whilst 23.7 percent of person trips were by motorcycles with 56.6 percent by private car. Table 2 shows the car ownership figures for the component districts of the Klang Valley according to the JICA Home Interview Survey results. Car ownership in the Klang Valley area is approximately 50 percent higher than the average national level. Petaling District shows the highest ownership rate in the area followed by Klang District.



Source: MalaysiaCentral.com

Figure 4. The Kuala Lumpur LRT system

Although the nation as a whole has kept a fairly high population growth, out-migration tendency has been increasing remarkably in Kuala Lumpur. This undermines the total population growth in KL. Recent population growth in KL is decreasing at as low as 1.4 percent per annum during 1991-1997. Many have moved away from KL to the fringe areas of KL due to the progress of current urban development, which has changed the land use of the CPA to business and commercial use. This has accelerated the decrease of residential population in the CBD and its immediate peripheral area, resulting often in longer commuting trips. In addition to the increase of car possession ratio, the land use changes are also affecting the current traffic congestion in the CBD and it is inevitable that the excessive urban development will accelerate further out-

migration. This will undoubtedly bring about additional traffic and worsen traffic congestion in CPA.

Table 2. Vehicle ownership in the Klang Valley

District	Number of Private Vehicles			Ownership per 1000 person		
	Motorcycle	Car	Total	Motorcycle	Car	Total
Kuala Lumpur	225,031	289,521	514552	164	211	375
Gombak	83143	88818	171961	174	186	360
Hulu Langat	110466	109829	220295	194	193	388
Petaling	140891	192222	333113	169	231	400
Klang	99056	107356	206412	190	206	396
Total	658587	787746	1446333	175	209	383

Source: JICA SMURT Person Trip Survey 1996

According to the results of Home Interview Survey, the following outstanding features on person-trip demand commuting to the CPA with “Home-based Work (HBW)” and “Home-Based School (HBS)” trips were observed. A remarkable share of motorcycle and bus is observed in the northern and eastern regions. HBW trips have a very high car share in Damansara area. HBW trips generated from the areas alongside Federal Highway such as Petaling Jaya and Subang Jaya also show a high car share. HBS trips coming from the southern region are remarkable and bus transport plays a major role.

It is observed from Table 3 that between 1985 and 1997, the modal share of public transport decreased from 34.3 percent to 19.7 percent; and that the modal share of stage bus/mini bus within the public transport component decreased from 24.3 percent to 7.9 percent.

Table 3. Change in modal composition (1985 – 1997)

Mode	Person trips/day		Composition (%)	
	1985	1987	1985	1997
Motor cycle	884200	1492200	19	23.7
Car	2170000	3555200	46.7	56.6
Private mode (total)	3054200	5047400	65.7	80.3
Stage bus/mini bus	1129900	493900	24.3	7.9
Factory bus/school bus	465900	638700	0	10.2
Rail	0	103200	0	1.6
Public mode (total)	1595800	1235800	34.3	19.7
Total	4650000	6283200	100	100

Source: JICA SMURT Person Trip Survey 1996

The existing transport system in Kuala Lumpur is dominated by the highway network. The road network is currently used for the movement of private vehicles, commercial trucks and public transport vehicles. The network is radial in layout, focussing on the city centre. The available network within Kuala Lumpur in 1980 comprised some 706 km of which only 89.3 km were expressways and 268.9 km were primary distributor routes, with the vast majority of the network consisted of local/distributor access roads (347 km). In 1997, Kuala Lumpur had 1200 km of major roads. Almost all highways have a major arterial road function with full access control. User access is through well-constructed interchanges. Most of the minor roads consist of four lanes while others are dual-lane single carriageways.

Road based public transport (bus network) is operated throughout the highway and arterial road networks by the use of large buses with a capacity of around 70 persons including standing room. At present there are about 15,000 bus trips per day all operated by private companies. Intrakota operates 112 routes, Cityliner (Park May) operates 59 routes and Metro Bus operates 20 bus routes. Generally bus routes are radial in nature terminating at the City Centre and covered 67 percent of the population within a 350 meter radius from the bus stops in 1997.

Railway services are provided by KTMB suburban service and two Light Rapid Transit systems. The Light Rapid Transit Systems consist of at-grade, elevated and underground corridors within the metropolitan area servicing the suburbs and city centre. The Monorail Project is to be completed within the city centre as an inner city people mover. The express rail link (ERL) is a dedicated railway between KL Sentral and Kuala Lumpur International Airport. The ERL will facilitate the concept of a city airport terminal for KLIA. At the integrated hub of KL Sentral, an intermodal facility will be provided with KTMB, PRT and LRT System II whereby users can transfer between the various modes to their desired destination. On the completion of all planned and committed future rail lines, the services will cover 4.2 percent of the population within a walking distance of 350 metres from the stations. This increases to over 50 percent of the population within a 2 km radius of all stations.

Kuala Lumpur is currently served by three major bus companies i.e., Intrakota, City Liner and Metrobus. Together, a total fleet of 728 air-conditioned buses provide the much needed services in and around the city, serving about 175 different routes. Passenger volume averages 494000 per day. This constitutes about 7.9 percent of the total motorized trips made in Kuala Lumpur in 1997. Improvements to the bus network are being facilitated by Kuala Lumpur City Hall and the Highway Planning Unit in providing exclusive bus lanes both inside the Central Planning Area and on surrounding highways to further develop the bus priority lanes and the ticketing system to offer passengers a quick, comfortable and convenient transport option. The present structure of the bus routes is radial in nature emanating from the Central Planning Area of Kuala Lumpur. Routes of a circuitous nature away from the City Centre require transfers.

Growth management strategies

The Metropolitan Manila Development Authority (MMDA) was created in March 1995 with a mandate to ensure the prudent and efficient management of the development of Metro Manila. Towards this end, MMDA put together a consultative document 'The Physical Framework Development Plan for Metropolitan Manila 1996-2016' to serve as the indicative roadmap to the future development of Metro Manila. The 20-year Plan aims towards Metro Manila becoming 'a humane world-class metropolis renowned for its liveability, economic vitality and socio-cultural exuberance'.

The Physical Framework Development Plan has thus adopted two developmental strategies. The first is that of a preferred pattern of urban development based on selective specific policy zones, while the second is a preferred pattern of interregional development with an expansion-orientation that is agropolitan in nature, meaning urban standards or quality of life are promoted amidst a physical environment that retains its agricultural character. The preferred pattern of urban development for Metropolitan Manila will be implemented according to specific development policy zones consisting mainly of areas with varying stages of development and needs. There are six specific development policy zones identified.

Regeneration Development Areas (RDA) are zones within the major urban centres – mainly in the inner core – where new construction and expansion of factories and higher educational institutions, among others, are to be contained. Regeneration, redevelopment and preservation activities can be pursued in these zones.

Suburban Development Areas (SDA) are those zones in the outer part of the intermediate core as well as in the outer core of Metropolitan Manila itself. Here, planned development – specially, for human settlements – are encouraged, subject to local zoning regulations and environmental laws. In these areas could be located mass housing subdivisions including higher income enclaves whose residents usually rely on employment in the inner and intermediate cores for their livelihood.

Urban Promotion Areas (UPA) are those zones will be located in the intermediate and outer cores of Metropolitan Manila wherein production activities such as industries may be promoted in order to serve as alternatives to activities, which may no longer be feasible in the RDAs.

Urban Control Areas (UCA) are those zones extensively residential and commercial in nature. Land supply, however, is considered exhausted although there are pockets of idle lands already

pre-identified and intended for “future development”. As a result, new or additional developments is to e deferred because it can pose a strain on the existing amenities and infrastructure facilities which are yet insufficient given the growing population density.

Environmental Preservation Areas (EPA) are those zones in Metropolitan Manila and its outlying areas, which are environmentally sensitive and where limited land use activities could be allowed. In the area of transport, prohibition on additional planar infrastructure in RDAs and UCAs will create a redirection of transport concepts and practices. The location of roads and railways itself is a very effective tool in guiding the realization of preferred urban development. Within the context of specific policy zones, transport exchange centres –mainly multilevel parking areas and terminals – can be set up in the peripheries of the RDAs and UCAs.

Tourism Development Areas (TDA) zones are land and water areas endowed with natural or man-made physical attributes and resources that are conducive to recreation and leisure.

In terms of the plan implications on the transport sector, it is envisaged that the population who live in the intermediate or outer core of Metropolitan Manila but work in the RDAs will thus be forced to drop off at these transport exchanges centres. From here, they can commute to their place of work, using the regulated transit systems of the RDAs such as the light rail transit and other appropriate modes of transport. These centres will be strategically located to ensure that traffic flow remains unhampered, particularly towards the busier areas of the metropolis. To complement these transport exchange centres will be the promotion of other mass transit systems throughout the metropolis.

Within the Kuala Lumpur Metropolitan Area, the pressures for physical development are tremendous especially when the economy was robust in the first half of the 1990s. In dealing with the pressing development needs, local authorities within the Selangor state and the City Hall of Kuala Lumpur have taken to the preparation of the statutory Structure and Local Plans. The whole of the Klang Valley Region has been carved out under the jurisdiction of eight local authority areas of which the City Hall of Kuala Lumpur is one.

The Kuala Lumpur Structure Plan 1984 was prepared under the Federal Territory (Planning) Act 1982. The enforcement of the Structure Plan in 1984 was in accordance with Section 7 of the Federal Territory (Planning) Act 1982. This is a departure from the system envisaged by the 1976 Town and Country Planning Act whereby public participation begins at the onset of the commencement of the preparation of the Structure Plan. The Kuala Lumpur Structure Plan was first prepared on an administrative basis and then subjected to public objection under Section 7 of the 1982 Act. The review of the Kuala Lumpur Structure Plan has been implemented in accordance with the provisions of the Federal Territory (Planning) Act 1982 and is nearing completion (ISI, 1999).

The overall framework of the KLSP 1984 was based on a hierarchy of urban centre development, within the context of fifteen main planning units (PU) together with five Special sub-units. The city centre was designated as the principal urban core. Four new growth areas were identified to decentralise future employment and residential development away from the dense urban core. Three of the growth centres, namely, Wangsa Maju, Bandar Tun Razak and Bukit Jalil were basically greenfield sites while the fourth (Damansara) was a well-developed residential area with a committed commercial and administrative node. In general, it was seen that the Central Planning Area had not fulfilled the strategic role mapped for it in the KLSP 1984. It has experienced a decline of population, the reverse of its strategic role and a serious oversupply in commercial floorspace. The new growth centres, with perhaps the exception of Bukit Jalil, are close to achieving 1984 development targets.

The four new growth centres have experienced different rates of development: Wangsa Maju has almost achieved its target population and current growth is directed towards fulfilling the supporting commercial, industrial and open space requirements. In Bandar Tun Razak, growth has slightly lagged behind Wangsa Maju. In Bukit Jalil, the development is still in the early stages with major focus on development of industry, the site for the Commonwealth Games and the provision of the LRT in 1998. Damansara has seen residential growth although the current population of 106,374 falls well short of the KLSP 84 target of 135,000. The area primarily functions as a series of high quality residential areas.

There seems to be a lack of integration between landuse and transport development. More active coordination between landuse and transport planning is now more keenly pursued especially within the newer plans such as those we have seen above. Traffic peaks in the city are generally caused by work trips and school trips. In this context it is important that major employment areas and district centres are adequately served by the mass transit system including bus and LRT. Schools should be well distributed at the neighbourhood level. There is a need to provide for new employment areas both in the industrial and office sector outside the CPA in order to reduce the congestion in the city centre. It is also important that arterial ring roads are built to disperse the traffic. Privatisation bids on arterial roads should conform to the network proposed in the Structure and Local Plans and not be conceived independently. Care should be taken to ensure that arterial roads do not dissect whole communities and disrupt social patterns at the neighbourhood level. High intensity development could also be permitted at transit nodes to increase public transport ridership.

Liveability compared

In order to contribute to the development of sustainable cities, Pendakur (1995) is of the view that urban transport policy must have three components. Firstly, it must ensure that a continuing capability exists to support an improved material standard of living for all people, especially the poor. This corresponds to economic and financial sustainability. Secondly, it must generate the greatest possible improvement in the quality of life, not merely an increase in goods and services. This relates to the concept of ecological and environmental sustainability. Finally, the benefits generated by the urban transport structure and investments must be shared equitably by all sections of the community, without penalizing the poor. This relates to social sustainability.

The Manila and Kuala Lumpur cases show that liveability is attained by means of balancing between improving public access to public transportation (the inception of LRT) which serves to regulate and expedite outward flow of movement, and improving local area development (growth management strategies) to reduce the outflow to the city centre. The two metropolises differ in terms of population and affluence scales : the LRT system in Metro Manila is very much bigger than that of Kuala Lumpur in tandem with the larger number of urban population it serves and at less affluence levels (Table 4).

Table 4. Population and GDP Indicators of Philippines and Malaysia

	Philippines	Malaysia
Population (national)	86,241,697 (2004)	23,522,482 (2004)
Population (metropolitan)	11,240,743 (2004)	4,000,000 (2004)
GDP Per capita (Purchasing Power Parity)	USD 4,600 (2003)	USD 9,000 (2003)

Sources: Philippine Information Agency, CIA World Fact Book (2004), Kuala Lumpur City Hall Official Website (2004)

Be that as it may, both cities indicate the familiar trends in developing societies, in that, the ultimate goal is not for a total shift to public transport but rather to manage it in such a way as to still make it possible, even easier, for private car owners to use their vehicles in the city. In the Manila case, as noted above, on all major corridors, the traffic volume of private car is larger than that of public transport. This is true even for the bus-dominated EDSA and the jeepney-dominated Shaw Boulevard. Private mode accounts for 53.2 percent of total vehicular traffic demand but carries only 21.6 percent of total transport demand in terms of person trips due to low occupancy. On the other hand, bus shares 14.9 percent of the person trip demand but only 3.7 percent of vehicular traffic. The popular jeepney shares 39.1 percent of total person trips and 17.9 percent of vehicular traffic. Traffic congestion has adversely affected public transport services significantly. Travel speed on roads has decreased sharply and travel time has increased tremendously. Similarly, in the Klang Valley, the distribution of motorised trips by mode indicated

that 80.3 percent of trips were by private transport and only 19.7 percent by public transport, whilst 23.7 percent of person trips were by motorcycles with 56.6 percent by private cars.

The two cities of Metro Manila and Metropolitan Kuala Lumpur tell us the story of the special and symbolic socio-psycho-cultural value attached to owning private cars by the local public. It means one has arrived. The meaningfulness of this value (privately owned car as a status symbol) is still greater than the sensibility of achieving an efficient public transport mode where it makes sense for everyone, including the affluent private car owners, to do without their cars while in the city.

Conclusion

Despite overt differences in physical scales and population numbers, Metro Manila and Kuala Lumpur depict a similar story of managing urban liveability where public transport modes have to compete with the powerful value attached to private car ownership as a status symbol. As such it does look like it will take a lot more in terms of public education for the societies in both countries and cities to unlearn the merit of using private modes of transport. Urban transport and land use planning in this kind of situation will have to grapple with more than just physical change; it has to contend with attitudinal change that will probably require capabilities of the kind beyond that of conventional physical planners.

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