

## Re-Thinking Urbanism for Kuala Lumpur Conurbation: Live Work and Travel Easily

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### 1 ABSTRACT

Travelling to work in Kuala Lumpur Conurbation (KLC) can be nerve-racking. Majority of workers travel from their homes by cars along web of congested road network that converge into Kuala Lumpur City Center. Those who travel to work using public transportation struggle daily through much inconvenience to reach their workplaces in the morning and homes in the evening. Travelling to work ordeal is therefore the most mention grouse among KLC residents. For KLC this is not merely a transportation problem as people would like to imagine but can also be looked at as an urbanism problem. Many researchers relate the urban form with travel patterns so much so as urban areas are becoming more sprawled that it is alleged to be the main cause for driving habits among urban residents. However the urban form is created through complex decisions of urbanization and urbanism therefore this paper explores the association between the two to explain travel pattern in KLC in order to make travelling easy for workers throughout KLC.

### 2 INTRODUCTION

Traveling to work in Kuala Lumpur Conurbation (KLC) can be nerve-racking for both who drives and who uses the public transportation. Like most major urban areas around the world, road networks and highways in KLC are heavily congested due to dominant use of private vehicles. In 2005 modal split between public and private transportation was 14:86 as compared to 34:66 in 1985 (Kuala Lumpur City Hall, 2005; Zakaria, 2008). Majority of workers in KLC travel from their homes in the suburbs and urban fringe by cars along web of congested road network that converge into Kuala Lumpur City Center. Despite encouraging policies and investment in public transportation infrastructure and usage improvement, the modal share for public transportation continues to drop (Zakaria, 2008). Since 1995 rail-based commuter services have been introduced to serve suburban areas in addition to the road-based public transportation (Mohamad, 2003). Nevertheless those who travel to work using public transportation struggles daily through much inconvenience to reach their workplaces in the morning and homes in the evening.

Part of this problem can be attributed to the heavily congested road network systems. While high quality rail-based public transportation services were being introduced, the efficiency of road-based public transportation services were being hampered by large number of private vehicles running along the same route as well as low quality infrastructures and issues of maintainence. In addition the increase in vehicle ownerships among KLC households are also a pressing concern. Zakaria(2008) did a survey on car ownership in KLC and reported incidence of households who owns up to 5 cars per household, 64 percent own at least one car and 26.3 percent own two cars or more. With all of these at hand it is no surprise that traveling to work ordeal is the most mention grouses among KLC residents. However for KLC this is not merely a transportation problem as people would like to imagine but is also an urbanism problem.

### 3 URBAN FORM, TRAVEL AND URBANISM

Many researchers relate the urban form with travel patterns so much so as urban areas are becoming more sprawled that it is alleged to be the main cause for driving habits among urban residents (Giuliano & Small, 1993; Levine, 2006; Stead & Marshall, 2001). It is alleged also that as the urban land uses such as residences, shops and workplaces decentralized into the suburbs the need to commute by private cars became more widespread (Glaeser & Kahn, 2003; Hayden, 2004). This situation is explained by looking at the distance between land uses that constitute the origin and destination of a person's travel. As urban centers become more decentralized, location between urban nodes become more distant from each other therefore travelling using motorized vehicle between any two nodes became essential (Giuliano, 1999). Furthermore most of these urban nodes are not effectively connected by physical infrastructure to allow for the use of nonmotorize transportation i.e walking and cycling. These urban land uses and activities are also usually not efficiently served by public transportation to increase mobility for residents and workers . Therefore in general people in urban areas are more apt to own cars and drive to get to their destinations.

Urban sprawl form is a widespread phenomena globally as urban residents earn more and can buy more living space in the suburbs followed by affordable car ownership (Giuliano, 1999; Glaeser & Kahn, 2003). Decentralization of major urban centers is a movement to improve the quality of urban living. Majority were inspired by the Garden Cities movement which advocates for larger living space that was mooted through creation of garden suburbs (Gallion & Eisner, 1986; Hall, 2002a; Howard, 1902). In these suburbs each workers and their families live on single family houses that are built on private lots. Residential suburbs in most part of the world were also influenced by the American dream that advocates for home ownership as a symbol of one's level of socioeconomic status and achievements in life (Hayden, 2004). As a result there are great demand for these garden suburbs as they provide workers and their families with private and individual spaces as well as dignity. With increased demand more and more greenfields were developed into residential suburbs making the urban to sprawl further out.

The spread of the urban sprawl were intensified by the creation of employment districts known as edge cities and free standing employment nodes known as the edgeless cities in the suburbs (Garreau, 1991; Glaeser & Kahn, 2003; Lang & LeFurgy, 2003). It has been allerged that when employment are located in the suburbs workers will be able to travel short distant to work as their homes are already in the suburbs. However as employment started to follow the people to the suburbs it has been noted that people are travelling more miles to work instead of less (Cervero, 1989; Weitz, 2003). The reason being that although both residential and employment areas are located in the suburbs they are infact separated from each other. Futhermore each suburb district does not have good mix of land uses. The land use activities in Edge Cities for instance are mostly employment that are office based as well as retail based and because there are not many houses in Edge Cities workers were drawn from the residential suburbs that are connected to the Edge Cities by highways (Garreau, 1991). Edgeless cities like Edge Cities are employment centers but unlike Edge Cities that are massive and concentrated at the urban peripheries, Edgeless Cities are small and scattered all over the suburbs and are not efficiently served by public transport (Lang & LeFurgy, 2003). Although many of the researches are American based research, polycentrism is also happening in other parts of the world (Alpkokin, Black, Kato, & Vichiensan, 2007). However Alpkokin et al (2005) found a decrease of travel time for workers in Turkey metropolis as employment started to move to the suburbs nevertheless workers are still traveling via motorized vehicles between the two land uses. On the other hand measure of travel by time does not necessarily imply short distance travel but may aslo imply ease of movement on highways. In Alpkokin et al (2005) 60 percent of travels were made by public transport.

The urban ecological model presented by the Chicago Shool relates the physical urban environment with the way people conduct their life (Hutter, 2007). It is submitted that the behavior of urban residents is affected by their environment on the other hand the actions of the urban residents affect the nature of their environment. Perhaps this model rightfully explains why the sprawled urban form induce travel between multiple origins and destinations. The sprawled urban environment, where each category of land uses stand as a single-land use district that are remotely separated from each other, leaving people with not much options but to use their cars to access each of the land use districts in their course of living especially where homes and workplaces are concern. Hence many researchers postulate that people are drving a great deal due to the sprawed nature of the urban environment. However it can be postulated also that the demand for homes that provides more space and sense of dignity drives urban to sprawl thus increase driving and travel distance for urban residents.

Many other researchers also examined the urban form particularly the urban sprawl form because it is said to be the source of a wide environmental as well as societal issues and problems (Couch & Karecha, 2003). If the hypothesis of the urban ecological model holds, then these environmental and societal issues and problems can be mitigated using the reverse nature of sprawl that is the compact form. In fact much has been done in this area in parts of the world to mitigate urban sprawl or to ensure urban does not sprawl (Arbury, 2005; Couch & Karecha, 2006; Yuen, 2007). There are series of commitments in the form of policies as well as movements to stop sprawl or make the urban areas more compact. Britain for instant has been very committed to combat urban sprawl using greenbelt policies and strong planning control measures (Couch & Karecha, 2006). In the United Stated the battle is in a much bigger form of smart growth movement, which calls for smarter moves in developing the urban areas. Smart growth movement present a much wider principles and approaches to change people perspectives on urbanism (Smart Growth Network, 2002, 2003; Urban Land Institute, 1999). Studies on people's perspectives have found that households be them in United



States or United Kingdom as well as in New Zealand are mostly reluctant to accept compact and vertical living therefore poses great challenge in planning for compact development (Arbury, 2005; Couch & Karecha, 2006; Richardson & Gordon, 2000)

Success in Transit Oriented Development (TOD) shows that driving habits can be suppressed through the change in urban form (Cervero, 1998; Dittmar & Ohland, 2004; Yuan). Transit Oriented Development is an effort to integrate all aspects of people's life i.e live, work and leisure with mobility needs within a compact and manageable area. Manageable in this sense is providing the people and the authority alike the feeling of control towards otherwise chaotic situations generated by an urban form that condition people to use their car for every trip that they have to make in the course of a day's life. The center of a TOD area is the transit station which provides people with a gateway for long distance physical connections to the other TODs and other areas beyond the designated TOD using public transportation. However the most important aspects of TOD are the characteristics of the development that are located near the transit stations and the nature of initiatives that supports sustainable living which include convenience living, less dependency on car travel policies, walking and cycling and decreased traveling time (Belzer & Autler, 2002; Cervero, 1998; Dittmar & Ohland, 2004). Despite observed success they are still skeptics about this concept due to the lack of understanding about the overall concept as well as apprehension about the future (Belzer & Autler, 2002). Cervero (2006) found that workers who work near rail service facility will likely use the facility if the station areas are equipped with other supporting land uses such as restaurants, retail shops and day care centers for children further to the provision of feeder bus and travel to work financial support from their employers. Therefore compact urban form can be an alternative to the sprawled urban form but will not be successful without the support of mixed development that provide linkages to people's daily tasks as well as without the support of incentives and policies that promotes transit riderships.

#### 4 EFFECT OF URBANIZATION ON URBANISM

Urban growth process around the world has transformed many traditional compact cities into gigantic urbanized area covering massive area of land with low density urban development (Burchfield, Overman, Puga, & Turner, 2005; Glaeser & Kahn, 2003). Urbanization of the rural area had started well before the World War II (WWII) but post WWII especially in America, witnessed massive tracts of land outside the cities transformed into low density urban residential gardens that was led by real estate developers with the support from government policies and home appliances businessmen (Hayden, 2004; Nicolaides & Wiese, 2006). The transformation of these tracts into urban residential gardens not only transformed the natural landscape but also the cultural landscape of the people creating a new class of urban lifestyle. Although writings about suburbanization of America dominate the scholars conferences and forums, suburban development is not unique to America (Giuliano, 1999). Around the world other nations had also suburbanized and largely had emulate the sprawl characteristics of American suburbans therefore experiencing similar problems posted by the suburban developments. As discussed in the previous section it is noted that human behavior can be influenced by their environment vice versa. It is acknowledge that if urban form are vast and wide, people will be inclined to own cars and travel long distance using these private vehicles in order to overcome the distance between separated destination points especially from their homes to workplaces. Alternatively, this situation can be reversed by promoting compact urban form that integrates land uses activities with various modes of transportation. However the reverse process is not as easy to accomplish without further understanding of urbanism.

Louis Wirth (1938) who was part of the Chicago School argued that urbanism or the city way of life is created by three elements; the size, density and diversity of the urban population. He put forward that as the size, density and diversity of urban population increased people become more impersonal, separated and indifference. As a result there is social disorganization in the city. Wirth's argument discribed the effects of urban concentration on people's behaviour towards each other and towards the urban society as a whole. The city has always been regarded as a place of diverse economic opportunities and most who came to the city came for economic gain through different skills that they possessed. Generally those who migrated to the city came from multiple origins and cultural backgrounds and they came either alone or in small groups leaving behind their family kinships. Therefore it is natural for cities or urban areas to reflect individuality as well as diversity in cultural and socioeconomic backgrounds. Consequently they will lead their life differently and will only communicate intimately with those who have high level of similarities, in cultural and

socioeconomic background with them because it is rather impossible to form a bond with everybody in the city as compared to the rural settings.

Earlier Robert E. Park's had also acknowledged the force of the diversity of the people who reside in the urban areas on their environment. Park maintained that the urban physical environment evolved by responding to the diverse conditions of the urban population (Hutter, 2007). Therefore as the economic and population of the city grows in size the impact of individuality and diversity of the urban population become more intense that they often lead to economic and societal frictions that later leads to fractions. As seen in the Mercantilism Era, economic expansion led to diversity in economic activities and increase requirement of space for running business; therefore, workers were removed from their normal live-work environment to accommodate for this expansion (Vance, 1990). When this happened workers had to compete with other workers as well as business entities in order to obtain suitable home that they can afford outside of their working environment. Thus as the conduct of economic activities changes it brought changes to the ways urban residents conduct their living. As a result the places for living and places for working began to split-up, each located separately in different districts within city centers (Vance, 1990).

This situation build up during the Industrial Revolution Era where when the streetcar were invented the living space or homes for the urban population began to occupy lands in the urban peripheries along the transit lines. During that time it was considered crucial for urban residents to move out of the city centers as the industrial technologies were still inferior that it was not conducive to live near industrial establishment. Rampant emission of smoke from industrial smokestacks were becoming very hazardous to the urban residents' health. At the same time the physical and environmental conditions of the city centers were very depressed and congested that city living became terrible. The decentralization of the urban population were accelerated when the car was made available to the public, accordingly the urban peripheries were pushed farther from the city centers urbanizing rural and greenfields along the way. In this sense it can be suggested that the initial reason why people moved to the suburbs was to escape the horrible urban physical conditions and that the inventions of the rail transports and car had assisted the urban population to improve their quality of life by moving away for the city center.

The outcomes of all decisions made by stakeholders throughout these urbanization process are the physical environments and urban landscapes that can be observed today i.e. sprawling urban residential areas, commercial ribbons and leapfrogs, suburban malls, edge cities, edgeless cities, web of land transportation infrastructures as well as predominance of city centers as job centers in most part of the world. Accordingly the side effects of these long term urbanization process such as travelling long distance to work, heavy dependency on private vehicles, polluted urban air, and traffic jams were securely infused as a way of life for contemporary urban residents. Therefore reversing this type of urbanism trend require not only physical change but also changes in perceptions of urbanism itself. The suburbanization of urban residents is very much part of the urbanization process and were easily accepted by the urban residents because it promotes individuality and self esteem as well as psychological independence and freedom, which the industrial cities could not offer. The iconic thinking by Ebenezer Howard (1902) on urbanism as a mixture of rural-urban living had captured the minds of urban residents world wide till today. Unfortunately the aspects of highly organized self-contained or self-sufficient communities where people would live work and travel easily within the Garden City was not passed on well by followers of the thinking. Much of Howard's original idea had been misconstrued and sadly there are widespread acceptance of the manipulated idea that promotes rampant urban development behavior from authorities as well as the urban population and it is hard to break.

## **5 URBANIZATION IN KUALA LUMPUR CONURBATION**

Kuala Lumpur Conurbation (KLC) as depicted in figure 1 consists of the Klang Valley Region (KVR), Kuala Langat District and Sepang District in southern Selangor including the Federal Territory of Putrajaya (Putrajaya) and part of the Negeri Sembilan State towards the Town of Port Dickson. The southern part of Kuala Selangor District and Hulu Selangor District in Selangor State make up the northern part of KLC and the rest of the KLC comes from the western part of the state of Pahang in the east of KVR to encompass the Town of Bentong. Klang Valley Region on the other hand are made up of the Federal Territory of Kuala Lumpur (Kuala Lumpur) and four of Selangor State's districts namely Klang District, Petaling District, Gombak District and Hulu Langat District. The total land area of KLC amounts to approximately 504,000 hectares. This is an increased of 221,000 hectare (78%) from the original 282,600 hectares of KVR land area.







Fig. 1: Kuala Lumpur Conurbation

The KVR are known for its rapid urban development and due to that the KLC has been designated as the main development area for Malaysia (JPBD, 2002). Study done by Ibrahim et al (1999) shown that the built-up area in KVR covered more than four times as much land in 1998 as compared to the coverage in 1988. They found that within the 10 years period, land for residential use had increased by more than 50,000 hectares and industrial use by almost 20,000 hectare. Consequently around 55,000 hectares of agriculture land and forest land were lost during the same period. Petaling District lost almost 19,000 hectares of its greenfields within the same 10 years period which amounted to 40 percent of the available greenfields in 1988 while other areas lost between 8,550 – 10,000 hectares with Federal Territory of Kuala Lumpur losing 45 percent of its available greenfields in 1988 (Yaakup, Ibrahim, Mohamed, & Kamarudin, 1999). The period of 1988 – 1998 was a period when KVR experienced intense economic development that was brought about by conducive economic development policies to encourage industrialization in Malaysia particularly in the KVR. This has brought many people to the region increasing the demand for housing and other urban services as well as mobility. These development was for the most part fuelled by the Malaysian Expressway System that escalated during this period. With an extensive web of expressways, the KVR became highly accessible and greenfields inside the area as well as outside were easily accessed for development purposes.

Evaluation on the achievements of Kuala Lumpur Structure Plan 1984 (KLSP 1984) development strategies indicated that Kuala Lumpur's population in the year 2000 fell short of the KLSP 1984 population projection for that particular year by 0.8 million people. This was attributed to the out migration of Kuala Lumpur population to other areas in the KVR in search for more affordable housing (Kuala Lumpur City Hall, 2005). The area outside of Kuala Lumpur were said to offer more affordable housing although more than 8,600 hectares of greenfields in Kuala Lumpur were developed during the 1988 – 1998 period. According to the Kuala Lumpur Structure Plan 2020 (KLSP 2020) in 2000, 52 percent of the housing supply were categorized as high cost housing whereby more than 68 percent of Kuala Lumpur's population required low to medium cost housing creating a mismatch of 19 percent in supply and demand for affordable housing. This showed that affordable housing are not located appropriately according to where they are need therefore people were forced to seek for affordable housing elsewhere. This strengthen the report attributing the lack of affordable housing in Kuala Lumpur as the main reason for the out migration of Kuala Lumpur's population to other areas of KVR. What these entail is high demand for travelling especially from workers who work in Kuala Lumpur but live outside of Kuala Lumpur. With decreasing mode split for public transportation the demand

for infrastructures that promote mobility services via private vehicles increased thus explaining the heavy investments on the expansion of the Malaysian Expressway System within the KVR. Nevertheless traffic congestions are still the mainstay problems for KVR workers and population alike. Being the center for economic development for KVR, Kuala Lumpur also recorded a high job-housing ratio at 2.56 in 2000. This indicates an imbalance between the availability of jobs and housing units in Kuala Lumpur as a whole. Job-housing ratio is yet another indicator of spatial mismatch but accordingly it is an indicator to measure the availability of employment compared to the availability of housing in an area. Since a high job-housing ratio indicates that there are more workers than housing units within an area, it is implied that most workers will definitely need to travel longer distance to reach their workplaces from their homes which are located elsewhere. Therefore both types of locational mismatches will induce travelling between the two points of origin and destination for workers.

In response to the high demand for housing within the KVR, many greenfields were opened to make way for the development of new residential suburbs. Figure 2 depicts the chronicle trend of urban settlement pattern within the KVR and Selangor State between 1895-2002. The figure shows that KVR's development is anchored in the historical significance of Kuala Lumpur as the first administrative center as well as the main business district for Malaysia and the Town of Klang as a port district as well as the Royal Town for the Sultanate of Selangor (Gullick, 1998). The two focal points are linked together by various links to reinforce the connection between the two thus development in KVR had grown linearly along the Federal Route 1 that connects them. However as the National Capital, development in Kuala Lumpur is more intense compared to Klang Town nevertheless various settlement areas and commercial districts were developed between the two forming multiple centers along the Federal Route 1. This has been looked at as a decentralization process in effort to redistribute the urban population within the Region. However within 1991 – 2002 urban development started to sprawl and leaped frog into the greenfields outside of the KVR. This is indicated by the maroon color on the map in figure 2.

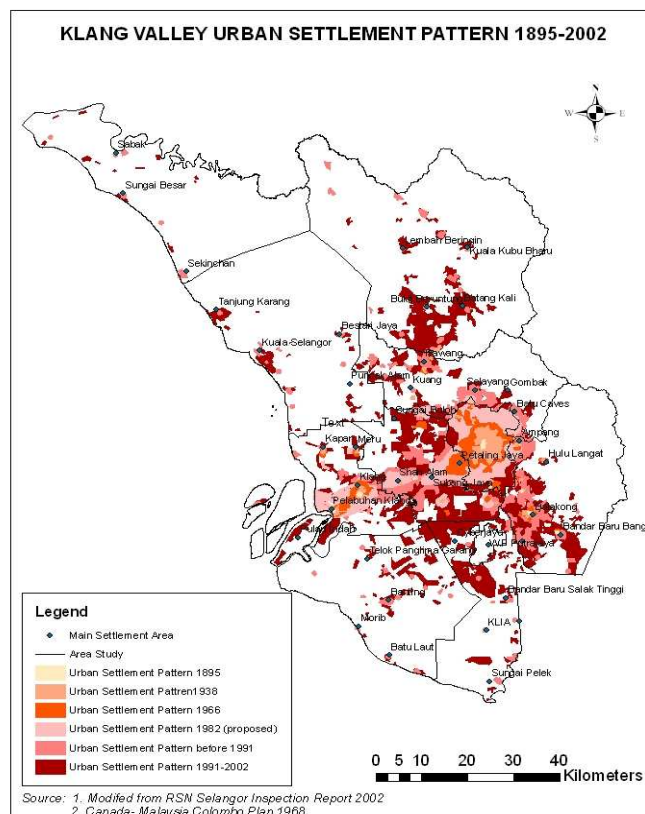


Fig. 2: Klang Valley Urban Settlement Pattern 1895 - 2002

It is in these response that the KLC was identified in order to justify the KVR's urbanization pattern within the context of regional development. Similar to other countries most of the new residential development that are located in the suburbs in the KVR and outside the region are low density development that had been brought about by the same nature of urbanization and urbanism process. This is the preference for homes that



offer individuality and privacy as well as symbol of socioeconomic achievements. Consequently this types of residential development present the urban area with similar problems like it did in other developed countries such as America as well as Europe. Around the globe it has been widely argued that urban sprawl cause people to travel more as compare to a compact city and is a source of various environmental problems that lead to unsustainable living.

The NPP projected that around 8.5 million population will reside in the Kuala Lumpur conurbation in 2020. As an expanded version of the Klang Valley Region, KLC currently have multiple urban centers, 45 to be exact, with employment and commercial areas running along its major roads and urban highways. However Kuala Lumpur is still and will be the main employment and commercial focal point for KLC with its surrounding areas providing bulk of the housing and community facilities for most of the KLC residents. In 2005 the jobs-housing ratio for the Kuala Lumpur is 1.57 indicating an acceptable jobs-housing balance according to reseachers in this field if the number of workers per household is 1.5 (Cervero, 1989; Weitz, 2003). This is a lower ratio compared to the previously discussed for year 2000. An explanation to this is perhaps that in realizing the short fall of affordable housing the Kuala Lumpur had taken mitigation measures to increase the supply of affordable housing within the City Council area between 2000 and 2005 therefore could retain more workers to stay in the Kuala Lumpur. Nevertheless the KL City Plan 2020 projected that there will be around 1,419,600 jobs in Kuala Lumpur as opposed to 626,317 units of housing thus increasing the jobs-housing ratio to 2.27. What this represent is a jobs-housing imbalance in the Kuala Lumpur in 2020.

There is an increasing trend in car ownership in Malaysia annually. The average anual growth rate for car ownership for the year 1986 – 2003 was 9.23 percent. In 2003 Kuala Lumpur and Selangor recorded more than 2.2 million registered car ownerships, this comprised about 42 percent of the registered car in the whole of Malaysia of which about 70 percent were registered in Kuala Lumpur (Zakaria, 2008). The high recording of car ownerships in Kuala Lumpur and Selangor is linked to the concentration of urbanization in KVR and the characteristics of the urbanization that promotes travelling. Zakaria (2008) in his survey found more than 90 percent of his responden own a car while others own either motorcycle or other type of vehicle and 72 percent of those who own a car used the car for mobility while less than 10 percent use public transportation. Therefore if the trend in urban sprawl and car ownerships persist along with the preference for car as the major mode of transportation to workplaces then Kuala Lumpur specifically and KLC in general will be experiencing severe traffic congestion and environmental degradation in 2020. (Kuala Lumpur City Hall, 2008).

To put it briefly it can be said that for the most part urbanization in KLC had exploded into the areas beyond the boundary of KVR and need to be readdress to create a more refine decision on urbanization due to its negative externalities. The condition of urban sprawl in KLC had been attributed to few factors firstly, Kuala Lumpur had neglected the demand for affordable housing therefore more workers who work in Kuala Lumpur have to live elsewhere in KLC. As a result more greenfields in KVR were developed into residential suburbs making the urban area to sprawl beyond control thus it had to be redefined as KLC. Secondly the spatial mismatch between workers and affordable housing as well as between jobs and housing locations had created a commuter's lifestyle among KLC workers. Therefore workers do not expect or are not expected to live near where they are working because it has become an accepted custom in the KLC to live and work separately. Furthermore the KLC is seen as a hetrogenous single metropolitan area rather than consisting of multiple independent urban centers. Therefore people are not seeking to live and work within a specific location in anyone of the centers but to live and work anywhere in the metropolitan area. Lastly perhaps the most important challenge in urbanization and urbanism in the next decade is the increasing trend in car ownerships and car usage as the major mode of urban tranportation among KLC population. As the KLSP2020 indicated despite improved commuter rail services the usage is not yet optimized because the transit station area are not supported by mixed land use development, nonmotorized mode of transportation as well as other mode of transportation.

## 6 RE-PLANNING EXERCISE

In 2001 the Town and Country Planning Act of 1976 (Act 172) under the Malaysian law were ammended to allow for a three tier land use planning: National, State and Local Authority with options for a region wide development planning. Act 172 in its original state allowed only for a two tier land use planning within a

Local Authority jurisdiction and did not provide for land use planning at the national and state level not even at a regional level. What this amounts to later towards the end of the 20th Century was a considerable amount of chaos in term of urbanization and urbanism. KVR in particular received intensed development pressure and recorded more than 440% increase in built-up area in 10 years within 1988 through 1998 (Yaakup, Ibrahim, Mohamed, & Kamarudin, 2003). Although local authorities were given power to plan their areas most chose to focus on overseeing the daily urban services tasks as stipulated in the Local Authorities Act of 1976 (Act 171). As a result urbanization was very much led by the industrial sector as well as real estate development that gain its momentum in the mid 80s throughout early 90s. During which many people migrated to major urban areas in the Klang Valley Region for employment purposes. Under the ammended act (Act 1129) the first National Physical Plan were prepared to provide a framework towards sustainable and integrated land use planning system within Peninsula Malaysia. However the planing were done within the context of regional as well as global perspectives. Basically what this entail is to make a detail inventory of all the land resources in Peninsula Malaysia and to categorize them according to their limitations and potentials as an exercise to provide for sustainable development. Therefore with full knowledge of land resources it is imagined that land use planning can be done efficiently and this can serve as a good foundation for lower level planning.

As mentioned, the original Act 172 did not provide for an integrated planning and developement at a higher level therefore each local authorities took upon the task to prepare development plans rather isolated from other areas and local authorities in the country. Planning in isolation would create incompatibles such as the spatial mismatch between supply and demand of affordable housing as mention earlier. At the same time would also create an imbalance of jobs-housing. The unexpected experience of losing its population to other areas of the KVR by Kuala Lumpur when the development strategies in KLSP84 did not take place as planned demonstrated the need to integrated development planning as much at a higher level. In the case of Kuala Lumpur the KLSP84 were done rather isolated of the conditions prevailing in other areas in the KVR and outside the KVR. The problem of planning in isolation is not unique to Kuala Lumpur alone but is done by almost all local authorities in Malaysia. However it is more pressing for a large metropolitan area such as the KLC to have an integrated planning due to the rapid development and more intense development implications such as traffic congestion and commuting problems. The move to amend the Town and Country Planning Act was prompted by the need to promote sustainable urban development however since 2001 Malaysian urban areas are still hard pressed by increase commuting problems among urban workers.

There are 13 local planning authorities in KLC and the most prominent ones are located within the KVR, they are Kuala Lumpur City Council, Petaling Jaya City Council, and Shah Alam City Council. Urban planning exercise in most of the local planning authorities in the KLC are bind under the Town and Country Planning Act , 1976 (Act 172). Since the amendment of Act 172 in 2001 various Development Plans were prepared and completed by respective local planning authorities, including the NPP and the Selangor State Structure Plan (Selangor SSP). While, the planning exercise in the Federal Territory of Kuala Lumpur is executed under the purview of Act 267, the Federal Territory (Planning) Act, 1982. Under this particular Act, The Kuala Lumpur Structure Plan 2020 (KLSP2020) and Kuala Lumpur City Plan 2020 (KLCP2020) were prepared and completed by Kuala Lumpur City Council. Nonetheless although there are supposed to be a natural progression of planning levels accorded by Act 172 from the NPP to State Structure Plans through the Local Plan and later on the Action Area Plans, it is rather ambiguous as to how the Development Plans prepared under Act 172 is integrated with the the ones prepared under Act 267 in KLC. On the other hand there is also some level of difficulties if not resistances to incorporate plans and planning ideas among the ones prepared under the Act 172. Therefore it is rather difficult to have a fully comprehensive plan that can take into considerations all aspects to mitigate spatial mismatches and planning aloofness among local planning authorities with regards to the location of homes and workplaces.

As mention previously, travelling to work ordeal in KLC is not merely a transportation problem but is also an urbanism problem. Therefore installing transportation infrastructures such as expressway and Mass Rapid Transit (MRT) to form connections within the KLC is not adequate to contain worker's journey to work but merely facilitating their travel. Live, work and travel easily requires local planning authorities in KLC to act upon the landuse-transport integration planning strategies that will facilitate the development of TOD. The need to plan for the integration of landuse and transportation is now urgently needed in KLC to create an urban form that can demote travelling by car, lessen vehicle mile travelled to work and shorten time travelled





to work. Among the reasons identified as contributing to the non-optimal use of the rail base public transportation in Kuala Lumpur is inadequate facilities at the station area for trip linkages in form of pedestrian walk way as well as efficient feeder bus. Although the concept of landuse-transport integration in form of TOD at transit station area has been referred to regularly in some of the development plans prepared under Act 172 there is yet one TOD at any transit station in KLC. The National Urbanization Policy No. 15 explicitly list TOD concept as one of the actions towards an integrated public transportation system that are efficient and user friendly. TOD is perhaps the only concepts which captures all of the smart growth principles in creating a livable area. In Malaysia it is gaining recognition particularly for the application in KLC. TOD in its simple version is the location of home, workplace and transportation thus providing residents ease of living , working and travelling.

## 7 CONCLUSION

With development areas approaching the “full” level and the level of service (LOS) for almost all road network within KLC slumping their grade towards “F” it is now important to rethink about reversing the trend of home and workplace separation. First of all, travelling ordeal must not be looked at solely as a transportation problem because travelling is interrelated with land use activities that form the destination for one’s travel. Subsequently travelling ordeal must be overcome. If previously the target of travel to work is to overcome the distant by driving cars at present, planners in KLC should be led to overcome traffic congestion by designing and encouraging development to merge as Transit Oriented Development at station area.

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