



Issues and challenges of a liveable and creative city: The case of Penang, Malaysia

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Abstract

'Liveable City' is an urban planning concept that has recently attracted much attention. In Penang, the city-state has undergone massive social and economic developments. Penang's popularity has increased following its capital city, George Town's inscription into the UNESCO's World Heritage List in 2008. In February 2013, Penang was also ranked as the 4th greatest place to retire abroad. In Asia, it was ranked the eighth most liveable city for two consecutive years by ECA (Employment Conditions Abroad) International. Although bestowed with these accolades, the actualization of sustained liveability in Penang is still a matter of serious concern amongst political leaders and Penangites themselves. This paper aims to explore and understand the issues and challenges besetting Penang in becoming a full-fledged liveable and creative city. The challenges and issues highlighted in this paper were gathered from several sessions of in-depth interviews with key informants. In sum, chronic traffic jam, lack of affordable housing, safety issues and scarcity of land were some of the critical issues highlighted.

Keywords: creative city, liveability, liveable city, liveability issues and challenges, UNESCO's World Heritage, urban planning

Introduction

Every city in the world aspires to be a liveable city. Essentially, a liveable city should possess basic yet unique attributes to welcome people from all strata of society without marginalizing any particular group (i.e. poor, disabled, women, children, minority groups). According to United Nations, nearly 60 per cent of the world's population will live in cities by 2030. Today, half of the world's population of 3.5 billion people is living in cities. To date, there are 21 megacities in the world with a population size of over 10 million in each. In Asia alone, there are currently 12 megacities (United Nations, 2012).

By 2030, it is projected that 6 out of 10 people will reside in urban areas and the number will increase to 7 out of 10 people by 2050 (World Health Organization, 2013). As the population of a city continues to grow, citizens will eventually expect their government to make the city a liveable one. In addition, challenges arise vis-à-vis the irreversible and unprecedented impacts of rapid urbanization. Policymakers have to address these challenges with limited resources through appropriate policy approaches.

According to ECA (Employment Conditions Abroad) International, Penang was ranked eighth among cities of Asia two years consecutively in the ECA liveable city index for 2012 (United Nations, 2012). Penang is also popularly known as 'The Pearl of the Orient'. It comprises of an island and a mainland. The capital city of Penang, George Town, is well-known for the city's culture, food and heritage (Tourism Penang, n.d.).

In retrospect, during the 1970s, the adoption of export-oriented industrialization strategy facilitated the first Free Trade Zone in Malaysia to be located in Bayan Lepas, Penang. The major contributor to the economy of Penang is the services sector, especially trade, tourism and education, which has been the leading contributor even before the 1970s. Subsequently, Penang became the hub for electric and electronics manufacturing in Malaysia. Besides manufacturing, Penang has been holding as much as 75% of market share in Malaysia's medical tourism market since 2009 (Invest Penang, 2010).

While Penang was undergoing unprecedented urban growth, George Town together with Malacca were listed as United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Sites on 7 July 2008 in recognition of their charming ancient heritage and culture (Chua, 2012). Also, Penang was ranked as the 4th greatest place to retire abroad on February 2013 (Fuscaldo, 2013).

Notably, Penang is becoming an attractive place to work and live. Today, Penang has a population of 1,611,600 people (Penang Institute, 2012). In The Penang Paradigm Report (Penang Institute, 2013), one of its agendas is to promote and leverage on the liveability of Penang. In view of the State and Municipal Governments' efforts to ensure Penang's liveability, there are also challenges faced by Penang which warrant sound policies to be introduced.

Clearly, many research questions can be generated from this introductory statement. However, this paper only aims to explore the issues and challenges that Penang is currently facing in the state's quest to be a liveable city. Understanding the issues and challenges will enable policy-makers to propose creative solutions to address new problems in urban spaces as the city transforms and responds to pressures of urban development. The following section will review related literature on liveable cities.

Literature review

What is a Liveable City?

When more people congregate and live in a city, the following questions are asked: What are the elements that constitute a liveable city? How does a liveable city look like? However, the definition of a liveable city is subjective. It does not have a precise definition. The concept of liveable city includes many interconnected factors contributing to the quality of life in the urban area.

For those interested in liveable cities, there is really no need to reinvent the wheel. The general concept of liveable cities is freely available (Goh, 2012). Nonetheless, there are varying opinions on the precise characteristics of liveability. During the 1980s and 1990s in North America, the concept of liveability has been used proverbially in line with problems of urban sprawl and car-dependent land use patterns (Aziz & Hadi, 2007). However, this concept has only begun to enter public minds recently even though it has actively been a theme discussed by urban planners for decades.

Therefore, the term 'liveable city' requires a broader discussion with people who are living in the city or region experiencing day-to-day living. Their on-going satisfaction, needs and wants should be taken into consideration in the attainment of a better future. Thus, scholars have also defined a liveable city as a city that offers quality of life to urban dwellers who reside in the city. Quality of life, measured by liveability indicators, refer to accessibility to infrastructure such as transportation, clean water, sanitation, affordable housing, clean air, green space as well as a peaceful and quiet environment (Timmer & Seymoar, 2005).

For example, in Australian cities, liveability is defined as 'the degree to which a place, be it a neighbourhood, town or city, supports quality of life, health and wellbeing for the people who live, work or visit.' The term 'liveability' owns these characteristics of amenity and also the other features of the built environment such as the arrangement, design and construction of dwellings and other buildings, public transport systems, road networks and public spaces, walkability and accessibility to goods and services, and high quality communication technology (Major Cities Unit, 2012).

The components of a liveable city comprise public and mental health, physical activity, physical environment, safety, transport accessibility and mobility, housing and so on. However, only a few of the

elements discussed in this review will be selected and used for my study due to the constraint of time and manpower.

Subsequently, some significant ideas are gathered from San Francisco in terms of Transportation for a Livable City (TLC). In San Francisco, a liveable city is seen as a city that consists of five fundamental elements: i) strong neighborhoods; ii) walkability; iii) a vital public realm; iv) affordability; and v) connectivity to the entire region (Transportation for a Livable City, 2002).

Congestion appears as one of the most visible issues related to transportation. Widening of roads or minimizing the number of cars, are two basic ways to lower congestion. However, in San Francisco, roads are already widened while walking pathways are narrowed. Hence, strategies to minimize the number of cars are needed. Nevertheless, alternatives to cars are needed to ensure that a balanced approach to minimize vehicular access can be materialised.

One of the reasons that make San Francisco succeed as a city is its great public transit system. The city's Transit-First policy was first introduced in 1973. Between 1970 and 1990, San Francisco was able to add 57,000 new jobs to the downtown core where 66% of the people who worked in downtown core assessed to work without having to drive alone. The ideal way to encourage people to transit is to make the local transit faster. Things that bother most people are the overall trip time from door-to-door. Hence, San Francisco is trying to help Muni (a network of metro or subways, buses, streetcars and cable cars serving the city of San Francisco) fight the traffic. The key to making transit work is to ensure that transit vehicles do not get stuck in traffic.

In this regard, San Francisco has a dedicated right-of-way created for transit only which enables it to move faster. Although some places already have these lanes, other vehicles still use the lanes. This dedicated right-of-way is the best scenario to make transit possess its own lane which can go against the flow of car traffic. Clearly, a well-planned physical environment supported by good amenities and social environment is vital towards the making of a Liveable City.

Liveability: The key thrust of a Creative City

Interestingly, the making of a Liveability City is closely intertwined with the attributes required in a Creative City such as the availability and accessibility of a good physical, socio-economic and cultural environment. Cities nowadays have to be adequate and competent in these dimensions given their increasingly strategic role in today's highly globalised world. Planners and political leaders are beginning to realize that it is no longer nations that compete amongst themselves but cities (SERI, 2011: 4). To this end, government blueprints in Penang have emphasized the importance to make our cities more liveable, people-oriented, aesthetically appealing and balanced by a clean, safe and green environment (SERI 2011: 5). To dissect this even further, competition amongst cities is no longer confined to the city down the road or the adjacent town; but, cities are faced with competitors 'half a world away' (van Gelder & Allan 2006: 5). Simply put, globalization has broken down all barriers between and within cities, thus, igniting and requiring cities to compete for attention, investment, firms and talent.

Though scholars have claimed that globalization has rendered the irrelevance of geography (Friedman 2006), but arguably, the need for a city to compete and outshine other cities has in fact once again uplifted the credence of 'location, space and place.' As argued by Florida (2002: 23-233), the defining and differentiating aspect to compete and attract people to a city resides in three 'quality of place' dimensions, namely, "What's there? Who's there? and What's going on?" (Florida, 2002: 231-233). Specifically in a Creative City, Florida contends that as national economies structurally shift to embrace knowledge-based, creative and innovative production methods and occupations, the city is now the ultimate place to be where the creative class will want to work, live and be able to connect with other creative employees like themselves (Florida, 2002; 2008; Landry, 2009).

Additionally, besides the above clustering force of the creative class and the spatial aspects of a Creative City, other experts such as Landry (2009) have also discussed the way a Creative City should respond to the countless irreversible and unprecedented transformations that are underway that resulted in new urban problems and issues. In order to respond and redress these new and emerging urban issues,

Landry advocated that it is important to inculcate and embed the ‘culture of creativity’ in the city where the flow of creative ideas by all urban stakeholders/actors (i.e. policymakers, private sector, individuals, NGOs) have to come together to propose creative solutions that are sustainable. However, getting a consensus from the social urban actors who have diverse objectives and motives can prove to be a challenging rather than creative process altogether. The next section will juxtapose the elements of liveability and creativity of a city within a sustainable development framework.

Liveability, creativity and sustainable urban development

Oftentimes, the discourse on Liveable City also incorporates principles of sustainable development. As universally known, the United Nations (2012) has defined sustainable development as a mode of development that ‘meets the needs of the present without compromising the ability of future generations to meet theirs.’ This concept is now being applied in all realms of development, in this case, sustainable urban development, which is seen as ‘development that improves the long-term social and ecological health of cities and towns’ (Wheeler, 1998). In this study particularly, sustainable urban strategies that are creative and innovative are needed to address challenges in the urban environment, economy and society to ensure Penang’s liveability, attractiveness and competitiveness.

Research methodology

In this study, a qualitative research approach was used. Purposive sampling was administered to identify key informants to be interviewed. According to Neuman (2011), purposive sampling (judgmental sampling) is a “valuable sampling type for special situations” and individuals are chosen according to their ability to purposefully provide an understanding of the research problem of the study. In this study specifically, purposive sampling was used to identify key informants who could provide in-depth information pertaining to the issues and challenges faced to transform Penang into a liveable and creative city. Key informants from Penang were selected based on their professionalism in the field of urban development and town planning. In-depth interviews were conducted with these key informants and each in-depth interview took approximately one and a half hour to complete. The in-depth interviews were carried out from January until February 2013. Refer to Figure 1 to locate Penang’s position within Malaysia.

To understand the issues and challenges faced by Penang to become a liveable and creative city, a semi-structured interview protocol was designed and used to interview the key informants. The questions were framed to gauge their perceptions on the issues of public transportation, physical infrastructure, environment and housing. The key informants were also asked to give their suggestions and recommendations to develop Penang into a liveable and creative city.



Source: <http://www.lonelyplanet.com/maps/asia/malaysia/>

Figure 1. Penang's position within Malaysia

Data findings

From the in-depth interviews, the top five challenges identified (in order of severity) are listed in Figure 2 below. The biggest challenge identified is traffic congestion which inevitably affects and impacts on public transportation. Other challenges include issues of affordable housing, safety aspects and scarcity of land for development. These challenges will be discussed in-depth in the following sections.

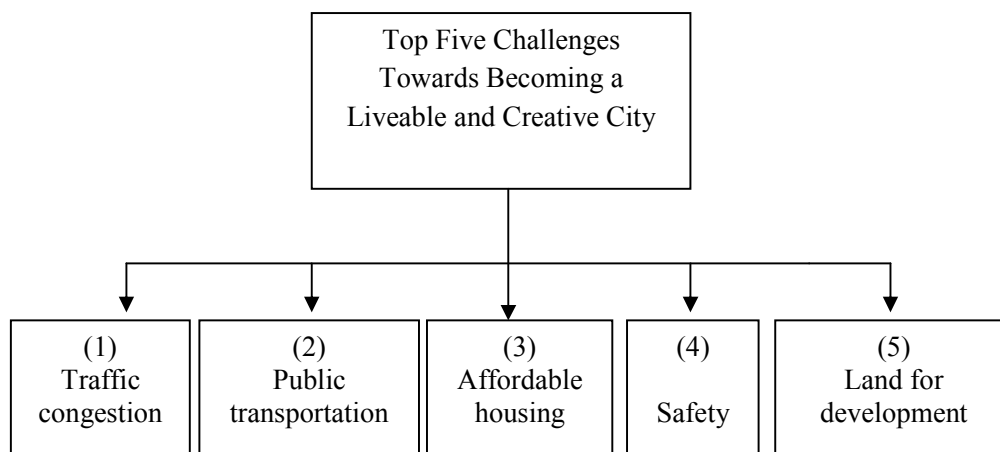


Figure 2. Top five challenges towards becoming a liveable and creative city in Penang

Public transportation

Currently, public transportation in Penang is akin to only one public bus service operated by Rapid Penang. This service was established in July 2007 (Rapid Penang, n.d.). The Penang scenario is unlike the capital city of Malaysia, Kuala Lumpur, which has more than one public transit system provided to the public such as monorail and LRT systems.

In other words, a comprehensive transit network that serves neighborhoods is very important. The best way to attract people to use public transit is to make it punctual, faster and more convenient. This can be explained by one of the key informants who is also a Municipal Councilor of the City Council of Seberang Perai Penang. He is also an Associate Professor at the School of Social Sciences, USM. His opinion on the public transportation system in Penang is as follows:

It has slightly improved, but it doesn't cater for the whole population. The problem is, a lot of people don't want to use the public transport because they feel that it is very tedious and very difficult to get access to public transport. (Municipal Councilor, MPSP, Associate Professor of School of Social Sciences, USM)

According to him, people find it difficult to access to public transportation because some buses do not service certain areas. As a result, it takes quite some time to reach the destination that a resident wants to go. This indirectly fails to attract locals to use public transit. Thus, people choose to use private vehicles instead of taking public transit. However, the MPSP Councilor mentioned that according to the consultants of Penang's Transport Master Plan, it is not profitable to build a monorail system in Penang if the population has not reached 3 million. Nevertheless, he explained that in most developed countries, public transit is built not for profit but for the wellbeing of the public.

Indeed, public transport is an essential element of a liveable city. In order to reduce traffic congestion and to attract people to take public transit, a better and more efficient public transit system has to be built for the wellbeing of the public instead of being profit-oriented.

Affordable housing

Given the rising cost of housing in Penang, most of the respondents commented that they could not afford to own their own homes due to the high cost of housing. Some lamented that this issue made it quite challenging and impossible for the younger generation or the low and middle income earners to afford a decent shelter in Penang. The root of the problem may be that the suppliers of housing factored additional costs into the selling prices. Also, Penang is the second smallest state in Malaysia yet the state has the eighth highest population in the nation. At the same instance, land is limited for development in Penang. Thus, cost of housing is on the rise especially on the island (Macdonald, 2012). As a result, the respondents hoped that the State Government can provide more affordable housing to deal with this issue.

In the qualitative interviews, most of the key respondents pointed out that the scarce land in Penang Island has pushed up the cost of housing. One of the key informants interviewed is a Town and Rural Planner in Penang. She highlighted that land is very scarce in Penang. Even then, the government should build more affordable housing and look into the design of low and medium-cost housing schemes.

Affordable housing does not only concern the 'affordability' factor, but the quality of housing also impacts the home users. So, well designed housing is important as it can allow people to live comfortably. (Town and Rural Planner, Penang)

Additionally, in keeping with the tenets of sustainable development, housing developers should be responsible to provide decent and affordable housing that are environmentally friendly. In order to lower the negative environmental impact and improve the affordability status of home users, the design concept of houses should be considered as well.

While interviewing the Chairperson of Health License & Urban Services, a department under Municipal Council of Penang Island (*Majlis Perbandaran Pulau Pinang*) MPPP, he commented that land in Penang is limited. It may be one of the reasons why the cost of housing in Penang is rising. He also commented that quality of life and quality of housing are two different dimensions. Houses should not only be built to code but the quality of housing is equally important.

A good quality house is important. Therefore, I hope that the government can subsidize developers on building materials. This is because quality of life and quality of housing are interrelated. If quality of housing is good, it can guarantee a good quality of life. (Chairperson of Health License and Urban Services, MPPP)

In addition, he suggested that the government should have a set of new guidelines to control the rising cost of housing in Penang. His suggestion is as follows:

I suggest that the best way is to have new guidelines to control or stop people who are not at the level of low and middle income. Government can play the role as the seller and housing agent while citizens as the buyers. When a buyer wishes to sell his low or low-medium cost house, he should sell it to the government who acts as the housing agent and then let the government sell it to another low-medium income earner. This is to ensure that the government looks properly into the need of the public, especially those who are not high income earners. (Chairperson of Health License and Urban Services, MPPP)

Without doubt, most of the key informants agreed that land in Penang is limited for development. The government should have a long-term approach on planning and building affordable housing in order to ensure that future generations can also afford a decent shelter in this massively developed city.

Safety

Safety is another issue of concern in Penang. It is important to make residents feel safe in a densely populated environment. Interestingly, Penang was ranked the first place in the nation with the lowest street crime cases (Vinesh, 2012). Most of the key respondents also agreed that Penang is quite safe to live.

In this case, the Chairperson of Health License & Urban Services commented that the government has highlighted the importance of security in cities. Hence, both the State and Federal Governments have installed Closed Circuit Tele Vision (CCTV) on the streets. As of February 2013, there were 60 CCTVs installed around Penang Island.

The implementation of new guidelines that installation of a street light at an interval of 50 meter is to ensure that crime rates in Penang can be lowered to a minimum level. As of February 2013, there were 31,000 street lights in Penang. About 30 *Light-Emitting Diode* (LED) street lights were set up. The lifespan of each LED street light is about 10 years.

Street lights are important to anyone, especially females, living in the city as the installation of more street lights on the streets provides security. This can be explained through the interview with a Town and Rural Planner in Penang. She commented that lightning plays a key role in providing security, especially to women who walk at night. Thus, it is of paramount importance to keep the streets brightly lit at night.

Discussion and policy implications

To remedy the situation indicated by the MPSP Municipal Councilor regarding the issue of inconvenient access to public transport, the respondents suggested that the current transport system should be improved. These findings are consistent with the core strategies of Penang Overarching Transport Master Plan Strategy of which one of the strategies is to reduce the inconvenience of changing from one bus service to another. In addition, improving the bus system is also one of the strategies. To encourage transit, more bus routes have to be introduced in order to enable all communities to access to public transport.

Besides that, the core strategy also targets to reinforce on-street parking regime by expanding parking bays and yellow lines throughout the built up areas. In addition, further improvements to the on-street parking enforcement regime will be enhanced. These strategies are consistent with the scenario in San Francisco where one of the automobile recommendations is to reduce parking in town in streets that have difficulties in dealing with high volumes of traffic (Transportation for a Livable City, 2002).

In proposing a sustainable bus system, the Metro Shuttle bus which is a free shuttle service in Manchester, United Kingdom is a good example and can be emulated by Penang. The Metro Shuttle is a low-floor, easy access and diesel-electric hybrid bus which offers three circular routes, produces lower emissions than most standard bus and consumes less fuel too. In other words, these greener buses are more environmental-friendly and they are free of charge. Green Funds are also allocated from the Department of Transport for these green buses (Anonymous 1, 2011).

In Penang, the State Government has spent RM2 million to support the BEST (Bridge Express Shuttle Transit) Park and Ride service and the CAT (Central Area Transit) service (AJC Planning Consultants Sdn Bhd, Halcrow (A CH2M Hill Company) and Singapore Cruise, 2011). The free shuttle service in Penang is good. Perhaps we should plan to have greener buses which have low-carbon emission and decrease air pollution in town.

However, in Penang, the State Government has no control over the public transport provision as it is under the jurisdiction of the Federal Government. Therefore, if greener buses were likely to be built, this proposal may need the financial support from the private sector in order to minimize the burden on the State Government (AJC Planning Consultants Sdn Bhd, Halcrow (A CH2M Hill Company) and Singapore Cruise, 2011).

The State Government has encouraged Penangites to car-pool as one of the approaches in the initiative 'Cleaner Greener Penang.' Provision of sustainable transport alternatives under the approach of 'Transforming Mindset towards A Responsible Citizenship' in the initiative is good, provided Penangites do actually practise and implement this initiative. Car-pooling can reduce the number of motor vehicles on the road, thus, effectively minimizing traffic congestion, particularly during rush hours. However, first of all, we need to transform the mindset of Penangites by urging them to adopt this green practice.

High cost of housing was identified by the respondents as the challenge that hampers Penang to be a liveable city. As a result, affordability and accessibility to public housing are needed by Penangites who are seeking for a shelter. Therefore, approaches to increase the affordability and accessibility to public housing should come from the State Government in strategic partnership with the private sector, in this case, developers.

In proposing a better housing scheme, affordable housing organized by Housing and Development Board (HDB) in Singapore is a sterling example and can be emulated by Penang. HDB was set up in 1960 to deal with the crisis of housing, with a significant goal to encourage home ownership in order to nurture a stronger sense of Singapore as the home country of Singaporeans. With the long-term public housing strategies, Singapore had successfully provided more than 90% of home ownership and very low share of rental housing to the republic's residents. Today, Singaporeans who reside in flats organized by HDB consists of 82% while satisfaction rate is as high as 95%. The highest home ownership in the world is in the most liveable city in Asia which is Singapore. It was reported that 93% of Singaporeans are able to afford a decent housing in the nation (Anonymous 2, n.d.).

From the Singaporean experience, it clearly shows that planning for public housing is a long-term endeavour. The government needs to ensure that its citizens can afford a unit of good housing. Home ownership in a liveable city should be high and the share of rental housing should be low. Besides, social stability and the sense of belonging to the nation should be taken into consideration in the long-term approach.

To date, *Skim Rumah Pertamaku (SRP), or my First Home Scheme*, is a scheme announced by the Malaysia Government with the aim to help young adults who have just started working with a gross income not more than RM3,000 per month to own their first homes. It serves to assist young adults to own their first homes whereby they can obtain up to 100% financing from financial institutions (Anonymous 3, n.d.). It allows young adults to have affordable shelter. However, Penangites are finding themselves increasingly being priced out of housing. In fact, affordable housing is limited in terms of units due to the scarcity of land in Penang and yet the number of applicants is more than the number of housing provided. Put simply, demand for affordable housing far exceeds supply. Thus, this is extremely challenging and impossible for the younger generation or the low and middle income earners to afford a decent shelter in Penang. Eventually, they will be forced to move out from Penang.

Therefore, proper actions or policy implementations are needed to handle the shortage of affordable housing and rising cost of housing on the island. To avoid the younger generation or the low and middle income earners from being priced out of housing, the State Government should prioritize young applicants who just joined the workforce during the application for an affordable housing.

To ensure that other applicants are able to get a unit of affordable housing, a married couple should collectively be allowed to own only one unit of affordable house only. In other words, if the husband and wife each owned an affordable house, one of them has to sell the house. This is to be fair to other applicants who are still single or those who do not as yet own a house.

With regards to safety, more CCTVs have to be installed spanning wider areas. Street lightning is important towards creating a safe city. The Safe City Concept which targets to create a crime-free area in urban spaces is good in promoting a safer Penang.

Conclusion

Overall, this study aims to understand the issues and challenges that hamper Penang to be a liveable and creative city. The five main challenges that were highlighted by the respondents should be addressed properly and promptly by the state, private sector and also civil society in making Penang a better and more liveable and creative place in the world.

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References

- AJC Planning Consultants Sdn Bhd, Halcrow (A CH2M Hill Company) and Singapore Cruise (2011) *Penang Overarching Transport Master Plan Strategy*. George Town, Penang: Anonymous.
- Anonymous (No date) [cited June 1, 2013]. Available from: ECA International: <http://www.eca-international.com/home>.

- Anonymous 1 (2011, February) *Pocket guide*. [cited May 18, 2013]. Available from: Metro Shuttle Free Travel In Manchester City Centre: <http://www.tfgm.com/Corporate/Documents/Information/Manchester-Metroshuttle.pdf>.
- Anonymous 2 (No date) *Singapore's successful long-term public housing strategies*. [cited May 10, 2013]. Available from: IFHP FIHUAT IVWSR: <http://www.ifhp.org/ifhp-blog/singapore%E2%80%99s-successful-long-term-public-housing-strategies>.
- Anonymous 3 (No date) *My First Home Scheme (Skim Rumah Pertamaku)*. [cited May 10, 2013]. Available from: REDHA Institute: <http://www.rehdainstitute.com/landed-or-high-rise/83.html>.
- Aziz NA, Hadi AS (2007) Linking urban form to a liveable city. *Malaysian Journal of Environmental Managemeng* 8, 101-105.
- Chua R (2012) George Town a work in progress. *Penang Monthly*, pp.28-31.
- Chua YP (2013) *Asas statistik penyelidikan analisis data skala likert edisi kedua*. McGraw-Hill.
- Florida R (2002) *The rise of the creative class: And how it's transforming work, leisure, community and everyday life*. Basic Books, New York.
- Florida R (2008) *Who's your city? How the creative economy is making where to live the most important decision of your life*. Basic Books, New York.
- Friedman TL (2006) *The world is flat*. Penguin Group, England.
- Fuscaldo D (2013, February 22). *8 great places to retire abroad*. [cited May 14, 2013]. Available from: Yahoo! Finance: <http://finance.yahoo.com/news/8-great-places-to-retire-abroad-175538395.html?page=1>.
- Goh BL (2012, September 20). *Making a city liveable is no easy matter*. [cited July 5, 2013]. Available from: Penang Monthly: <http://penangmonthly.com/making-a-city-liveable-is-no-easy-matter/>.
- Invest Penang (2010, March 10) *State government's efforts to maintain economic resilience in Penang*. [cited November 20, 2012]. Available from: Invest Penang: <http://www.investpenang.gov.my/portal/press-release/1357-state-governments-efforts-to-maintain-economic-resilience-in-penang.html>.
- Landry C (2009) *The creative city: A toolkit for urban innovators* (2nd ed.). Comedia Earthscan, London.
- Macdonald S (2012, January 12) *Housing in Penang*. [cited May 17, 2013]. Available from: Penang Monthly: <http://penangmonthly.com/housing-in-penang/>.
- Penang Institute (2012) [cited November 20, 2012]. Available from: Population: <http://penanginstitute.org/v3/resources/data-centre/122-population>.
- Penang Institute (2013) *The Penang paradigm*. George Town, Penang.
- Rapid Penang (No date) *About us*. [cited May 11, 2013]. Available from: Rapid Penang: <http://www.rapidpg.com.my/about-us/>.
- Socio-Economic and Environmental Research Institute (SERI)(2011) *Penang Economic Outlook 2011*. SERI, Penang.
- Timmer V, Seymoar NK (2005) Vancouver Working Group Discussion Paper. In: The World Urban Forum 2006.
- Tourism Penang (no date) *About Penang*. [cited November 20, 2012]. Available from: Tourism Penang: <http://www.tourismpenang.net.my/index.php/About-Penang/>
- Transport for a Livable City (2002) *The path to a Livable City*. San Francisco: Anonymous .
- Unit MC (2012) *State of Australian Cities Report 2010*.
- United Nations (2012) *Rio+20 The future we want*. [cited March 13, 2013]. Available from: United Nations: <http://www.un.org/en/sustainablefuture/cities.shtml>.
- van Gelder S, Allan M (2006, November) City branding. How Cities Compete in the 21st Century. Place unknown: Placebrands.
- Vinesh D (2012, October 8) Penang records sharp drop in street crime. [cited March 4, 2013]. Available from: Invest Penang: <http://www.investpenang.gov.my/portal/component/content/article/1-latest-news/1982-penang-records-sharp-drop-in-street-crime.html>.
- Wheeler S (1998) Planning sustainable and livable cities. *The City Reader*, pp.434-445. Routledge, London.

World Health Organization (2013) *Urban population growth*. [cited July 5, 2013]. Available from: World Health Organization:
http://www.who.int/gho/urban_health/situation_trends/urban_population_growth_text/en/.