

Essay on bus transportation



Infrastructure is a broad concept linked to every facet of the economy and human life. Accordingly, the list of associated issues is long. For any purposeful analysis of issues in infrastructure development to lead to an action-oriented way forward, it is necessary to narrow down the definition of infrastructure and associated issues. The term infrastructure has been used since 1927 to refer collectively to the roads, bridges, rail lines and similar public works that are required for an industrial economy to function.

Transportation, communication, sewage, water and electric systems are all a part of infrastructure. These systems tend to be high-cost investments. In general, infrastructure is location-specific and cannot be moved from place to place ([www. unescap. org](http://www.unescap.org)).

Transportation infrastructure cannot operate without transportation and transportation cannot run without transportation infrastructure. Different transportations have their own infrastructure to support each other. For air transportation, their infrastructure will be the airport. Port will be the infrastructure for water transportation while infrastructure for land transportation such as public bus will be the bus terminal or bus stop.

Transport infrastructure development in East and South-East Asia has played a key part in the phenomenal growth of world trade. The infrastructure backbone for international trade has been the container shipping network and increasingly the airfreight network. World container port traffic, which expanded by 9.2 per cent to 266 million TEUs in 2003, is dominated by Asian countries. They accounted for 46 per cent of container ship operations, 62 per cent of container port throughput, and 83 per cent of container ship

building. Twelve major South and East Asian exporters together account for half of the world's containerized exports (www.unescap.org).

Bus terminal or known as bus station is one of the most important transportation infrastructure where buses stop to pick up and drop off passengers. It may be intended as a terminal or station for a number of routes or as a transfer station where the routes continue. It is larger than bus stop where bus stop is usually built at the road side for the bus to stop for a while but not to wait for passengers.

Tel Aviv's new central bus station was officially inaugurated recently, after 26 years of off-and-on construction, legal and financial disputes (Encyclopedia.com). A majority of the Dan and Egged Tel Aviv-area buses are now based at the new station; 5, 000 buses pass through the station daily, carrying some 150, 000 passengers. The station is the largest bus station in the world, encompassing 197, 600 square meters indoors, and 34, 400 square meters outdoors (Encyclopedia.com). The largest underground bus station in Europe is Kamppi Center of Helsinki, Finland completed in 2006. The terminal cost 100 million Euro to complete and took 3 years to design and build. Today, the bus terminal, which covers 25, 000 square meters, is the busiest bus terminal in Finland. Every day, the terminal has around 700 bus departures, transporting some 170, 000 passengers (www.webcitation.org).

Since bus station play a vital role in strengthening the volume of traffic as well as in providing better services to the passenger, the bus service undertakings, specially in the public sector, should come up and encourage

the emergence of the bus station management as an independent discipline in the field of traffic management. (Kulshrestha, 1993, p. 9)

Penang, as most of us may already know, is one of Malaysia's most popular destinations for travelers coming from the local or the international communities (Talk Malaysia 2010). One of the main reasons for Penang to have so many travelers coming and going out annually is partly because there are a lot of interesting places to visit in Penang. Most of the interesting places in Penang are located at mainly around Georgetown and Seberang Perai ([www. talkmalaysia. com](http://www.talkmalaysia.com)).

Therefore, transport infrastructure especially bus terminal or station in Georgetown play an important role in order to pick up and drop off passengers from a destination to another destination. This is because Penang has traffic problem, therefore public transport are used.

Komtar Bus Terminal is the hub of bus services in George Town. All the bus routes of Penang radiates from this terminal. To be exact, Komtar Bus Terminal is not a “ terminal” proper, but rather a bus station, because buses do not actually start from here, but rather, from the Weld Quay Bus Terminal. Nevertheless, most people will know it by that name. At the Komtar Bus Terminal, you can catch buses going to the north, central, south and west parts of Penang Island, as well as some buses that go to the mainland. Among the bus companies that use the terminal includes Rapid Penang, Milan, Transit Link and KGN-Hin. The terminal is located along Lebuh Tek Soon, although buses approach it via Jalan Ria and they emerge from the terminal into Jalan Ria once more ([www. penang-traveltips. com](http://www.penang-traveltips.com)).

As a bus stop user, not satisfied with bus terminal in Georgetown. Some of the same complaint had been made by locals and tourists too. This is because they have the difficulties in determine which bus to ride in order to reach their destination. Therefore, this study is to find out what are the factors which make the tourists satisfied and not satisfied with the bus terminals in Penang. This study also includes, to identify the present condition of transport infrastructure, the cleanliness in the bus terminals and the safety and security in the bus terminals. From these factors, this study is able to conclude what are their expectations towards bus stop in order to let the government make improvement.

1. 2 Statement of Problem

Transport and traffic management have always been a bone of contention for Penang. Many feel that rapid economic development has not been met with an equal amount of attention given to proper traffic management and planning. There are about 1. 4 million vehicles (motorcycles, cars and other vehicles) for a population of about 1. 4 million people in Penang. This is about double the number of vehicles in 1999 (Sympologic, 2008).

For the above reason, public transportation had played a very important role to reduce the traffic in Penang. But without a good infrastructure, public transportation will not be able to run smoothly. There are 2 main transport infrastructures for bus in Georgetown which are Komtar Bus Terminal and Weld Quay Bus Terminal. But, locals and tourists are not satisfied with the bus terminals in Georgetown. This is because there are no proper route information and bus timetable. It is difficult especially for tourists to identify which bus to ride in order to reach their destination. Tourists always have to

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ask the bus driver one by one to ask for the destination. This had slow down the traffic also. Besides, from the observation, the bus terminals are not well-maintained in term of cleanliness and safety.

1.3 Goal & Objectives

The goal of this research is to study tourists' satisfactions and expectations towards bus terminals in Penang.

In order to achieve the above goal, there are some objectives need to be done.

- To examine tourists' satisfactions towards bus terminals
- To examine tourists' expectations towards the bus terminals
- To examine the present condition of bus terminals
- To identify the cleanliness in the bus terminals
- To identify the safety and security in the bus terminals

1.4 Hypothesis

From the objectives above, the below are the hypotheses which had concluded:

- Locals and tourists are not satisfied with the bus terminals.
- Locals and tourists have high expectations on the bus terminals in term of cleanliness and security.
- There is no proper route information or sign board in the bus terminals.
- The bus terminals are not clean.
- The bus terminals are not secure.

- The above hypotheses are made based on my own experiences and observation.

Significance of the Study

This research is able to let the government and private sector to make improvement on the bus terminals in order to let them become truly efficient. From the questionnaires which will be distribute and collected, they able to tell us the satisfaction level and expectation of locals and tourists towards the bus terminals. From their expectation, the improvement can be made. For example by putting up the route information and sign board, locals and tourists able to know which bus to ride to reach their destination. Besides, clean the bus terminals daily so that locals and tourists will feel comfortable and assign more security to secure the bus terminals. When the improvements have made, the locals and tourists will have the chance to use better bus terminals. All these will make the business of the bus increase too.

1. 6 Scopes and Limitations of the Study

The scopes for my research are Penangites and tourists in Penang. Penangites and tourists who are the user of bus terminals are targeted. 80% Penangites and 20% tourists are chosen to carry out this research. In order to complete this research, distribution of questionnaires will be made to these 2 groups of people mentioned above. Besides, observation in the bus terminals will be done by my own selves too.

The bus terminals in Georgetown which would like to research on are Komtar Bus Terminal and Weld Quay Bus Terminal. These are the two popular bus

terminals in Georgetown which crowded by people every day. This is because these are the two main stops which the bus will pick and drop passenger.

There are also limitations for this research. The first limitation is resources. There is very few information on books, journals or articles about transportation infrastructure. The next limitation will be the time. Only 5 months to complete this research. Last but not least, the limitation is the manpower. I am the only one who doing this research.

Chapter 2

LITERATURE REVIEW

2. 1 Transport and Tourism

Page (2005) said that transport act as one of the important that contributed to the international development of tourism.

According to Page (2007), the mode of transport can be one of the main motivations for the tourists to travel. He also said that in the growth of domestic and international tourism, transport is the most critical element in the promotion. He continued said that transport links the tourist from the origin area with the destination area. Therefore it enables the holidaymaker, business traveler and other categories of traveler to purchase the products and experience what they have purchased. He added that transport may be an attraction in its own right. Tourists who travel by road may use public transport or private transport to experience a variety of destinations.

2. 2 Transport and Tourism in Penang, Malaysia

A combination of East and West, Penang continues to grow in modernity but at the same time holding its traditions and old charm. Recently, because of the harmony of multiracial in Penang and the heritage buildings which are well preserved, these make the Georgetown being accorded a listing as a UNESCO World Cultural Heritage Site. Penang, long regarded as the food capital of Malaysia, it also attracts tourists with its beautiful beaches and delicious cuisines ([www. tourismpenang. net. my](http://www.tourismpenang.net.my)).

Transportation in Penang is convenient. You can travel in or out of Penang by the well-connected of road, rail, sea and air. Not only the air and train service is good in Penang but the seaways also offer good transportation. Ferry and seaports are there to create convenient to the people in Penang and Butterworth. Penang ferry is provided by the Penang Ferry Service that connects George Town, Penang and Butterworth. There are four terminals, one on Penang Island (Swettenham Pier) and three on the mainland. Next, railway act as one of the transportation in Penang, but they are not popular due to their low speed. Besides, international flights are available in Penang International Airport which situated in the Bayan Lepas area of Penang, Malaysia ([www. asiarooms. com](http://www.asiarooms.com)).

Goh (2010) said that traffic jams in Penang especially the major roads including Jalan Burma, Jalan Sultan Ahmad Shah, Jalan Jelutong and Jalan Mesjid Negeria re common although the population is small. Outside the city, jams are found even in Bayan Lepas and Telok Kimbar. He added that although the Jelutong Express Way had provided some relief to Jalan Jelutong and Jalan Mesjid Negeri, but the costs to Penangnites have yet to be

calculated, although the highway is touted to be “ free”. He suggested that Penang should follow the example of Curitiba. Curitiba is a city where the people rely on buses to avoid traffic jam. Recently, Rapid Penang buses are introduced for those who do not have car or have chosen not to use their cars.

2. 2 Public Transportation

Zegeer (2002) said that good public transportation is an important to the quality of a community as good roads. According Ramanathan and Parikh (1999, cited in Ramanathan, 2001; Banister and Berechman, 2001; Ramanathan and Parikh, 1999; Eisner, 1991), transport is a vital element for the modern society now and key to sustained economic growth.

But, Ortuzar and Willumsen (2001) argued that the world of transport still face many problems of the past such as congestion, pollution, accidents, financial deficits and so on. They continued said that these problems will not get away until the traffic management improved.

They continue said that the transport problems have spread widely in both industrialized and developing countries. According to them, fuel shortages which are temporarily not a problem, but the increase in road traffic and transport demand has resulted in congestion, delays, accidents and environmental problems well beyond what has been considered acceptable so far. These problems have not been controlled to roads and car traffic alone. They added that economic growth seems to have generated levels of demand exceeding the capacity of most transport facilities. They continue argued that these problems are not likely to disappear in the near future.

They suggested that it is necessary to ensure that a major effort in improving most forms of transport, in urban and inter-urban contexts.

With respect to the quality of prices and services, transport services have been traditionally been subject to tight economic regulation with respect to entering and exiting the market. In many countries, road and rail networks and airport and port systems are traditionally designed, built, and operated by the public sector itself, which is the ultimate form of regulation. This type of government intervention has resulted in excessive costs that are not matched by prices or quality, therefore creating an outcome that reflects the interests of the sector's civil servants of contractors, unions, and other interests groups more than preferences of users and taxpayers (Estache and Rus, 2000).

According to UITP (2004), government and public transport share a same goal to make sure the public transport is accessible to all especially the traffic environments have to be well-designed and managed to let the people to reach and use public transport safely and with confidence. UITP suggested that government and the public transport community to work together to reduce not only the physical but also the psychological barriers such as cognitive, information, fear and discrimination to travel safely in cities.

UITP continues said that at any one time, an average of 25% of the population may have a degree of reduced mobility due to a physical or mental disability, impaired sight or hearing, or through having to carry heavy bags or travel with small children. UITP added, physical and sensory disabilities are often related to age and, as is well known, the proportion of

the elderly population in western countries is growing and will continue to do so well into the 21st century. These are clear of the importance of improving accessibility to transport systems. According to UITP, benefits from improvements in transport accessibility are accrued not just to the disabled and ageing communities, but to all clients of the transport system.

2.3 Transport infrastructure

Traditionally, building extra capacity has been addressed due to the blockages in transport infrastructure. But the possibility is small for the further expansion of infrastructure in many urban areas where the demand for transport is highest. Furthermore, a number of reports have found that the construction of new roads and airports to relieve congestion is ineffective because it only serves to induce new traffic. On the other hand, a study undertaken by a Norwegian research organization, the SINTEF Group claims that infrastructure capacity increases are directly linked to decreases in polluting emissions from motor vehicles. Using a traffic micro-simulation, it showed, for example, that upgrading narrow, winding roads or adding a lane to a congested motorway can yield decreases of up to 38% in CO₂ emissions, 67% in CO emissions and 75% in NO_x emissions, without generating substantially more car trips (EurActiv. com, 2008).

According to Cárcamo-Díaz and Goddard (2007, cited in IADB, 2000), Infrastructure, defined as the set of engineering structures, equipment and facilities with a long-term, useful life employed by households and the different productive sectors of the economy, is essential for economic growth (cited in Easterly and Serven, 2003) and integration. As pointed out by IADB (2002), there is a positive relationship across countries between income

levels and the quality of infrastructure. According to Tanzi (2005), the implicit assumption about the direction of causation goes from infrastructure to growth, although this issue is still debated in the literature.

In many cases, the objective of transport infrastructure investment is to improve the accessibility of a given region by reducing travel time or increasing the potential to travel. Accessibility can be measured as the quantity of economic or social activities that can be reached using the transport labor, leading to increased competition and centralization. On the other hand, the impact for region concerned could be both positive and negative, depending on its initial level competitiveness (OECD, 2002).

According to ITF and OECD (2008), there are some features of surface transport infrastructure that make its provision distinct from many other areas of the economy and which will likely have to be accounted for when different models are being considered. They claimed that transport system does not exist for their own sake but rather to serve other economic and social activity, this is because transport is a ‘ derived demand’. This means that the possible wider implications of capacity shortages in, and overall standard of, the transport system, must be taken into consideration in the design if any model for providing transport infrastructure.

2. 4 Transport Infrastructure in Different Countries

2. 4. 1 Luxembourg

The pressure of congestion, excessive strain on transport infrastructure and environmental have led to a challenge due to a large and increasing number of commuters (OECD, 2008c). These pressures stem from both resident and

cross-border commutes, which are broadly similar in number. High and increasing number of commutes among residents is reflected in Europe's highest car ownership rate and one of the highest annual distances covered by automobile per capita. For cross-border commutes, 85% are made in passenger cars without use of public transport. These patterns lead to alarming levels of congestion on the main road transport corridors and there are now severe bottlenecks at the entrance to urban areas, notably in the city of Luxembourg. This results in wasted time, unsafe driving conditions, noise and high levels of emission and local air pollution (OECD, 2010).

2. 4. 2 France

According to Willis (2010), the transport infrastructure in France is one of the most modernized to be found anywhere in Europe and this makes international freight movements streamlined and effective. In the area of modern tramways, France is a world leader in railway technology. Rail transport is therefore always a best option for shipping companies and freight forwarders operating in France. The transport network is built as a web, with Paris at the center. There is a total of nearly 32, 000 kilometers of track in France, most of which is operated by the French railway company, SNCF. Over the last twenty years, a set of high speed LGV (lignes a grande vitesse) have been constructed to connect most parts of France with Paris. There are same gauge rail links to adjacent countries of Belgium, Germany, Italy, Luxembourg and Sweden, as well as the Channel Tunnel link with the UK. The TGV, the French high speed train has broken world speed records is a sign of the way that France is a true global leader in rail transport. For freight transport, rail is a model in France.

2. 4. 3 Germany

According to Willis (2009), Germany has a transport infrastructure that is the envy of the world and this has helped enable the development of a highly effective freight services industry. The phrase ‘Germanic’ is often used as a byword for efficiency and with good reason, if the freight services industry in Germany is seen as a measure. He continued said that when consider that it is less than twenty years since the Berlin Wall came down and East Germany started its process of integration within Germany, the efficiency of the transport network throughout the country is all the more remarkable. There is a very efficient network of waterways, railways and motorways that make internal connections fast and straightforward and also connect Germany with other countries throughout the world.

2. 4. 4 Middle East

Timon Singh (2010) claimed that the Middle East and North Africa region has invested heavily in its transport infrastructure and for the likes of the UAE in particular over the past few years. He continued claimed that the money has gone into planes and trains in order to better improve between states, but to turn the region into both a business and tourist hub. Air traffic in the Middle East is the fastest growing in the world, and in order to cater for the increasing number of passengers at their various airports and thus improving their general transport infrastructure, the UAE has been implementing various aviation projects.

According to him, rail is another part of the region’s transport infrastructure that has gathered support in the Middle East from Dubai’s Metro System to plans for an expansive network connecting the GCC states. Qatar and

Bahrain have one of the most ambitious projects, combining both rail and metro lines, which is set to transform the emirate into a major transport hub. The project, which is rumored to be costing over US\$36.6 billion (QR133.5 billion) and estimated to take six years, is expected to be finished in phases over the next six years, with three major sections being the focus of the scheme – the metro network within Greater Doha, the over-ground railways covering the whole of Qatar and then, linking it to the rest of the GCC region and cargo trains.

2. 4. 5 London, United Kingdom

McDougall (2010) asked how do cities meet the needs of a growing population, promote diverse and healthy communities, improve the environment and tackle climate change. The answer is it's a tall order and one that London is tackling head on with their aptly named “ London Plan”. He said that the London Plan sets out to ensure that London's transport is easy, safe and convenient and encourages cycling, walking and electric vehicles. The ambitious plan sets out the overall strategic direction for an integrated economic, environmental, transport and social framework for the development of London over the next 20-25 years.

He continues said that the London Plan identifies what are termed “ Opportunity Areas” in and around London's major reservoirs of brown-field land. These areas are characterized by their potential to accommodate new housing, commercial and other development linked to existing or potential improvements to public transport accessibility. It is important to make sure that they can be developed without undue additional pressure on London's

already-crowded public transport, or on the limited funds available for anything beyond committed transport improvements.

2. 4. 6 India

According to Pradhan (2010), transport is a key infrastructure in the present study, as causes energy consumption as well as economic growth in India.

Therefore, he suggested that increasing transport facility along with energy consumption will lead to more economic growth in India. The achievement of higher economic growth through transport infrastructure and energy consumption could be due to its various direct and indirect benefits in the economy. But he claimed that the level of transport infrastructure is not so good, both in quantity and quality, in contrast to developed countries in the world. He suggested that if there is sufficient transport infrastructure in the economy, the result would be much better. He continued suggested that a suitable transport policy should be required urgently to boost economic growth and to maintain sustainable economic development in the country since transport infrastructure is a big deal to economic growth.

2. 4. 7 Malaysia

The greatest advantage to manufacturers in Malaysia has been the nation's persistent drive to develop and upgrade its infrastructure. Over the years, these investments have paid off and serious bottlenecks have been avoided. Today, Malaysia can boast of having one of the well-developed infrastructures among the newly industrializing countries of Asia (www.mida.gov.my).

The latest development of Kuala Lumpur Sentral has become a futuristic self-contained city, providing the perfect live, work and play environment. A

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modern transportation hub integrating all major rail transport networks, including the Express Rail Link to the KLIA and Putrajaya, the government's new administrative center. Besides, the Peninsular Malaysia's network of well-maintained highways is a gain to industries. These highways link major growth centers to seaports and airports throughout the peninsula and provide an efficient means of transportation for goods. (www. mida. gov. my).

Malaysia's central location in the Asia Pacific region makes her an ideal gateway to Asia. Air cargo facilities are well-developed in the five international airports – the Kuala Lumpur International Airport (KLIA), Penang International Airport and Langkawi International Airport in Peninsular Malaysia, Kota Kinabalu International Airport in Sabah, and Kuching International Airport in Sarawak. Malaysia's biggest airport, the KLIA, surrounded by four main cities of Kuala Lumpur, Shah Alam, Seremban and Melaka has a capacity of handling 25 million passengers and up to 8 million tons of cargo per year. Cargo import and export procedures are fully automated at the KLIA to cut down delivery time (www. mida. gov. my).

Recently, Rapid Penang has introduced a state-of-the-art Intelligent Commuter Information System (ICIS), which provides real-time information on the arrival times of buses at terminals in Penang. The ICIS system, the first of its kind used by stage bus companies in the country, would enable some 75, 000 commuters who use Rapid Penang buses daily to plan their journey more efficiently. It proved to be a success and has since been expanded for usage at the Komtar bus terminal, which sees the highest number of people boarding buses daily. A total of 200 buses operate from <https://assignbuster.com/essay-on-bus-transportation/>

the Komtar bus terminal on a daily basis. The ICIS display system uses global positioning system (GPS) to map out the movement of all Rapid Penang buses and calculate the exact time of arrival of each bus at the Komtar bus terminal. The ICIS display system will later be extended to other strategic areas throughout the state including the possibility of having it installed in shopping complexes (newstraitstimes, 2010).

2. 5 Bus Stop and Bus Terminal

There are bus stops all over the Penang and there are three main bus terminals for buses in Penang, Malaysia. They are Weld Quay Terminal, Komtar Bus Terminal and Sungai Nibong Terminal. According to Zegeer (2002), a well-designed transit routes a reachable stops are essential to usable system. He continues said that bus stops should be located at intervals that are convenient for passengers for safety purpose and should be comfortable places for people to wait.

UITP (2004 cited in Grenoble, 2004) argued that if the related infrastructure is inaccessible or inappropriately designed, much of the accessible vehicles will lost. Grenoble has carried out extensive research and development work to design tram and bus stops, starting some 20 years ago. The principle adopted by Grenoble was that the bus services should be made as accessible as the tram. According to Grenoble, the design standards found to be most effective for accessible bus stops were 14m(standard bus) and 20m(articulated bus) for overall length of bus boarding platform, 2. 1m(minimum) and 2. 6m(if a shelter is provided) for overall breadth of boarding platform, 3% for gradient of access ramp at end of platform, 21cm for height of boarding area, 60cm back from front edge of boarding area for <https://assignbuster.com/essay-on-bus-transportation/>

safety line and 1. 1m(minimum) and 1. 3m(preferred) for clear space between front end of bus shelter and front edge of boarding area.

Zegeer (2002) said that besides the bus stop signing, a bus shelter with seating, trash receptacles, and bicycle parking are also desirable features. He suggested that bus stops should be highly visible locations where pedestrian can reach them easily by means of accessible travel routes. Therefore, a complete sidewalks system is essential to support a public transportation system. Convenient crossings are also important.

He continued suggested that proper placement of bus stops is key to user safety. For example, placing the bus stops on the near side of intersections or crosswalk may block pedestrians' view of approaching traffic, and approaching drivers' view of pedestrians. Approaching motorists may be unable to stop in time when a pedestrian steps from in front of a stopped bus into the traffic lanes at the intersection. Far-side bus stops generally encourage pedestrians to cross behind the bus. Reallocating the bus stop to the far side of the intersection can improve pedestrian safety since it eliminates the sight-distance restriction caused by the bus. Placing bus stops at the far side of intersections can also improve motored vehicle operation.

Besides, he also suggested that the bus stops should be fully accessible to pedestrians in wheelchairs, should have paved connections to sidewalks where landscape buffers exist, and should not block pedestrian travel on the sidewalk. Adequate room should exist to operate wheelchair lift. Yet, it is also useful to install curb ramps at bus stops so that a passenger can board from the street if bus-lift deployment is blocked.

According to Iles (2005), problem may arise at bus stations which are used as intermediate stops for buses passing through the town or city when services are operated to schedule. Iles gave an example on when a full bus with a few passengers drop enter the station, they have the capacity to pick up same number of new passenger, but through services always delayed by having queue while other buses, some of which may be commencing their journeys at the station, load first. For this reason, in some countries, illegally in some cases, long-distance buses do not call at all bus stations on