

The relationship between public transportation and city planning in Thailand

The choice for people to choose to travel, whether the personal car, the public transportation, or the alternative choice of transportation are all related to the city planning. Thailand has various choices of public transportation, by land, by air, or even water transportation. All of them are further categorized to suit the specific area and condition. However, the decisions we made are the effect of the transportation and the city planning. The choice we make is to sacrifice something, if we want to save our time, we might have to spend more money for the transportation choice, or if we want to save money, we might have to prepare more time in travelling.

Public Transportation in Thailand

The government in every country has the duty to provide public transportation to citizens in the country. The public transportation in Thailand has various enterprises provided either by private companies or the state-owned enterprise. These can be roughly separated to transportation by land, by air, and water transportation and will be different in each area. People in Thailand mostly travel by using the personal transportation, car and motorcycle. However, not every person can afford it. Bangkok is the capital city of Thailand, it is the main transit for the logistic, economic, and other activities. The transportation by land can be further categorized to rail rapid transit system, railway, public bus service and other public transportation services. The rail rapid transit system consists of Bangkok Mass Transit System or BTS, Metropolitan Rapid Transit or MRT, and Suvarnabhumi Airport Rail Link connected to the airport. All rail rapid transit systems are state-owned enterprises or SOEs which means the government has partial ownership in that business, some businesses might bear too much cost for either the private firm or the government, so it is better to cooperate between the private sector and the public sector. Another transportation that the government provided is the public bus service called Bangkok Mass Transit or BMTA, operated only in Bangkok and suburban provinces which are Nakhorn Pathom, Nonthaburi, Samut Sakorn, Samut Phrakarn, and Pathum Thani. However, not all of the public bus service is owned by the public sector, BMTA allowed the private company to launch the bus service in the same route. Thai government also launched Bus Rapid Transit or BRT in Bangkok, this business also state-owned enterprise operated with Bangkok Mass Transit System Public Company Limited who operate the BTS skytrain. The railway or the train mostly used to travel to the nearby province, yet not cover all parts and all provinces in Thailand. The railway is the state-owned railway enterprise from the State Railway of Thailand or SRT. The main hub for the service in Bangkok is Hua Lumphong station. The alternative choice for people who do

not want to use train is public bus service or บริษัท. which is also another state-owned bus company. Other popular transportation for Thai people are registered taxis, vans or minibuses, motorcycle taxis, songthaews and tuk-tuks. Thailand also has lots of canals and a main river which is Chao Phraya river. Thai people also use these as the main transportation which are Chao Phraya express boat, ferries, long-tailed boats and the Khlong Sean Saeb boat service. Each service targeted different areas. The transportation by air can be either domestically and internationally located in specific areas, the main airports in Bangkok are Suvarnabhumi airport and Don Mueang international airport.

City planning in Thailand

Cities can be distinguished for various purposes such as the industrial purpose, the agricultural purpose, and the residential purpose. For the past several years, Thailand has increased the urban area, people in the rural area choose to enter the industrial area instead of stay in the agricultural sector. According to Statista, the share of urbanization in Thailand or the share of population in the industrial sector over the total population, has gradually increased in the past ten years. Compare the urban area in 2009 to the urban area in 2019, the urbanization in Thailand has significantly risen, from 42.54% to 50.69%, or more than half of the people in the country live in the cities (Figure 1). The population in Thailand is approximately 69.83 million people in 2020 and more than 5 million people live in Bangkok (Worldometer, 2020). People that migrate from the rural sector mostly migrate into Bangkok, the expansion of urbanization in Thailand partially is the increase in share of population in Bangkok. Compared to other countries in ASEAN, Thailand has an increasing rate in expanding urbanization. Since 2009, the Philippines had a higher share of urbanization until 2012, Thailand has developed the city area more than the Philippines (Figure 2).

For the brief history of Thailand country planning, before the Siamese revolution in 1932, the king or the monarch had the absolute power to decide in developing the infrastructure. Until 1952, there was the first town planning act which was the town and rural planning act B.E. 2495, which aim to be the project that the king does not have the absolute power in decision. The city infrastructure project will be approved from the minister of interior instead. In 1957, Thai government contracted Litchfield Whiting Bowne & Associates to system the city, their city plan was called Greater Bangkok Plan B.E. 2533 or the Litchfield which was the comprehensive plan consisted of land-usage plan, logistic and communication plan, and the public utility project plan, further develop to the current version of the city planning.

Relationship between the public transportation and city planning

The city planning and the transportation we choose can affect our decision making. According to the Texas A&M transportation institute, the traffic congestion can affect people's decision making, plan, and economic activities that cost so much in either monetary terms or non-monetary terms. People have to prepare more the actual time relative to the traffic conditions, without the traffic, time can be saved more than half time spent on the exact same distance with the traffic cognition. Not only is the driver's time wasted, the driver's money and fuel also wasted. With the heavy traffic condition, the aggregate fuel wasted can be calculated for more than billions gallons, the time wasted in the car is the trade off of the economic productivity and the time spent on waiting, this costing billions of dollars of national income that is spent for nothing on the road. There are also other invisible costs wasted.

The government should provide mobility in transportation for the citizens, providing the choice for people to choose which one is the public transportation choice they prefer. Not every person in the country can afford the personal car, it is not just the cost of the car but also the repairing cost, the maintenance cost, fuel, and other details. Public transportation also should not be the only choice for the people who do not have a personal car, the city should provide space for people to walk, to run, and to cycling. The most important thing is all places can be accessed by everyone and everywhere. Everything has to be connected. The government who design the city planning can use the mixed-use development, combine the road for the private car and the public car with the space for other mobility options. Expanding the choice of transportation for the citizens. The relationship between urbanized city planning, transportation, and institutions is that if the institution or the government has the project to build something and they build it, people will follow and use that thing. If the government wants to promote the private car, and urge people to use their individual car, the government announced the policy in supporting the driver, conducting the project to build more roads, people will buy more cars and use it. Or if the government wants to support the alternative transportation choice, the government launched the policy to support the green energy used or support cycling, and have the project to expand the bike path, people will tend to use more bicycles because of the city planning that support the use of it. Moreover, the transition from one place to another is also important, this is the connectivity in the city. For example in Thailand, the transit station of the BTS skytrain system is at Siam station. The Siam station is now the main station where every economic activity occurs here because most of the people can easily access. If the government supports other parts of the country to have the transition between one province to another province, the business

activity and urbanization will follow. On the other hand, if the government discourages people to use alternative choice instead of the personal car, it is hard for that country to develop every province equally.

Good city planning, accessible and various transportation can also lead to physically and mentally healthier. The accessible road to small streets also help the small shop and local business, they will be more exposed and found by the tourist which leads to increase in that shop revenue, government revenue, and national revenue. Most people also separate the residential area and the work area. The good city planning should provide the minimum time on travelling either from the private car, the public car, or the alternative choice of travelling. Not only should we expand the quantity of the accessible area to public transportation, the government also should adapt the new technologies to increase the quality of the vehicles.

Problem of Thai public transportation and city planning

During the rush hours, before the work starts and after the work, everyone has to prepare twice of the actual time, reserve for transport either the private car or the public transportation. Some of the public transportation such as public bus service and railway systems also are perceived that they are inefficient and insecure. The government is also not funded in the public transportation enough even these businesses are state-owned enterprises which means the government also part of the ownership. Some businesses face a deficit in the balance sheet. Some businesses have the technical problem during the rush hour. Some businesses are monopolized and charge too high mark up prices, pushing the burden of the gap to the customers. In the previously mentioned, the share of urbanization in Thailand has increased over the years but the expansion of public transportation is not at the same rate. Not only the lack of expansion to rural areas, the public transportation in Thailand also lacks connectivity. To transit between one type of public transportation, people have to switch the registered card which is not convenient to the customers. Not only the quality of the bus, but the quantity of the bus also does not match with the user demand. The customer cannot track the bus how much time is waiting for the new bus.

Charin Gatenark, the laboratory mechanical engineer of the department of land transport suggested that Singapore's technology that can be adapted to Thai's public transportation is that the technology which can access to the route information and time schedule. This technology should be supported by the government for the state-owned enterprises and the government should control the price for the public transportation so that the monopoly should not charge too high mark up.

Conclusion

To conclude, the transportation, the city planning and the institution are all related and all of them affect our decision making. If the government supports the city plan and public transportation through the policy launched, this will be beneficial to the citizens in the country. The policy that support should be done continuously, the good city plan will lead to healthier physically and mentally, moreover, the promote and increase the usage of public transportation will reduce the carbon dioxide emissions and reduce the pollution.

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Appendix

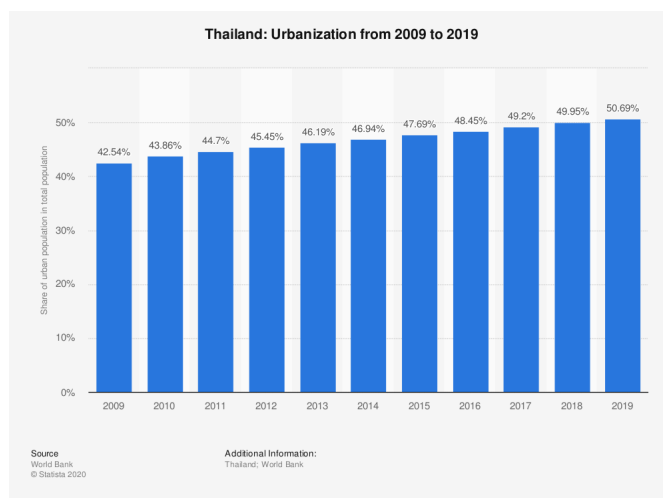


Figure 1 : Thailand Urbanization from 2009 to 2019

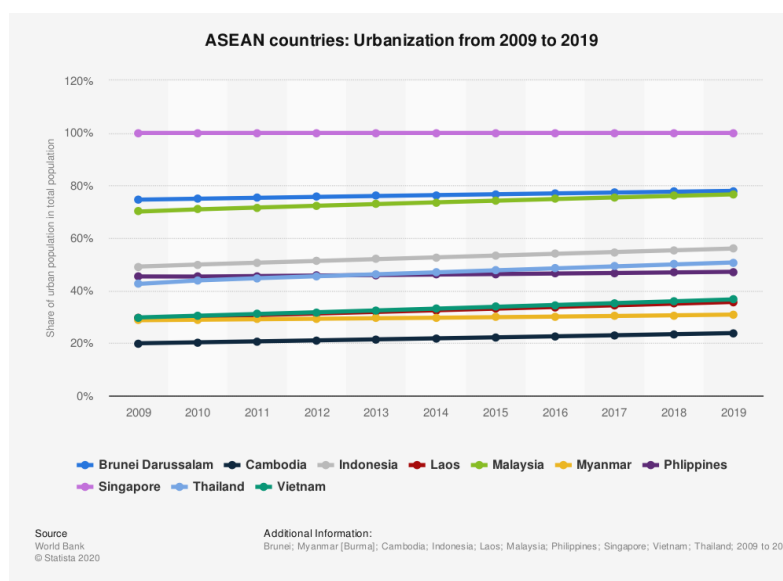


Figure 2 : ASEAN countries: Urbanization from 2009 to 2019