

CHAPTER TWO

REVIEW OF LITERATURE

In order to understand the people's concerns about public transportation, this chapter reviewed the literature on the concept of Public transportation services along with the related research. It also included a review of the concept of transportation improvement conducted in other countries for better insights into public transportation in Thailand.

Public transportation

Transportation relates to a country's stability in that it creates social activities in both economic and governance spheres. Regarding the relation of transportation to the economy, it plays an important part in satisfying the needs of society. People produce goods and services for actual use, for the accumulation of a reserve, or for the exchange of other goods and services. As the cost of transportation decreases, goods can be transferred from more distant points with an expenditure of less time and effort, since a reduction in transportation costs reduces total costs at destination. Increased speed of transportation and decreased transit times enable a distributor to estimate the business process more quickly because of the short distance from manufacturer to final process. For the governance relationship, transportation is essential to the successful operation of the economic system and is considered essential to the public interest of the nation. Fare control must be guarded through the control of maximum rates and unjust discriminatory practices (Mossman & Morton, 1957).

Public transport is the primary form of motor transport that serves people who do not travel in their own vehicles, especially in developing countries where private car ownership is considerably expensive in terms of the high cost of parking, fuel consumption, maintenance and so on. Public transportation has become the practical option for people who travel long distances compared with walking and (motor) cycling which are not viable for this purpose. Generally, public transportation often

takes the form of omnibuses that may follow fixed routes on a non-reservation basis. The majority of transit passengers travel within a local area or region between their homes and places of employment, shopping, or schools.

Regarding the aspect of fuel conservation, public transport is the alternative mode provided by the authorities to people who use private cars. Changes in gasoline prices have caused fluctuations in the share of the total urban travel market in many countries including Thailand; the share of private car use increases when fuel prices stabilize but decrease in periods of fuel crisis. In the U.S. in 1970 - 1990, the number of work trips made by solo drivers increased doubled while the number of work trips made by other means of travel declined slightly during the same period. Public transit has become an alternative mode of travel that government has developed to solve the problem of fuel consumption by private automobiles and to facilitate the movement of people for various journeys (Ferguson, 2000).

According to The Department of Local Administration, 2006, the population of Bangkok was 5,695,956 in 2006; thus public transit has become a fundamental necessity for people who do not have their own vehicles while traveling within metropolitan areas. The study indicated that public services are offered to the public based on the principle of equality while private services on the other hand are based on differentiation (Andreassen, 1995). But according to the increasing numbers of the middle-class population in Bangkok Metropolis, public transportation has been continuously developed to respond to the endless demand. In Bangkok, public transportation are in form of buses, BTS, MRT and other vehicles operated by private parties; such as mini-buses, mini-vans, and vans, which people choose as alternatives when public transport is not sufficient. The overwhelming demands of people who make use of transportation services encouraged the government to develop transportation systems to solve the insufficiency. Consequently, transportation development causes problems of traffic congestion and traffic violation that cause drawbacks to people. As the main purpose of people who use public transportation is to travel within commercial areas or central areas that are surrounded by important landmarks and business buildings and also within residential areas where their habitats are located, this affects the traffic in those areas causing it to become congested a reduction in rapidity. The government tries to manage the public transit

system by expanding extra routes the cover most areas of Bangkok, building express ways and cross-intersection bridges, and especially increasing the number of public vehicles in order to facilitate the movement of people. Anyway, these actions have produced side effects to the city that have increased traffic congestion and pollution; air and noise pollution (Ph.D. Somkiat Athikomchaikul, 2005).

As most major transportation facilities are built by the public sector for use by the private sector, they call for user fees as the basis of their market mechanism. For some kind of transportation system like BTS and MRT, or even air-conditioned buses, people are called on to pay costly fares for the trip's convenience. The limitation of transport fares restricts passengers who cannot afford the fare to switch to lower cost transportation (Tangpaisalkit, 2007). From the theory of rate-making of Mossman & Morton, the pricing system in transportation depends on two elements which are the cost of service or the operation cost and value of service that passengers are willing to pay for the transportation. The value of service affects people's decision making on whether to use or not use public transit. In Travel demand management and public policy, Ferguson said that the conditions affecting passengers to decide which carriage is most suitable for them depends on physical characteristics, social status or credit, and the urgency which individuals count as crucial issues at that time (Ferguson, 2000).

Considering customer satisfaction towards public transportation has becomes crucial task for government authorities and private operators in order to evaluate the service outcome and improve overall quality. Customer satisfaction is an essential factor to optimize service provided to users of the transportation system. To publicize the performance of transit systems, the attitudes of people who are the main customers of the system need to be observed. Cleland stated that studying the satisfaction related public transportation could provide comparative data to identify the components of service whether they meet minimum levels of customer satisfaction and for which significant improvements would have the highest probability of increasing overall customer satisfaction. And it also provides profiles of satisfied and dissatisfied customers (Cleland, 1999).

However, the problems caused by economic development and policy implication also affect public transportation management and that leads to

dissatisfaction of people. From an empirical study in India, it indicated that with the severe and continuing resource problems besetting the economy, and with the pressure on policy makers to increase economic growth, there is a need to privatize public transport for the purpose of expanding investment (R.K. Mishra, R. Nandagopal, 1993). This action affected the satisfaction drop off in that the transportation operated by the private sector provides a poorer service quality than ones managed by government agencies due to commercial concerns.

According to the Public transportation organization of the U.S., public transit system development should get along with well-organized facilities. In the journal on the topic of Unleash the power of public transportation, the suggestions for public transportation improvement are recommended to attract larger numbers of passengers. The considerable suggestions focus on changes in policy application and people's behavior.

In governance policy, public transportation should be prioritized as part of the decision-making process when government or state is considering new public facilities and when project developers are proposing new commercial projects. When a public transit system is developed to serve a combination of residential and for commercial use, it will help reduce vehicle trips and increase passenger's satisfaction toward public transportation so that passengers do not have to depend on their cars. The mixed-use communities were to combine residential components with retail, office, parking and public transit stop point within easy walking distance of each other. This can solve the problem of traffic congestion and drawbacks from pollution. Considering the locations of buildings and public transportation routes is helpful for authorities when they develop transit system for the purpose of mixed-uses.

The public transportation organization in the U.S. found that the outcome of governance policy making relationship between public transit and facilities brings satisfaction to residents. Making shortcut to public transit station; like wide and appealing sidewalks, interconnected streets between residential areas and transit station, is considered favorable to passengers in that it provides them with optional routes and shorter walking distances. Advertising is important to boost satisfaction in public transportation. The authority working in public transit systems should update the advantages and special promotions for people who go to destinations by public

transit in order to increase the number of trips (Public transportation organization, 2006).

Traffic congestion is a result of too many vehicles crowding available road space along with a lack of alternative travel options. Traffic congestion is the crucial factor that reduces people's satisfaction in traveling. Mary E Peter stated that traffic congestion reduces the number of vehicles on the road and vehicle miles traveled. This leads the decline of trips made by passengers. Public transportation provides alternative choices to people who have their own cars to make a trip conveniently while reducing the numbers of vehicles. Thus, where public transportation is available, it makes roads work better. To relieve congestion, investment priority must shift toward dramatic expansion of high-capacity public transportation systems, including light rail, heavy rail, commuter rail, bus rapid transit (BRT), express bus services and transit/high occupancy vehicle (HOV) lanes. These improvements must be supported with targeted investments and better management of the current highway network (Peter, 2007).

A study by the American public transportation association in 2007 found that public transportation saved \$18.2 billion in additional congestion costs. In the 13 largest areas of the 85 urban areas studied, the average savings is almost \$1.2 billion annually. Without public transportation, congestion would have increased by 27 percent.

The report concluded that without public transportation:

- Congestion delays in these 85 areas would have increased 27 percent.
- Residents in the major urban areas studied would have lost an additional \$18.2 billion in wasted time and fuel. Public transportation is one of the best ways that major urban centers can fight congestion. Public transportation reduces the hours of delay in major travel corridors. Public transportation use reduces delays for both public transportation riders and highway users. According to a Federal Transit Administration (FTA) study of six urban corridors served by high-capacity rail transit:
 - Public transportation passengers saved 17,400 hours daily over auto travel in the six corridors.
 - Remaining road users in the six corridors saved an additional 22,000 hours of delay per day due to the absence of vehicles from public transportation users.

Travelers on surrounding roads in the corridors saved an additional 20,700 hours daily as spillover congestion was reduced. These reductions represent an annual savings of \$225 million in the six corridors analyzed.

Although public transportation provides many benefits to society; its development brought economic growth and helped ease the problem of traffic congestion caused by private car uses, public transportation can be a drawback the outcomes relating to pollution and landscape (Ph.D. Somkiat Athikomchaikul, 2005). This may reduce the satisfaction of people towards public transportation service.

The Attitude of people can be described following the theory of Belief, Attitude, Intention, and Behavior (Fishbein & Ajzen, 1975) that the definition of attitude refers to behaviors that are consistently favorable or unfavorable. It means attitude is relating to evaluative consistency. Different behaviors at different points of time may not affect people to respond in a consistently favorable or unfavorable manner with respect to a given object.

For example, traveling by BTS, buying a 30-day card, paying attention to special promotions provided by BTS, are some of the favorable behaviors with respect to transportation that a person may like. On some occasions, a person may be observed performing some of these behaviors and refusing to perform others. Although, the person may perform different behaviors on different occasions; like travelling by omnibus on weekend, the degree of favorability toward BTS expressed by his behavior may remain constant.

Attitudes are predispositions. Attitude refers to the overall favorability of behavioral pattern. Predispositions to respond in consistently favorable or unfavorable ways are assumed to be the result of past experience; like behavior or knowledge.