

Chapter 2

An Overview of Bus Service Operators in Bangkok

2.1 Transportation in Bangkok

This chapter starts with an explanation of the background of transportation in Bangkok and transport policy. The modes of transportation, namely boats, tricycles, taxis, Bangkok Mass Transit System (BTS) and Mass Rapid Transit Authority of Thailand (MRTA) will be discussed. After that, the organizational structures and management of Bangkok Mass Transit Authority (BMTA) and private operators will be discussed.

Bangkok is the capital city which has the populations of 5,710,883 persons in 2008. Bangkok's transportation infrastructure can be generally characterized by a very low proportion of space devoted to roadways (not more than 10% in the inner core). A road network depends on a limited number of major roads with only a few connecting links, particularly outside the grid network in the central area of the city. The remaining road network, consisting of a discontinuous jumble of minor streets or "sois", is typically narrow, winding and has poor system continuity (World Bank, 2007). The net result is a supply and configuration of road space that is unable to cope adequately with existing transport demand. Travel speeds have declined and that made the cost of travel become too high.

Bangkok used to have an extensive network of bus lanes developed in the 1970s and have been modified with the major change to the one-way traffic system by the policy in the early 1980s. As congestion has grown up, bus lanes have been abandoned or police allowed private cars use bus lanes to compromise the traffic. Road networks rely too much on primary roads with excessive traffic congestion. A large fleet of aged, inefficient and polluting trucks and buses continues to operate which reduces economic efficiency and harms human health (World Bank, 2007).

In the past, there were many ways to travel in Bangkok and metropolitan areas such as buses, tricycles, small motor tricycles, automobiles, and taxis. It could be seen that bus services are one of the crucial public transportation in daily life of

people in Bangkok for a long time. Unfortunately, the congestion of traffic especially in rush hours is one of the huge problems on this capital city of Thailand that need to be solved.

The crucial factor which causes congestion problem in Bangkok is the incredibly increasing amount of private cars and others, while roads cannot expand enough to support the number of vehicles. The vehicle fleet expands at an approximate rate of over 5% annually (Table 2.1). In addition, accident on the road and migration of people from other provinces of Thailand to the capital city create more congestion problems on the road in Bangkok.

Table 2.1
Cumulative Vehicles in Bangkok during 2004 – 2008

Unit: thousand units

Type of Vehicle	2004	2005	2006	2007	2008	Average Annual Growth (%)
Private Car	6,377	6,935	7,881	8,313	8,740	6.6
Motorcycle	13,206	14,548	15,650	15,961	16,264	4.3
Bus	106	107	114	120	125	3.2
Truck	684	716	718	747	771	2.4
Others	248	262	442	474	515	17.9
Total	20,624	22,571	24,807	25,618	26,417	5.1

Source: Department of Land Transport.

Note: Buses includes minibuses, public vans.

As a result of traffic congestion, bus services in Bangkok have to face with many problems, such as slow operation speed on the road which affects reliability of services, falling productivity of the fleet that contributes to the vicious circle of passenger losses, and leads to higher cost of operation and declining service standard (World Bank, 1999).

There were the projects to relieve the congestion in Bangkok such as toll road being constructed by the Expressway and Rapid Transit Authority from the port area to Din Daeng and a Middle Ring Road being constructed by Bangkok Metropolitan Administration (BMA).

In order to fix congestion problems in Bangkok, in 1971, the Thai government launched the policies to construct the sky train and electronic railway in Bangkok. The two main alternative transportations are Bangkok Mass Transit System (BTS) and Mass Rapid Transit (MRT) to solve the congestion problem on the road in Bangkok during rush hours. Although the costs are expensive, these new born transit systems become more important for people among the new transportation choices in Bangkok. But bus services still remain popular due to cheaper fares and its comprehensive routing all around Bangkok.

The background of BTS and MRT as the alternative mass transits that are rapidly popular for people in Bangkok and others transportation will be briefly discussed in the following section. The background of Bangkok Mass Transit Authority and the private operators will be discussed afterwards.

Boats & Ferries

Traveling by boat is a great way for sightseeing many famous riverside areas such as many historical attractions, and it explores the 'klongs' (canals) for a glimpse Bangkok. Several kinds of boats (express boats, river taxis and tail-boats) run along the Chao Phraya River, connecting with the local suburbs on the Thonburi side and along the river, while ferries are for crossing the river at various points.

There are different types of boats offering different services, and some express boats only stop at the main piers. Fare of river-crossing is 3 baht that is available at several boat landings. Cost of river taxi starts at around 8 baht, depending on the length of the journey. The Chao Phraya Express Boat Company offers a daily pass with a departure every 30 minutes from Sathorn Pier. It stops at ten major piers and provides access to attractions like Wat Arun (the Temple of Dawn), the Grand Palace, Wat Po and the Royal Barge Museum. Sathorn Pier can be reached easily by taking the sky train (BTS) to Saphan Taksin station.

At present, traveling by boat is an alternative way for commuters to travel around Bangkok metropolis in order to avoid the traffic jam. Besides, it links to the other mass transit systems such as BTS.

Bangkok Mass Transit System (BTS)

BTS sky train has been providing service since December 5, 1999. It is operated by Bangkok Mass Transit System Public Company Limited. Travelling by BTS, passengers do not have to face with the chronic problems of traffic congestion, noise and pollutions on the street below.

BTS' modern electric trains transport commuters by wide air-conditioned bogies. It is time-saving due to quick and reliable service. The BTS sky train's high-capacity operating system ensures almost no breakdowns and a virtual 100% punctuality. Each train can carry over 1,000 passengers while a similar number of people would use 800 cars, making the BTS sky train the most environmentally friendly mass transit system in Thailand. It currently carries over 400,000 passengers per day as shown in Table 2.2.

Table 2.2
Number of Passengers per Day of BTS during 2000 – 2007

Unit: thousand persons

Year	Number of Passengers
2000	176
2001	244
2002	301
2003	329
2004	371
2005	411
2006	435
2007	415

Source: Bangkok Mass Transit System.

Nowadays, BTS has two main routes which are Sukhumvit Line and Silom Line. These two routings cover much of central areas and many commercial, residential and tourist areas in Bangkok (with extensions planned to outlying areas). The trains start its operation from 6:00 am until 12:00 pm with frequent service time-table throughout the day and more frequently service during rush hours. The fare is based on the distance of traveling.

The range of BTS fare rate is 15 - 40 baht. Cost of traveling by BTS starts at 15 baht and will increase for 5 baht in every next two stations. However, the fare rate does not exceed more than 40 baht (Table 2.3).

Table 2.3
Fare Rates of BTS

Station of BTS	BTS Fare Rates
First station	10 baht
Next station	15 baht
Next two stations	Add more 5 baht
10 stations and more	40 baht

Source: Bangkok Mass Transit System.

According to Indharadhawach (2002), satisfaction levels of several groups of people in Bangkok toward BTS service are moderate but very high toward the environment of the station and within the train. From this study, it could assume that BTS is currently one of the high standard mass transportation services in Bangkok.

However, Indharadhawach (2002) provided recommendations for BTS to improve its services. Firstly, BTS should expand its routes to other busy residential and commercial areas in Bangkok. Secondly, the train fee should be reduced for the benefit of low income people in Bangkok. Thirdly, the park and ride should be available at all the train stations in order that more car users can switch to use BTS

service. Lastly, the shuttle bus service should be extended to cover more areas in the future.

Mass Rapid Transit Authority of Thailand (MRTA)

Numerous traffic problems in Bangkok contribute to Mass Rapid Transit (MRT) system project in 1971, with supports from German government. However, the project face with so many problems from its mega size which requires huge amount of investing cost for the implementation. Hence, the project was delayed and unable to launch until 1992.

As the Cabinet of H.E. Prime Minister Mr.Anand Panyarachun imposed a policy to construct the MRT in the Greater Bangkok Area, on July 28, 1992, Mass Rapid Transit Authority of Thailand (MRTA) was founded under the Office of the Prime Minister. The organization would have a status of state enterprise under the Act on Establishment of the Government Organizations B.E. 2496 (1953). The Royal Decree Establishing the Metropolitan Rapid Transit Authority B.E. 2535 (1992) was announced in the Royal Gazette on August 20, 1992 and effective on August 21, 1992. In 2000, Metropolitan Rapid Transit Authority” was renamed “Mass Rapid Transit Authority of Thailand” under the Mass Rapid Transit Authority of Thailand Act B.E. 2543 (2000) which took effect from December 2, 2000. On August 1, 2000, Bangkok Metro Public Company Limited (BMCL) entered into the Agreement for the MRTA Initial System Project - Chaloe M Ratchamongkhon Line (the “Concession Agreement”) with MRTA. The BMCL has the exclusive right to collect fares and undertake activities and commercial development, including advertising and leasing space in the project for 25 years from the date of issuance by the MRTA of the Notice of No Objection to commencement of revenue service, namely, on July 2, 2004, which would end on July 1, 2029. It currently carries at 2,039 thousand passengers in 2007 as shown in Table 2.4.

The missions of MRTA is to provide the efficient and high technological railcar with international standard in Bangkok and metropolitan areas for Bangkokian’s better life and health standard, reducing the congestion problems and better environment in Bangkok¹.

¹ Mass Rapid Transit Authority of Thailand.

Table 2.4
The Average Number of Passengers per Year of MRTA during 2004 – 2007

Unit: thousand persons

Year	Number of Passengers
2004	1,950
2005	1,899
2006	1,976
2007	2,039

Source: Bangkok Metro Public Company Limited.

The fare rates of the metro were agreed to be in accordance with the basic reference fare rates². Under the concession agreement, the fare rates will be able to be adjusted every 24 months based on the actual changes of the Bangkok Non-Food Consumer Price Index, compared to the basic reference fare rates as at January 1, 2002. Besides, the fare rates will be adjusted under the terms of the Concession Agreement accordingly.

At the beginning, the fare rates are 14 – 36 baht. For every station, fare will increase 2 baht until the maximum rate, after that the fare rate will be constant at the minimum rate. The present rate, later as receive the resolution from cabinet to allow the BMCL to adjust the fare rate from 15 – 39 baht to 16 – 41 baht on January 1, 2009.

Nevertheless, instead of being developed as part of integrated public transport system, MRT has been constructed in the form of standalone project. Despite planned investment of some 165 billion baht in the five priority MRT lines, insufficient attention is given to the new MRT services to assist commuters to travel conveniently between beginning points and destinations. Public transport quality in Bangkok is falling behind its peer cities in the region.

Buses in Bangkok provide an incredibly cheap way to travel from one side of the city to another. Buses currently carry twelve times passengers of MRT services each day even if MRT system operates at the full potential (World Bank,

² Bangkok Metro Public Company Limited.

2007). The success of MRT also depends on the quality of the complementary bus system. In order to enhance overall transportation system in Bangkok, bus should be the connecting route to BTS and MRT. Nevertheless, it could be noticed that passengers who use buses are likely to have lower income than those who use BTS and MRT. Thus, the consequences of a failure to give the bus system sufficient policy attention and resources could therefore be substantial in both transport and social terms.

As shown in Table 2.5, although BTS and MRT are playing more important role for the commuters in Bangkok, the proportion of the traveling in Bangkok and nearby provinces by buses are 69% while for BTS and MRT are only 2%.

As shown in Tables 2.2, 2.4 and 2.5, the number of passengers of BTS and MRT are not as many as those of BMTA. Some other mass transit modes of transport such as BTS, MRT, ferry boat, and express boat are small proportions. However, their importance tends to increase for people in inner Bangkok especially BTS and MRT. These are the faster, more comfortable, and more convenient alternative ways. Then there is a question for BMTA how the BMTA can maintain its service in the mass transit in Bangkok.

By considering the operation of the state-owned enterprises (SOEs) in terms of transportations, some state-owned enterprises can earn profit but some could not. As shown in Table 2.6, it shows the cumulative profit and loss of SOEs. Port Authority of Thailand, Expressway Authority of Thailand and Aeronautical Radio of Thailand have the capacity to make a profit, whereas some SOEs such as State Railway of Thailand, Civil Aviation Training Center and BMTA, makes loss. Moreover, it could be noticed that their cumulative loss has been increasing over years, especially BMTA.

Table 2.5
The Proportion of Public Mass Transit in Bangkok and Nearby Provinces

Unit: percentage

Public Transportation in Bangkok	Proportion
Bus	69
MRT and BTS	2
Railway	2
Ferry Boat and Express Boat	2
The Transport Company Limited	15
Others	10
Total	100

Source: German Organization for Technical Cooperation.

The current bus system is deteriorating and losing patronage at the rate of 5% per annum. Despite the bus system's significant role in meeting daily travel requirements, it is excessively costly, inefficient, in need of major investment and not sufficiently responsive to the needs of users. The accumulated deficit is about 67 billion baht and has been growing by over 10% per year. It has been recognized for several years that there is urgent need to reform BMTA. In its manner, BMTA should reduce cost and enhance the quality of bus service. The deficit for its provision has risen to unsustainable levels at the same time as heavy investments in new buses are needed.

Since some state-owned enterprises make loss from their public service responsibility. Therefore, in 2007, the Ministry of Finance has the public service obligation (PSO) to correct the problem for some the state-owned enterprises that government regulates them to assess price lower than cost. Their prices are controlled by the government at lower rate for unaffordable people to be able to access the service equitably. The government will compensate for the difference between controlled price and actual cost in order that these state-owned enterprises can continue to provide the service and can improve the organization to be more efficient³.

³ State Enterprise Policy Office.

The next section will discuss about Bangkok Mass Transit Authority (BMTA). Later, the private operators' administration will be discussed.

Table 2.6
The Cumulative Profit and Loss of State-owned Enterprises in 2008

Unit: million baht

State-owned Enterprises	Cumulative Loss 2008
State Railway of Thailand	-72,000
Port Authority of Thailand	10,322
Expressway Authority of Thailand	4697
Civil Aviation Training Center	-733
Aeronautical Radio of Thailand	769
Bangkok Mass Transit Authority	-67,415

Source: State Enterprise Policy Office.

2.2 Bangkok Mass Transit Authority (BMTA)

2.2.1 The History of BMTA

BMTA is a state-owned enterprise, which is one of non-profit organization. The principle policy of BMTA is to provide service under 5 responsibilities which are easiness, quickness, safety, saving, and satisfaction⁴.

The bus service in Thailand has been operated since 1907 by Phraya Phakdi Noraset (Lert Setthabutr). In 1976, The Bangkok Mass Transit Authority (BMTA) was established by a Royal Decree Establishing. In 1933, bus services were very popular and were expanded throughout major areas of Bangkok.

The popularity of bus service leads to high demand for this business. After that many companies entered to the business and the buses were replaced the horse carriages on the roads in Bangkok. At that time there were 2 public enterprises and 24 private companies (which mostly are family business) providing bus service in Bangkok.

Due to the high growth, the competitions among bus companies were very intense. In 1976, the government under the leading of Prime Minister, M.R.Kukrit Pramote decided to merge all those companies together for the following reasons;

- 1) The defect of bus service structure caused nonstandardized level of the bus service in Thailand.
- 2) Strong competition in this business brought about complicated bus routes which finally led to traffic congestion problem. Thus, merging the bus companies under one organization would facilitate the management of the bus routes.
- 3) The governments expected that the merger of all bus companies would benefit for the improvement and expansion plan and stability of the bus service in long run. Hence, in order to increase growth rate of this business, high quality of service is needed to be provided to the consumers as well.

⁴ 19 years of Bangkok Mass Transit Authority. (1995).

- 4) The government anticipated that after all bus companies were merged together, the obstacles in improving management system would be eliminated and it is also easier to provide and adjust welfare for all workers.

Finally, in 1976, the Bangkok Mass Transit Authority (BMTA) was established. At the beginning BMTA had to buy 2,703 buses from all private companies for 282.35 million baht. Unfortunately, more than 1,000 buses could not be used. Moreover, BMTA had to pay 83.10 million baht and 4.55 million baht for compensation, materials and supplies, while they received only 329.20 million baht as subsidy from the government. It could be concluded that BMTA started with loss from the beginning of the first year of its operation.

2.2.2 The Structure and Administration of Bangkok Mass Transit Authority

BMTA is the state-owned enterprise. The responsibility of BMTA is to provide bus service for people in metropolitan areas. The structure of operation deputy can be divided into 9 zones⁵; the head office, and 8 zones of bus operation. The head office does not provide bus service but it is where the Managing Director works. Its main responsibility is to collect all data of BMTA and publicize them as organizational information. Therefore, the main revenue does not come from here but from 8 operation zones. In each zone, it is divided into 3 divisions. The number of buses in each zone is shown in Table 2.7. In each zone, there is a director who manages and controls the administration (Table 2.8). Most of the officers in each zone are bus drivers and conductors at the proportion of 40% and 41%, respectively as shown in Table 2.9⁶.

In terms of social welfares, the social welfare of the officers of BMTA is based on the state enterprise policy. BMTA has a lot of officers. Each general officer has the head up to 5 levels. BMTA has not been received new officers (except the bus drivers and the conductors) since 1985. Turnover rates of the bus drivers and the

⁵ BMTA Annual Report. (2006).

⁶ BMTA Annual Report. (2008).

conductors are quite high but not more than 10%. The allowance for the bus drivers and the conductors are 50 baht per day and 30 baht per day, respectively⁷.

The bus operation is controlled by BMTA. There are two types of operations in this industry, which are under BMTA and the private operators⁸. The Department of Land Transport determined the right of all concessions and the numbers of trips. BMTA receives all the right of concessions from the Department of Land Transport. BMTA can provide the right of concessions to private operators to provide bus service. BMTA and the private operators co-operated bus services since 1976. In response to the government's privatization policy, BMTA has granted the concessions to private operators to encourage them to play a greater role in providing bus service. BMTA acts on the regulator by gently distributing concessions to private operators. Currently, BMTA operation is only accounted for 24% of the bus service system in Bangkok where 76% is operated by private operators.

At the beginning, regular buses were provided as the extra free service for BMTA's passengers to travel between BMTA stations and other points nearby. In 1978, BMTA brought air-conditioned buses for serving more BMTA's passengers.

⁷ Interview with the Deputy Director (Department of Bus Operation) on June 11, 2009.

⁸ The private operators have begun the bus service with BMTA since 1976.

Table 2.7
The Location of Zones and Divisions of BMTA

Zone	Division	Location	Number of Buses	Bus Routes
1	Division1	Bang Khen	130	95 107 129 543
	Division2	Prachathipat	173	29 95n 185 510 520
	Division3	Perm-Phum	104	34 59 39A
		Rangsit	88	503 255
	Total (Buses)		495	15 Routes
2	Division1	Min Buri	136	26 501 502 512 549
		Suwinthawong	106	502 512 514 517
	Division2	Suan-Siam	184	60 71 96 168 519 550
	Division3	Sathu Pradit	111	11 93 206 550
	Total (Buses)		537	19 Routes
3	Division1	Samrong	124	2 23 45
		Phraek Sa	77	25 145 102A 552A
	Division2	Farm Jarakae	112	142A508 513 536 553
	Division3	Sai Luad	111	145 51
	Total (Buses)		424	14 Routes
4	Division1	Khlong Toei	198	4A13 47 72 136 205 552
	Division2	Sathu Pradit	107	1 62 77 108
	Division3	Pharam 9	98	12 137 179 551
	Total (Buses)		403	15 Routes
5	Division1	Phra Pradaeng	106	20A 82 138
	Division2	Tarnthip	106	15 21 37 75
	Division3	Sa Mae Dam	186	68 76A 105 111 140 141A
	Total (Buses)		398	13 Routes

Table 2.7 (Continued)

Zone	Division	Location	Number of Buses	Bus Routes
6	Division1	Bangkae	117	7 91 107 509
	Division2	Phutthamonthon Sai 2	141	79A 80 _n 80 84 189
	Division3	Phutthamonthon Sai 2	108	7 _n 42 84 _n 91 _n 195 515
	Total (Buses)		366	15 Routes
7	Division1	Tha It	205	18 32 134 166 203 505 516
	Division2	MOF3	78	63 114A543
	Division3	Si Narong	226	16 50 53 65 66 67 70 97
	Total (Buses)		509	18 Routes
8	Division1	Kamphaeng Phet 2	157	3 24 49 54 117 204
	Division2	Lat Phrao 101	101	36 73
	Division3	Lat Phrao 101	136	11 134 _n 156 178
	Total (Buses)		394	12 Routes

Source: BMTA Annual Report. (2006).

There are two main types of buses that BMTA currently provide service in Bangkok and metropolitan areas as follows; regular buses and air-conditioned buses. The regular buses of BMTA known as cream-red buses and white-blue buses and air-conditioned buses of BMTA known as ordinary air-conditioned buses, NGV buses, articulated air-conditioned buses, and EUROII (12 meters in length).

Frequency of BMTA's bus services are set differently in accordance with the different traffic condition in different period of the day. For example, BMTA's buses are normally released from the station in every 5 minutes in peak hour and 10 minutes during off-peak period.

In term of maintenance, the bus conditions have to be checked every day and the bus engine need to be changed in every 100,000 kilometers. BMTA control the repairing rate does not over 5%.

BMTA's fare systems are controlled by Department of Land Transport. Because BMTA's main role is to provide public services, the service fares are controlled at lower rate than its existing cost for the benefit of low and middle income people. Nevertheless, the fare rate used to be adjusted when the fuel prices rose in the past.

Fare systems can be divided into three types which are zone rate, flat rate and moving rate.

In 1976, BMTA adopted the zone rate system for the fare of regular buses. Nevertheless, the regulation was changed to the moving rates which are the same as the air-conditioned bus fare rate system in August 1980. In February 1985, BMTA's fare rate system was changed again to the flat rate system and this system still be used until now. The fare system of regular buses has been adjusted for 18 times. The fare rates of regular bus are shown in Table 2.10.

According to Table 2.11, the fare system of air-conditioned buses has been adjusted for 16 times. Air-conditioned bus was started operation in 1978 (two years after the operation of regular bus). Fare rate system of air-condition bus has been the moving rate at 5 and 10 bath depending on the distance. On September 1997, Euro II bus was launched with the flat rate fare system. This system has remained for three years and was changed to the moving rate later on because EUROII buses' existing cost has been rising over its revenue. Even though ordinary buses' fare rate are different from EUROII buses due to different costs as the fare rates of ordinary air-conditioned bus (cream-blue) are cheaper than fare rates of EUROII for two baht in every rate level.

Table 2.8

Number of Work Force of BMTA divided into Zone and Head Office during January – December 2007

Units: persons

Month	Head Office	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	Total
January	736	2,632	2,610	2,263	1,975	2,029	1,782	2,549	1,821	18,397
February	736	2,658	2,611	2,276	1,975	2,031	1,778	2,562	1,821	18,448
March	736	2,649	2,637	2,267	1,978	2,033	1,774	2,560	1,814	18,448
April	734	2,642	2,639	2,260	1,978	2,031	1,770	2,560	1,809	18,423
May	734	2,637	2,640	2,259	1,972	2,033	1,783	2,555	1,803	18,416
June	734	2,634	2,626	2,255	1,968	2,027	1,777	2,547	1,792	18,360
July	734	2,624	2,620	2,244	1,953	2,025	1,779	2,546	1,807	18,332
August	732	2,618	2,617	2,238	1,952	2,025	1,789	2,534	1,806	18,311
September	723	2,596	2,607	2,225	1,940	2,015	1,781	2,522	1,797	18,206
October	710	2,565	2,581	2,212	1,922	1,983	1,767	2,482	1,781	18,003
November	708	2,558	2,578	2,221	1,922	1,977	1,772	2,472	1,781	17,989
December	710	2,552	2,571	2,219	1,918	1,974	1,770	2,472	1,777	17,963

Source: BMTA Monthly Report. (2007).

Table 2.9
The Number of Bus Drivers and Conductors of BMTA during 2000 - 2008

Unit: persons

Year	Bus Drivers	Conductors
2000	7,674	7,743
2001	7,674	7,743
2002	7,595	7,694
2003	7,433	7,491
2004	7,433	7,489
2005	7,220	7,310
2006	7,390	7,517
2007	7,420	7,319
2008	7,189	7,027

Source: BMTA Annual Report during 2000 – 2008.

In conclusion, BMTA currently has used two types of fare rate system; flat rate for regular buses and moving rate for air-conditioned buses.

BMTA has been improving its service in order to serve the best service quality for customers while remaining self-reliance. BMTA is not profit-oriented because the majority of its clients are those within the lower and middle income brackets.

Table 2.10
Fare Adjustments of Regular Buses during 1976 – 2008

Unit: baht

Effective Date	Zone Rate	Moving Rate	Flat Rate
October 1, 1976	In-zone rate is of 0.75 baht.		
April 1, 1978	In-zone rate is of 1 baht.		
August 1, 1980		Rate starts at 1 baht for the first 10 kilometers. In excess of 10 kilometers, 1 baht per kilometer is surcharged. Maximum fare does not exceed 2 baht.	
November 25, 1982		Rate starts at 1.50 baht for the first 10 kilometers. In excess of 10 kilometers, 1 baht per kilometer is surcharged.	
February 15, 1985			Fare rate is of 2 baht.
December 22, 2008			For red-cream buses, rate is of 7 baht. For white and green-blue buses, rate is of 8 baht.

Source: BMTA Monthly Report. (2008, October).

Table 2.11
Fare Adjustments of Air-conditioned Buses during 1976 –2008

Unit: baht

Effective Date	Moving Rate	Flat Rate
1978	Fare rates are of 5, 10 baht	
November 9 1991	Fare rates are of 6, 8, 10, 12, 14, 16 baht Rate starts at 6 baht for the first 8 kilometers. In excess of 4 kilometers, 2 baht per kilometer is surcharged. Maximum fare does not exceed 16 baht.	
September 30, 1997		From 1997 to 1999, fare rate of EUROII is of 12 baht. From 2000 to 2001, fare rate of EUROII is of 14 baht From 2002 to 2003, fare rate of EUROII is of 16 baht
February 1, 1999	EURO I and II changed to moving rate system. Rate starts at 8 baht for the first 8 kilometers. In excess of 4 kilometers, 2 baht per kilometer is surcharged. Maximum fare does not exceed 18 baht. Rate for year 1999 is 8, 10, 12, 14, 16, 18 baht. Each was surcharged by 2 baht every two years.	

Table 2.11 (Continued)

Unit: baht		
Effective Date	Moving Rate	Flat Rate
December 22, 2008	Adjust ordinary air-conditioned bus (cream-blue) fare rate to 9, 11, 13, 15, 17, 19 baht Fair rates of ordinary air-conditioned buses are adjusted to be 9, 11, 13, 15, 17, 19 baht. (Rate starts at 11 baht for the first 8 kilometers. In excess of 4 kilometers, 2 baht per kilometer is surcharged. Maximum fare does not exceed 19 baht) Fair rates of EUROII are adjusted to be 12, 14, 16, 18, 20, 22, 24 baht (Rate starts at 12 baht for the first 4 kilometers. In excess of 4 kilometers, 2 baht per kilometer is surcharged. Maximum fare does not exceed 22 baht).	

Source: BMTA Monthly Report. (2008, October).

As shown in Table 2.12 (BMTA's bus cost on October 2007 – July 2008) every types of BMTA fare rates are lower than its actual cost (BMTA fare rates are fixed by Thai government in order to support the affordability of low and middle income people). Moreover, Table 2.12 also shows the cost per ticket which is calculated by two methods. The first method is the rate of official loads that the calculation based on the maximum number of passengers which could be contained on each bus (determined by the Department of Land Transport). The second method is the calculation from the average number of daily sold tickets. The number of tickets will be more than the first method. Then cost from the second method that based on the numbers of passengers will be less than the first calculation.

Table 2.12
Cost and Current Fares of Bus Types of Bangkok Mass Transit Authority
on October 2007 – July 2008

Unit: baht

Cost BMTA as of October 2007 – July 2008		
Bus Types	Cost	Current Fare
1.Regular buses		
Cream-Red		
Cost per bus per day	8,962.84	7
Cost per ticket - based on actual daily average number of tickets sold.	14.75	
Cost per ticket - based on the rate of official load.	11.59	
Rented buses (80 in total)		
Cost per bus per day	9,437.91	8
Cost per ticket - based on actual daily average number of tickets sold.	14.19	
Cost per ticket - based on the rate of official load.	12.05	
2.Air-Conditioned buses		
Ordinary air-conditioned buses		
Cost per bus per day	10,879.5	11 - 19
Cost per ticket - based on actual daily average number of tickets sold.	26.77	
Cost per ticket - based on the rate of official load.	28.33	

Table 2.12 (Continued)

Unit: baht

Cost BMTA as of October 2007 – July 2008		
Bus Types	Cost	Current Fare
NGV buses		
Cost per bus per day	8,549.18	11 - 19
Cost per ticket - based on actual daily average number of tickets sold.	25.96	
Cost per ticket - based on the rate of official load.	29.38	
Articulated air-conditioned buses (18 meters in length)		
Cost per bus per day	12,240.8	11 – 19
Cost per ticket - based on actual daily average number of tickets sold.	21.09	
Cost per ticket - based on the rate of official load.	31.63	
EURO II buses (12 meters in length)		
Cost per bus per day	12,644.87	12 - 22
Cost per ticket - based on actual daily average number of tickets sold.	26.83	
Cost per ticket - based on the rate of official load.	36.13	

Table 2.12 (Continued)

Unit: baht

Cost BMTA as of October 2007 – July 2008		
Bus Types	Cost	Current Fare
EURO II buses (12 meters in length) (500 in total)		
Cost per bus per day	8,549.18	11 - 19
Cost per ticket - based on actual daily average number of tickets sold.	25.96	
Cost per ticket - based on the rate of official load.	29.38	

Source: Bangkok Mass Transit Authority.

Note: 1. These calculations are from the data during October 2007 – July 2008. There are adjustments in salary and benefits, over time, maintenance of regular buses and air-conditioned buses, interest rate, number of tickets, return from coupons, actual insurance payment in the fiscal budget of 2008.

2. Maintenance for old buses includes VAT of 7%.

3. Number of tickets are calculated from the container rate assignment x trip per bus per day of the bus organization.

Since all fares are lower than actual cost so it led to BMTA's loss from operation for 3,316 million baht in 2002 and increased to 6,945 million baht in 2008 (Table 2.13). The accumulative loss dramatically increased from 32,343 million baht in 2002 to 67,415 million baht in 2008. BMTA's revenue decreased from 6,977 million baht in 2002 to 5,966 million baht in 2004 due to a decrease in number of passengers but revenue tended to increase during 2005 – 2006 due to the fares adjustment. Moreover, while the revenue was decreasing, the expenditure was continuously increasing from 10,056 million baht in 2002 to 14,126 million baht in 2008. Especially in 2006, the expenditure significantly increased at 15% because of

an increase in fuel price, interest paid, and salary adjustment (5% raised in accordance with the Cabinet resolution)⁹.

Table 2.13
Revenue, Expenditure and Gain (Loss) of BMTA during 1977 – 2008

Unit: million baht

Year	Revenue	Expenditure	Gain (Loss)
1977	622.923	870.633	(247.71)
1978	1,058.229	1,439.311	(380.082)
1979	1,421.256	1,898.256	(477)
1980	1,777.383	2,523.348	(745.965)
1981	2,524.497	3,344.3	(819.803)
1982	2,885.012	3,939.781	(974.769)
1983	3,017.775	4,214.242	(1,076.467)
1984	3,064.176	4,303.742	(1,239.566)
1985	3,447.711	4,553.737	(1,106.026)
1986	3,144.214	4,180.963	(1,036.749)
1987	3,216.9	4,129.8	(912.9)
1988	3,397.739	4,164.84	(767.101)
1989	3,844.855	4,730.493	(885.638)
1990	4,068.511	5,044.464	(975.953)
1991	4,296.843	5,468.32	(1,171.477)
1992	6,400.028	5,791.022	609.006
1993	5,759.068	6,586.289	(827.221)
1994	6,202.506	7,098.53	(896.024)
1995	6,024.778	8,136.604	(2,111.826)
1996	6,125.672	8,600.264	(2,474.592)
1997	6,421.452	9,156.722	(2,735.27)

⁹ BMTA Annual Report. (2006).

Table 2.13 (Continued)

Unit: million baht

Fiscal Year	Revenue	Expenditure	Gain (Loss)
1998	6,734.634	9,463.192	(2,728.558)
1999	7,035.969	9,744.638	(2,708.669)
2000	7,054.939	9,944.114	(2,889.175)
2001	7,081.884	10,802.742	(3,720.858)
2002	6,977.551	10,294.498	(3,316.947)
2003	6,458.475	10,917.264	(4,458.789)
2004	5,965.771	10,654.861	(4,689.09)
2005	6,316.864	11,549.369	(5,232.505)
2006	7,147.876	13,351.209	(6,203.333)
2007	6,803.336	14,080.593	(7,277.257)
2008	7,180.28	14,125.775	(6,945.495)

Source: In 1977 – 1989 from Bangkok Mass Transit Authority.

In 1990 – 2008 from BMTA Annual Report.

Note: There are subsidies in these following years;

In 1991: Thai government subsidized BMTA in term of debt payment (727.388 million baht) for petroleum cost to the Petroleum Authority of Thailand (PTT).

In 1991: BMTA received subsidies from the government in the form of debt payment to the Petroleum Authority of Thailand (PTT) for the cost of petroleum, in the amount of 727.388 million baht.

In 1992 – 1993 and 1998 – 2001: Government subsidies¹⁰.

In conclusion, the continuous increase in operating loss of BMTA was caused by its imbalance growth rate of revenue and expenditure. This information reflects the reduction of capacity of BMTA to raise fares and control the expenditure.

¹⁰ Government subsidies to BMTA for part of revenue, except in 1998, the subsidies for the part of interest.

Then, the next part will discuss about BMTA's expenditure and revenue structure in details.

2.2.3 Expenditure Structure

The expenditure structure of BMTA consists of 6 main expenditures as follows, salaries and benefits (such as incentive wage), fuel expenses, bus rent expenses¹¹, maintenance expenditures, depreciation, and interest paid. Table 2.14 shows the structure of BMTA's expenditures during 2002 – 2008. Besides, there are four expenditures that significantly affect cost of operation of BMTA which are salaries and benefits, fuel expenses, maintenance expenditures, and interest paid. The sum of them has high proportion at 90% of total expenditure in 2008. The next will discuss the details of each expenditure part during 2002 – 2008.

Firstly, BMTA spent 25% of its expenditure for fuel, which was normally used diesel as fuel. Thus, oil price had a direct effect on this part of BMTA's expenditure. As per increase in fuel price at the rate of 19% per year from 2002 to 2008, BMTA expenditure had been drastically increased at 17% per year from 1,856 million baht in 2002 to 3,786 million baht in 2008. Hence, changing from using diesel to compressed natural gas (CNG) might be the way to reduce this expenditure.

In addition, BMTA paid a lot of interest which has been dramatically increased from 21% per year from 969 million baht in 2002 to 2,152 million baht in 2008 as a result of the increasing debt that was mainly caused by the loss of BMTA for many years.

As for salaries and benefits, they were continuously increasing at the average rate of 7% per year from 3,498 million baht in 2002 to 4,704 million baht in 2008, mainly due to increase in salary and fringe benefits. They have expanded at 9% per year from 14,751 baht per person per month in 2002 on average to 21,832 baht per person per month in 2008. In particular, in 2005, they have been significantly increased at 33% from 2004 because of the increasing salary.

In contrast, the proportion of officers per car slightly decreased at 1% per year from 5.8 persons per bus in 2002 to 5.4 persons per bus in 2008 due to the “early

¹¹ BMTA Annual Report. (2000).

retirement program” that was launched in order to reduce the number of workforce in the organization.

Lastly, the maintenance of BMTA cost was about 30 % of its total expenditure due to its maintenance principle namely “Preventive Maintenance” which means the maintenance to prevent the bus from ruination. Alternatively, the maintenance of private operators is known as “Breakdown Maintenance” that means buses will be repaired if they break. However, BMTA’s maintenance and bus rent expenses tend to decrease because BMTA has negotiated with maintenance firms to reduce the cost of air-conditioned bus maintenance. Moreover, BMTA planned to change from leasing to bus purchase instead because the leasing way, BMTA has to fix buses with leasing firm. On the other hand, with purchase, BMTA can repair by its own staff so the cost is less¹². As the maintenance average growth rate of maintenance expenditures decreased by 3% per year from 2,016 million baht in 2002 to 1,501 million baht in 2008, and bus rent expenditure decreased from 993 million baht in 2002 to 20 million baht in 2008.

Table 2.14
Structures of Expenditure of BMTA during 2002 - 2008

Unit: million baht

Year	Salaries and Benefits	Fuel Expenses	Bus Rent Expenses	Maintenance	Depreciation	Others Expenses	Interest Paid
2002	3,498	1,856	883	2,016	361	472	969
2003	3,366	2,036	998	2,209	189	760	1,369
2004	3,421	1,988	993	2,216	152	454	1,469
2005	4,522	2,459	26	1,916	790	436	1,476
2006	4,653	3,434	27	1,814	737	596	2,091
2007	4,580	3,068	25	1,605	733	213	2,300
2008	4,704	3,786	20	1,501	686	654	2,152

Source: BMTA. (2007).

¹² Interview with the Deputy Director (Department of Bus Operation) on June 11, 2009.

2.2.4 Revenue Structure

BMTA has 5 sources of revenue its revenue structure, which consists of fare revenue from regular buses and air-conditioned buses, remuneration from joint venture buses under concession, bus body advertising, and other incomes.

As shown in Table 2.15 during 2002 - 2008, BMTA's main source of revenue (95% of total revenue) was from fare revenue, especially from air-conditioned buses. In 2008, BMTA earned revenue at 59% of total revenue from air-conditioned buses. At the same time, fare revenue from regular buses significantly increased at 31% in 2002 and 35% in 2008.

As fare rates are regulated by government so BMTA could not set its own fares. Furthermore, as normal fare adjustment is rarely happened due to the economic situation, apart from increasing of oil price. From this reason, BMTA's fare revenue tends to continue falling caused by reducing in number of passengers. However, BMTA's fare revenue was increased in 2005 and 2006 owing to the consideration of BMTA's fare adjustment from the Thai government.

Since air-conditioned buses have less constraint of adjusting fares rate comparing to regular buses, an average fare of air-conditioned buses is higher than average fare of regular buses. Air-conditioned buses' fare revenue was constant during 2005 – 2006 and tended to slightly decrease during 2007 - 2008.

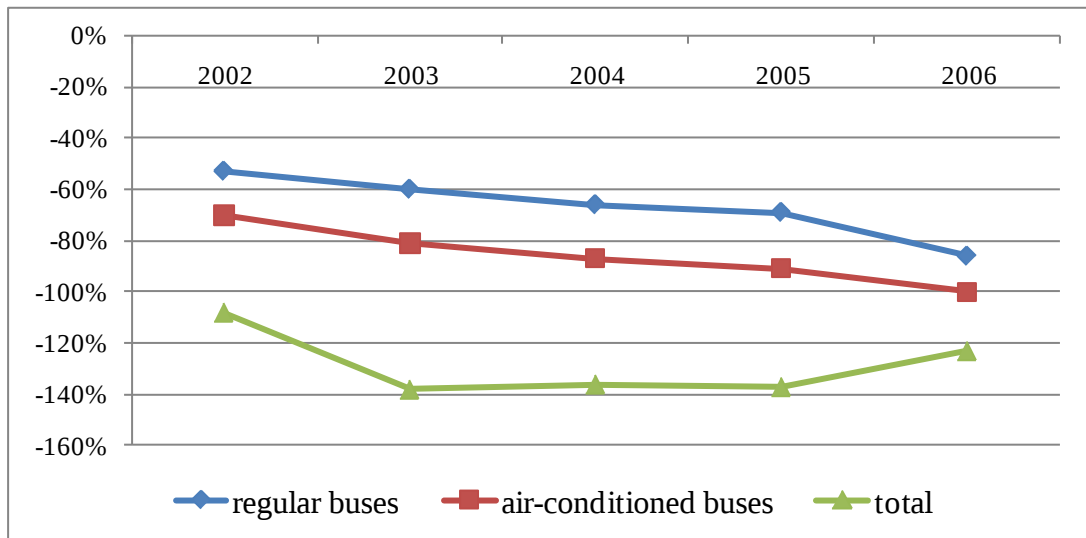
However, overall fare revenue from both types of buses is lower than the actual expenditure of the operation. Figure 2.1 shows that fare revenue of BMTA is not enough for covering the expenditure of both types of buses that lead to BMTA's losses over years.

Table 2.15
Fare Revenue from Regular and Air-conditioned Buses during 2002 – 2008

Year	Fare Revenue (Million Baht)	Number of Passengers (Million Persons)	Fare Revenue per Ticket (Baht)
Regular Buses			
2002	1,891.78	494.98	3.82
2003	1,689.26	461.36	3.66
2004	1,658.59	426.34	3.89
2005	1,942.69	417.08	4.73
2006	2,386.72	365.13	6.54
2007	2,397.54	340.53	7.04
2008	2,299.52	326.65	7.04
Air-conditioned Buses			
2002	4,171.3	379.1	11
2003	4,327.09	403.81	10.72
2004	4,002.08	329.57	12.14
2005	4,094.23	303.24	13.5
2006	4,226.69	279.79	15.11
2007	4,046.11	272.95	14.82
2008	3,834.63	258.51	14.83

Source: BMTA. (2007).

Figure 2.1
The Loss Rate of Each Type of Buses of BMTA during 2002 – 2006



Source: BMTA. (2007).

BMTA has to compete with private operators and other modes of transportations such as other private bus operators, private cars, railway, boat, sky train, and electric railway. Hence, BMTA's competitiveness has decreased in recent five years for both bus types. The number of passengers continuously decreased at 7% per year because the proportion of buses of other private operators was increasing.

The cost recovery ratio is the index which indicates the ability of the state-owned enterprises that provide public services whether they can earn enough revenue to support their expenditure. From this formula, the appropriate cost could be considered from whether the expenditure is over revenue. Moreover, this index can also suggest the suitable amount of subsidy that organization receives from the government.

Cost recovery ratio calculates from the proportion between total expenditure and total of revenue.

$$\text{Cost Recovery Ratio} = \frac{\text{Total Revenue}}{\text{Total Expenditure}}$$

If the index result is more than or equal to 1, it means that an organization has capability to earn a sufficient revenue to support their expenditure and operation without government subsidy. But if the index result is less than 1, it could be indicated that an organization cannot perform their operation without subsidy from government due to the revenue that they could earn is not enough for expenditure covering.

Table 2.16 indicates that cost recovery ratio of BMTA in 2008 is 0.61 which means that BMTA cannot provide services without government subsidy, in addition, according to the fact that from every 1 baht of their expenditures, BMTA could only earn for 0.54 bath as a revenue to support their expenditure so they need 0.46 bath as a subsidy from the government in order to be able to continue their business.

From the information above, it could be seen that BMTA could not manage to be profitable which could be implied that the cost management of BMTA is inefficiency.

In addition, BMTA's fare revenue could support only 55% of its overall expenditure. BMTA's cost recovery ratio of regular buses continuously decreased from 52% in 2002 to 44% in 2008, which could be implied that its fare revenue can support only 44% of its total expenditures. While cost recovery ratio of air-conditioned bus continuously decreased from 69% in 2002 to 53% in 2008, this situation reflects that this fare revenue can support only 55% of its all expenditures.

From the data above, BMTA should reorganize its organization structure to be more efficient in order to reduce costs and decrease the cumulative loss.

Table 2.16
Cost Recovery Ratio of BMTA during 2002 – 2008

Unit: percent

Year	Overall	Regular Buses	Air-conditioned Buses
2002	0.65	0.52	0.69
2003	0.58	0.44	0.65
2004	0.56	0.44	0.62
2005	0.54	0.44	0.61
2006	0.54	0.47	0.55
2007	0.53	0.46	0.54
2008	0.53	0.44	0.53

Source: BMTA. (2007).

2.2.5 The Investment for Quality Improvement of Bangkok Mass Transit Authority

Since BMTA started its operation in 1976, BMTA has been improving its service and developing its organization for better progressives, turn over and passengers' satisfaction. Besides, with regard to BMTA's direct operation, BMTA provides enough bus service to meet the demand of commuters.

BMTA which is the state-owned enterprise has main responsibility to service and support people in Bangkok, thus, quality of services is very crucial tool for creating people's loyalty toward BMTA.

In order to improve the quality of service, in 1989 and 1990, BMTA released new regular buses and air-conditioned buses for providing service to people in Bangkok. Again in 1997, BMTA released new 797 EUROII buses. In addition, after that BMTA also provided NGV van service and NGV air-conditioned buses which will not only friendly with environments but also help them reduce their operation costs.

In 1999, BMTA received ISO9002 of quality assurance system for the number 24 bus route. BMTA can receive ISO 9001:2000 in its all routing in 2007. Kwunjai Tuntiwasinchai (2002) stated that this service improvement of BMTA made

them succeed in enhancing most of their customers' satisfaction. Moreover, BMTA provided bus radio service (bus sound) in total 6,000 buses (both BMTA and joint private buses) since April 2006 in order to relieve passengers from seriousness due to the traffic congestion.

BMTA tries to improve the entire of the bus route networks in order to make it consistent and link with the other mass transit systems.

2.3 Private Operators

In 1976, twenty six private operators were merged under Thai government and it was established as Bangkok Mass Transit Authority¹³. However, there are private operators have been providing bus service.

Unfortunately, Table 2.6 shows that BMTA is one of those which have high loss relative to others state-owned enterprises organizations. Hence, the government attempted to rescue this loss making state-owned enterprises including BMTA. When Mr.Chuan Leakpai was the Prime Minister (1992 – 1995), he announced BMTA's privatization policy in the Seventh National Economic and Social Development Plan. This plan attracted the private operators to accompany with BMTA in order to provide the bus services.

BMTA has license of its all routes and also has right to grant the concessions to private operators and even has more licenses since the policy of the Seventh National Economic and Social Development Plan¹⁴. The concessions routes are unprofitable or expected unprofitable routes. The proportion of private operators tends to increase because the Seventh National Economic and Social Development Plan; and BMTA plans to be the regulator. Currently, 65% of the bus services in Bangkok are run by private operators.

The reasons to provide the concession to the joint private operators are as follows. Firstly, BMTA cannot sufficiently provide enough services for the demand of passengers. Besides, this way helps BMTA to reduce loss because BMTA will

¹³ 25 years of Bangkok Mass Transit Authority. (2001).

¹⁴ Interview with the Deputy Director (Department of Bus Operation) on June 11, 2009.

distribute unprofitable routes or new routes that is not profitable to the private operators.

The rules of concession are as follows. BMTA will choose the routes that they cannot provide sufficient operation and some unprofitable routes to private operators. The longer period of concessions is 7 years due to the high investment cost, thus, the private operators have to assure that it is valuable enough for them to invest. If private operators require operating new routes, BMTA will consider from their offer and might accept if they have a good deal for example using new NGV buses. These are more opportunities for the private operators who have a lot of experiences in this field to get the deal. Nevertheless, in some new routes for instance around suburb, BMTA may operate by themselves first then they might distribute concessions to private operators who are interested in operating in these routes later.¹⁵

Most of private operators who are granted the right of operation normally use BMTA's second hand buses for providing their services. Those private operators have to pay the concession fee to BMTA at the rate of 35 baht per day for the regular buses and 65 baht per day for the air-conditioned buses¹⁶.

There are four types of buses that the private operators have currently used to provide service in Bangkok and the metropolitan areas which are mini buses, regular bus known as white-yellow buses and air-conditioned known as blue-yellow buses and air-conditioned yellow buses (use NGV as fuel).

The private joint operation buses have two types of fare rate systems which is the same system as BMTA's regular bus system and air-conditioned bus rate system. The regular bus of private operators (white-yellow buses) has the same fare rate as cream-blue buses. Besides, there are two types of fare system of air-conditioned buses, which are the fare system of the blue-yellow buses which is the same as BMTA's air-condition ordinary buses and the fare system that private operators' EURO buses charge at the same rate as BMTA EUROII buses.

Private operators can be divided into 2 types which are individual operators and the companies (small companies and large companies). Most of individual private operators provide only one or a few routes same as most of small

¹⁵ Interview with the Deputy Director (Department of Bus Operation) on June 11, 2009.

¹⁶ Interview with the Deputy Director (Department of Bus Operation) on June 11, 2009.

companies that provide only one or a few routes while the large companies provide many routes.

Private operators are managed in form of firms which have owners being firms' managing directors. Private operators can manage themselves and have their own revenue (from tickets selling), fuel expenses, accident expenses, salary and benefit for their officers and they do not have to report their operation progress to BMTA. Normally, the structures of private operators are not complicated as BMTA's structure, hence, they do not need a lot of officers. The most officers are the bus drivers and the conductors that are quite similar to BMTA's officer proportion. The bus drivers and the conductors' salary can be divided into two parts which are daily allowance and percentage calculated from number of daily sold tickets. The rates of daily allowances are different depending on types of buses and companies (Table 2.17).

Besides, pattern of private companies' maintenance principle is "Breakdown Maintenance" which means "fix when buses break" resulted in lower maintenance budget than BMTA's maintenance principle, "Preventive Maintenance" or "maintain buses to prevent bus from breaking".

Notable, the disadvantage of breakdown maintenance is that buses may break down on the road during operation and this leads to the traffic congestion problem which is one of the crucial social problems in Bangkok.

Currently, there are more than sixty private bus operators in both large companies such as Wangsakarnkij Company, Sahakhonsong Thonburi Company, Union Bus Service Company, S.K. Tour and Service Company and Premium Management Company and small company such as Chaivisath Transport Company (Table 2.18). In addition, bus services which are provided by general private operators can be divided into three types which are regular buses, air-conditioned buses and minibuses, besides, small firms are mostly managed by individuals such as Pacharin Kasiviriyawong, Payoa Aonbangnoi and Pichet Kummuchpol.

Table 2.17
The Daily Allowance Rates of Each Type of Buses¹⁷

Unit: baht per day

Types of Buses	Bus Drivers	Conductors
White-Yellow Buses ¹⁸	120	80
Air-conditioned Buses ¹⁹	200	200

Source: Interviewed from the conductor of one company.

Note: the rate will be different between companies.

The large private bus services companies normally provide many routes. According to Table 2.18, there are few of large private operators since the data collection is constrained in such a way that private operators rarely disclose their data to public. Under this constraint and limited time, the author has to choose the large private bus services firms which are willing to disclose their data for this study. Wangsakarnkij Company, Sahakhonsong Thonburi Company and minibuses are the representatives of large private operators that are willing to disclose their data for this study in order to compare their organization and operation with BMTA. Besides, Union Bus Service Group Company which has many operations zones and operators of each zone can manage themselves. However, the author can collect data from this company only in Rangsit zone (route 29 and 504), therefore, the author will use this company as the representative of small private operators in order to measure the technical efficiency in this study.

In conclusion, the selected private operators of this study are Sahakhonsong Thonburi Company Wangsakarnkij Company, Union Bus Service Group Company, and minibuses.

The following section will demonstrate brief details of each private bus services company in this study. Union Bus Service Group Company, Wangsakarnkij

¹⁷ Rates will be different depend on each firms.

¹⁸ By interview the private operators.

¹⁹ By interview the conductors of air-conditioned bus.

Company and Sahakhonsong Thonburi Company Union Bus Service Company, and minibuses will be discussed respectively.

Table 2.18
The Lists of Some Private Operators in Bangkok and Numbers of Bus Routes

Company	Bus Routes
Regular Buses	
Sahakhonsong Thonburi	29 39 57 146 149 157 159 163 164 169
Bangkok Transport	109 110 113 115 116 124 125 127 146 147
Ladkrabang Transport	28 38 108 143 151 152
Pichet Kammuchpol	28 43 83 108 120 167
Union Bus Service Group	187 188
Others (firms that provide bus service one or a few routes)	6 8 9 10 14 17 19 25 27 30 35 39 40 44 46 48 51 52 56 58 64 69 81 85 89 92 98 99 104 120 123 126 131 132 133 139 144 150 154 162 175 182 187 188 201 207
Air-conditioned Buses	
Wangsakarnkij	170 171 172 173 174 177 183 528 529 544 548
Union Bus Service	7 29 68 84 504 523 533 537 547
Premium Management	549 550 551 552 552A 553 554 558
S.K. Tour and Service	92 506 507 538
Nithitas Tour and Transport	69 104 150
Others (firms that provide bus service one or a few routes)	8 28 40 44 99 113 115 139 140 207 524 539 542 545

Source: BMTA Monthly Report. (2008, October).

Union Bus Service Group Company

Union Bus Service Group Company was established since 1991. There are many zones of operations such as Rangsit zone, and Phutthamonthon Sai 4 zone and each zone operator can manage itself individually²⁰. In part of the operation of Union Bus Service Company (Rangsit zone), the buses they use were purchased from BMTA. Air-conditioned buses are normally checked by the company own maintenance technicians every month. This company provides air-conditioned buses number 29 and 504, the maximum and the minimum number of buses of the concessions for each route are 50 and 35 respectively. At present, there are about 100 buses that are providing services in two routes that cover the numbers of concessions. The services are divided into two shifts a day. The buses use diesel. Fuel expense is collected from bill²¹.

Wangsakarnkij Company and Sahakhonsong Thonburi Company

Wangsakarnkij Company and Sahakhonsong Thonburi Company are operated under the same ownership. Wangsakarnkij Company started its operation in 1995. All are air-conditioned buses. While Sahakhonsong Thonburi Company started its operation in 1954 and all of the buses they provide for services are regular buses. Although, their head office is on Chakpra road, there are several zones of operations around Bangkok. These two companies both have large number of buses. The maintenance principle is that the engines are normally checked every three months and will only be fixed in the case of the problems²². The numbers of buses which belong to these two firms are as high as BMTA's bus. Besides, there are large market shares in this industry comparing to other private operators. According to the information from the interview with the manager of depot of Wangsakarnkij Company on August 25, 2009, these two companies' buses can be divided into three parts which are service-providing part, rental bus for other private operators and the rest of the bus for replacing the companies' repaired buses. Table 2.19 shows the

²⁰ By interview the manager of Union Bus Service Group Company, Rangsit zone.

²¹ Interview with the Manager of Premium Management Company on June 22, 2009. This company replaces the Union Bus Service Group Company to provide the service. They use new buses replace the old buses that purchased from China. But the others conditions are the same.

²² By interview the manager of depot of Wangsakarnkij Company on August 25, 2009.

expenditure and revenue of Wangsakarnkij Company and Sahakhonsong Thonburi Company in 2007.

Table 2.19
Expenditure and Revenue of Wangsakarnkij Company and Sahakhonsong Thonburi Company in 2007

Unit: baht

Companies	Expenditure	Revenue
Wangsakarnkij	362,974,256	437,758,217
Sahakhonsong Thonburi	259,648,089	312,166,453

Source: Wangsakarnkij Company and Sahakhonsong Thonburi Company

Note: Expenditure consists of salary, maintenance, concession payment to BMTA and fuel expenses.

Minibuses

Minibuses entered the bus service business in 1990. This group of buses is quite different from other private operators. The minibus operators have their own buses, in addition, they do not have their own permanent officers but they let people rent their bus for providing bus service. The bus drivers have to pay daily rental to bus owners. The different rental rates depend on the demand in each area (depends on the numbers of passengers). The difference of operating regulation of minibus from other private bus companies is that one minibus will be run by only one bus driver and one conductor while the others private operators companies set two shifts for drivers and conductors for one bus per one day. In one day, the minibus drivers have to run the bus for six rounds in order to maximize level of numbers of trips. It could be normally heard saying about bad manner of minibuses drivers due to the fact that minibus drivers try to get as many passengers as possible regardless of whether or not they will cause any problem to other buses and cars on the road²³.

²³ By interview one of the minibus operators.