## Institutional System of Urban Bus Transport in Yangon, Myanmar\*

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#### 1. Introduction

Yangon is the ex-capital of the Union of Myanmar. It is the country's largest city and the most important commercial center. Note that the Myanmar government relocated the capital to Naypyidaw since March 2006. Under the military government, Yangon City is now controlled by the Ministry of Home Affairs and Yangon City Development Committee (YCDC). As of 2007, Yangon City has about 4.1 million people in the area of 598.76 km<sup>2</sup> 1). The City's population keeps increasing at 15.1 % of the annual growth rate<sup>1)</sup>. The population of the City including the suburban areas is about 6.7 million and it also keeps increasing at 18.7% of the annual growth rate. Most of the urban residences reside or work in the central area called the central business district or the urban area of the City. The central business district is located at the Southern part of the City adjacent to the merging point of Yangon River and Bago River. Administratively, the City is divided into four districts and 33 townships. The districts are the North, East, West and the South.

There are mainly four types of transportation modes available in Yangon: private car, rail, taxi and bus. According to Zhang et al.<sup>2)</sup>, the modal shares of private car, rail, taxi and bus are 3 %, 84 %, 6 % and 5 % respectively. According to the local government's data<sup>3)</sup>, the car ownership per capita in Yangon is about 0.025 in 2003. Note that the passenger cars per capita are 0.001 in Myanmar in 1990 whereas they are 0.482 in U. S. and 0.433 in Japan in 2003<sup>4).</sup> The low car ownership in Yangon is mainly because the most of local people cannot afford to purchase their private car due to their low income. Since the import of car is strictly regulated, the motor vehicles in the city are mostly second-handed cars. However, the price of cars is much higher than their income level, for example, the average annual income per household is about 219 US

dollar<sup>5)</sup> while the market price of an ordinary second-handed private car is over 1,000 US dollar (according to our interviews with local people). Although there is a circular rail network in the City, which runs a 45.9 km with 39 stations that connects Yangon's satellite towns, it has not been well utilized. This is because of its low service quality. The actual average running speed of rail service is less than 20km/h and its service frequency is every 60 to 120 minutes 5). Since the fare of rail service (10 Kyats per ride as of November 2008) is much cheaper than bus transportation (the minimum fare is 50 Kyats per ride as of November 2008), the rail is used mainly by low-income people. Furthermore, the rail stations are not equipped with Park and Ride facilities and feeder bus services are not regulated and infrequent. The motorcycle and bicycle are banned in the most of urban area in Yangon City. This means that the local people cannot use the motorcycle taxis or para-transit including the cycle rickshaws in the central business district. As the results of the difficulties of the car ownership, the low quality of rail service, and the regulation of motorbike and para-transit service in the central business district, the vast majority of urban transportation relies on the bus transportation.

Although the bus transportation is critically dominant in Yangon, its regulatory system and implementation have been rarely reported or analyzed so far. This is mainly because of the data availability. In our research, we survey the urban bus transportation in Yangon in the cooperation with the Government of Myanmar. Our research is a part of the study formulated in the Urban Public Transport Policy Framework<sup>6</sup>. This paper reviews the regulation system of urban bus transportation in Yangon by surveying the local



Figure 1 Road Network in Yangon

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bus market. We interview the bus-industry regulators, the bus control committees, individual bus owners, and bus workers to collect the data regarding the bus regulation framework and its operation in Yangon. The local interview surveys were made during September 15 to 23, 2008 and during November 9 to 21, 2008.

## 2. Regulation system on urban bus in Yangon

#### 2.1. Statutory framework of urban bus regulation

In Myanmar, there are the two laws to regulate the bus transportation: Road Transport and Inland Water Transport Law 1963 and Motor Vehicles Law 1946. Motor Vehicles Law 1964 covers the registration of motor vehicles; the license of owning the motor vehicles; the insurance of motor vehicles; the driving license; the control of traffic speed; and the offenses and penalties for violation. Motor Vehicle Rules 1989 was enacted under section 33 of Motor Vehicles Law 1964. This includes the registration of motor vehicles; vehicle maintenance; driving license; driving training school; terms and conditions of hired motor vehicles; the traffic rules for vehicles, pedestrians and cyclists.

According to these laws, there is no definition of bus in general. However, Motor Vehicles Rules 1989 prescribes that an urban bus is included in the category of "Hired Motor Vehicle". The regulations relating to "Hired Motor Vehicles" are shown in the Chapter 6 of Motor Vehicle Rules 1989 and Section 1 Preliminary of Road Transport and Inland Water Transport Law 1963. The "Hired Motor Vehicles" include not only the bus vehicles or trucks, but also taxies or other small-capacity vehicles. However, the motor cycle is not included in "Hired Motor Vehicle". This means that the taxi service by motor cycle is prohibited in Myanmar. Although there is no rule about a process to determine the bus fare, Section 108 of Motor Vehicle Rules 1989 defines the authorities who determine the rates of transport fares. To operate the "Hired Motor Vehicle", the operators are required to have business by law (Section 102, Motor Vehicle Rules 1989). Note that there is no law/act regarding the exception of antimonopoly or fair trade in Myanmar.

# 2.2 Bus Transportation Regulation: Implementation in Yangon

## (1) Main actors of urban bus service market in Yangon

There are the two types of local bus services in Yangon: the bus service given by bus companies and the bus service controlled by the bus control committees (BCCs). The bus companies are the large-scale private bus operators who own

the bus vehicles, hire the drivers/conductors and operate the urban bus service in Yangon. The two bus companies are now supplying the bus service in Yangon: the Golden City Link Co. (GCL) and the Union of Myanmar Economic Holdings Limited (UMEHL). The BCCs are the non-profit organizations which control the small-scale individual bus owners. The individual bus owners own the bus vehicles and lease the bus vehicles to the drivers and conductors. The individual bus owners must belong to one of the BCCs. There are a number of individual bus owners in Yangon. The bus operation and the fare are permitted by the Yangon Division Peace and Development Council (YDPDC). No subsidy program for the bus operation is given by the Government. No strategic urban transportation plan has been made officially so far.

#### (2) Permission system for bus operation

To operate the public transportation in Yangon, the bus operators are required to possess an operating license "B". Table 1 shows the types of operating licenses issued by the Transport Planning Department (TPD) in Yangon. When the application for operating license is submitted to the TPD, the TPD will request the Road Transport Administration Department (RTAD) to inspect the vehicle for operation. The RTAD will inspect the vehicle in accordance with the regulation. Then, they will report the results to the TPD. If the vehicle is accepted, the operating license B is issued to the applicant. The operating license B is valid for a year. The annual registration fee for the operation license B is 350,000 Kyats. The bus vehicles are inspected by the government officials every year.

Anyone who possesses the operating license B can apply for starting a new bus operation service. To start the new bus operation service, a bus company or a BCC shall submit its application to the YDPDC first. Then, the YDPDC proposes the application to the Yangon Division Supervisory Committee for Ensuring Secure and Smooth

**Table 1 Types of Operating License** 

Types of Operating License	Permitted to Operate
A	Freight Transportation
В	Public Transportation
С	Charter Transportation
D	Transportation According to Agreement
E	Transportation for Private Business

Source: Document from Road Transport Administration Department, interview Transportation. Although the individual bus owners are also allowed to apply for the new bus operation service, they are required to discuss with their corresponding BCC before the application. There is no regulation about the minimum fleet size to start the new bus operation. However, over 10 vehicles should be operated on any permanent bus route per day. Therefore, for example, any individual bus owner is not allowed to withdraw the bus service from a bus route where 10 or less than 10 vehicles are operated on the route by other operators than the corresponding bus owner. When the bus operators stop the bus service, they are required to notice it to the Government one week before at latest. When they change the service, they are required to notice it to the Government and get the approvals from the Government.

#### (3) Permission system of fare

Bus fare is strictly controlled by the YDPDC. When a bus company or a BCC wants to change its fare system, it must propose its plan to the YDPDC and get the permission from it. The decision-making process of bus fare system in the YDPDC is not clear. However, the YDPDC seemingly has the criteria to accept the proposals, which include the demand of bus service, the supply of existing bus service and the mobility of low-income people.

There are the two types of fare systems in Yangon: a distance-based fare system and a constant fare system. First, the distance-based fare system is introduced into the bus routes controlled by the BCCs except for some special bus routes. A unique distance-based fare system is shared among all the BCCs: the minimum fare is 50 Kyats; the fare rises by 50 Kyats for every 5-mile after 5-mile travel; and the maximum fare is 250 Kyats. Second, the GCL has the constant fare system. Its fare is 300 Kyats per ride. Third, the UMEHL has the two types of fare systems. The one is the constant fare system which is applied to the routes where the

air-conditioned city bus service is provided. Its fare is 200 Kyats per ride. The other is the distance-based fare system which is the same as that of BCCs. Generally, the bus fare is collected by the conductors serving in the bus vehicle or at the entrance of the vehicle. Note that the GCL exceptionally introduces the ticket system, in which the bus conductor sells the tickets for collecting the fare.

## (4) Control of service frequency

The service frequency of the bus operated by the bus companies is self-controlled, whereas the service frequency of the buses owned by the individual bus owners is controlled by the BCCs. The BCCs monitor the passenger demand as well as the service quality at each bus route of individual bus owners. To monitor the bus service, the BCCs install the control gates with a small office at each origin and destination of bus routes. The officers of BCCs are allocated to each gate and they record the timing when the bus vehicle arrives at or departs from the bus terminals. The BCCs sometimes change the service frequency flexibly on the basis of collected data. The individual bus owners are obliged to follow the BCC's requirements regarding the service frequency. In practice, each bus operator fixes the cycle time of bus operation in the bus route. If they do not keep the given cycle operation time, the penalties are given to the individual bus owners and drivers. Note that the bus drivers are not allowed to work for over 8 hours a day.

#### (5) Presentation of service information to the public

No time table of bus operation is available in Yangon with a few exceptions in some bus routes operated by the bus companies. There is no obligation for the bus operators to show the daily service frequency, the schedule of the first and the final buses and the travel time between stops. However, the information about the fare, the route, and the

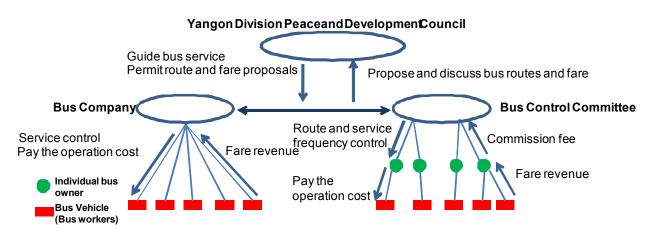


Figure 2 Relationship among bus regulator, bus company, bus control committee and individual bus owners

name of stops must be presented inside the bus vehicle.

## (6) Regulation of importing bus vehicles

The import of bus vehicles is strictly controlled by the Government of Myanmar. The Government Agency gives a license of bus vehicle import to the local trading companies. As of 2008, only two companies own the license of bus vehicle import. The first company has the business with the UMEHL while the second company has been permitted to import the bus vehicles only once so far. This means that, in Myanmar, the bus vehicle is actually imported by the monopolistic company which has the business with the UMEHL.

The individual bus owners cannot import the bus vehicle in principle. Exceptionally, the individual bus owners under the MaThaTha BCC can import the bus vehicles indirectly via the UMEHL. If the individual bus owners pay the deposit of 10 million Kyats to the MaThaTha BCC in advance, they can request the BCC to negotiate with the UMEHL about importing the new bus vehicles. It may mean that the MaThaTha BCC takes a role of the monopolistic bus dealer for the individual bus owners under them. Note that the individual bus owners who have imported the bus vehicles in the above process are not allowed to sell the imported vehicles to others. They are also not allowed to change the BCC from the MaThaTha BCC to another BCC.

#### (7) Regulation of fuel consumption

In 2005, the Government of Myanmar started to promote the introduction of compressed natural gas (CNG) engine into the bus vehicles. This reflects the fact that the CNG is cheaper than the other fuels in Myanmar because the country has produced the huge amount of CNG recently. As the most of bus vehicles in Yangon used to use the diesel engine, they were reformed into the bus vehicles with the CNG engine. To reform their vehicles, many individual bus owners borrowed the fund from the local banks. There are the five banks including the four governmental banks and a private bank that loan the fund to the bus owners to introduce the CNG engine. According to our interviews, the cost to convert from the diesel engine to the CNG engine is about 4 million Kyats. The individual bus owners borrowed 4 million Kyats from a bank under the condition that they pay them back within 2 years with 15% of annual interest rate.

As of November 2008, the Government regulates the

amount of daily diesel-consumption for any vehicle while it does not regulate the amount of daily CNG-consumption. According to our interviews, some BCCs impose the additional regulation of CNG-consumption on bus vehicles. Some BCCs issue a "slip" for the purpose of CNGconsumption control. The bus drivers are required to receive the slips at the control gate of bus terminals and to use them to purchase the CNG fuel. This means that the slip represents the BCC's permission for the bus drivers to purchase the CNG tanks at the CNG stations. The amount of CNG permitted by the slip varies among the BCCs. For example, a slip permits to purchase four CNG tanks per vehicle in the Eastern District BCC whereas a slip permits to purchase the five tanks including four regular tanks and one spare tank in the Northern District BCC. The UMEHL also introduces the regulations which prohibit the bus drivers from purchasing the unnecessary CNG tank, but it allows them to purchase the spare tanks by paying from their own fare revenue. Although the GCL does not introduce any regulation on the CNG-consumption, they monitor the amount of CNG consumed by each bus driver. The GCL introduces an original book "Moge" for recording the amount of CNG-consumption.

#### 3. Conclusions

This paper reported the regulation framework and reported the current practices of urban bus regulation in Yangon, Myanmar. The details of improvement of local bus operation should be investigated further more.

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