Urban Public Transportation in Viet Nam

- Improving Regulatory Framework -

December 1999
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Upon the establishment of JBIC, the Research Institute for Development and Finance (JBICI) was created as its research arm. Its research activities are geared toward improving the overall quality of JBIC's operations through systematic analysis of various issues and policies related to JBIC's activities. JBICI was established by merging the two former research institutes: the Research Institute for International Investment and Development (RIIID) of J EXIM and the Research Institute of Development Assistance (RIDA) of OECF.
Foreword

In 1992, the Overseas Economic Cooperation Fund, Japan (OECF), whose functions have been transferred to the Japan Bank for International Cooperation (JBIC), resumed providing the concessional loans to Viet Nam. The ODA loan commitments to Viet Nam aggregated 506.4 billion yen, or approximately US$ 4.6 billion, consisting of 56 loans as of March 30, 1999. These ODA loan projects are mainly for physical infrastructure development. JBIC, as a major donor agency in Viet Nam, needs to focus upon the regulatory and institutional improvements to make every development effort much more effective. This study aims at examining the regulatory improvements for the promotion of public transportation in Hanoi and Ho Chi Minh City.

The study team was formed by Naohiro Kitano, Director, and Kengo Mizuno, Economist, Research Institute for Development and Finance (JBICI), and Minoru Shibuya, Executive Director, Toshiaki Kudo, Consultant, and Junji Shibata, Consultant, Pacific Consultants International, and Masashi Hattori, General Manager, Pacific Consultants.

The study team and I appreciate the cooperation given by Vietnamese governmental bodies, i.e. Ministry of Planning and Investment, Ministry of Transport and the People’s Committees of Hanoi and Ho Chi Minh City, especially, the Hanoi Authority for Planning and Investment, Department of Planning and Investment and the Transport and Urban Public Works Service in each city. Thanks also goes to other workshop participants including, but not limited to, the Transport Development Strategy Institute, World Bank, Asian Development Bank, the Embassy and General Consulate of Japan and the Japan International Cooperation Agency. We are very grateful as well to the advisory group, which consisted of Le Dam Hanh, Research Staff, Institute for Transport Policy Studies, Hitoshi Kawada, Transportation Planner, Osaka City Government, Tetsuo Kidokoro, Senior Research Adviser to JBICI, Associate Professor, University of Tokyo, Hisashi Kubota, Associate Professor, Saitama University, and Hirotaka Yamauchi, Professor, Hitotsubashi University.

December 1999

Koichi Kosumi
Executive Director
Research Institute for Development and Finance
Japan Bank for International Cooperation
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<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
</tr>
<tr>
<td>BPPT</td>
<td>Bus Public Passenger Transportation</td>
</tr>
<tr>
<td>DFID</td>
<td>Department for International Development, U.K.</td>
</tr>
<tr>
<td>DPI</td>
<td>Department of Planning and Investment, HCMC People’s Committee</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GRP</td>
<td>Gross Regional Product</td>
</tr>
<tr>
<td>HAPI</td>
<td>Hanoi Authority for Planning and Investment, HPC</td>
</tr>
<tr>
<td>HBC</td>
<td>Hanoi Bus Company</td>
</tr>
<tr>
<td>HCMC</td>
<td>Ho Chi Minh City</td>
</tr>
<tr>
<td>HPC</td>
<td>Hanoi People’s Committee</td>
</tr>
<tr>
<td>JBIC</td>
<td>Japan Bank for International Cooperation</td>
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<tr>
<td>JBICI</td>
<td>Research Institute for Development and Finance, JBIC</td>
</tr>
<tr>
<td>JICA</td>
<td>Japan International Cooperation Agency</td>
</tr>
<tr>
<td>MOCPT</td>
<td>Management and Operation Center for Public Transportation</td>
</tr>
<tr>
<td>MOF</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>MOT</td>
<td>Ministry of Transport</td>
</tr>
<tr>
<td>MPI</td>
<td>Ministry of Planning and Investment</td>
</tr>
<tr>
<td>ODA</td>
<td>Official Development Assistance</td>
</tr>
<tr>
<td>OECF</td>
<td>Overseas Economic Cooperation Fund, Japan</td>
</tr>
<tr>
<td>PMU</td>
<td>Project Management Unit</td>
</tr>
<tr>
<td>RPI</td>
<td>Retail Price Index</td>
</tr>
<tr>
<td>SAPROF</td>
<td>Special Assistance for Project Formation</td>
</tr>
<tr>
<td>TDM</td>
<td>Traffic Demand Management</td>
</tr>
<tr>
<td>TDSI</td>
<td>Transport Development Strategy Institute</td>
</tr>
<tr>
<td>TUPWS</td>
<td>Transport and Urban Public Works Service</td>
</tr>
<tr>
<td>WB</td>
<td>World Bank</td>
</tr>
<tr>
<td>VND</td>
<td>Viet Nam Dong</td>
</tr>
</tbody>
</table>
Executive Summary

Introduction

Viet Nam is experiencing rapid urbanization and motorization owing to economic development after the introduction of Doi Moi policy. Urban transportation problems such as traffic congestion and air pollution are becoming important challenges for the nation’s two major cities of Hanoi and Ho Chi Minh. This study outlines the current status and issues of motorcycle-dominated urban transportation in both cities, reviews the present regulatory framework regarding the bus transportation, and recommends the regulatory improvements for the promotion of public transportation.

Chapter I  Current Status and Outlook of Urban Transportation

Characteristic of Urban Transportation

Motorcycle ownership rates at both cities are extremely high, nearing 250 vehicle per 1,000 person (Figure 1), and the modal shares of motorcycle and bicycle exceed ninety percent. High usage of motorcycle can be explained by three reasons, i.e. no driver’s license obligation, its asset value and convenience (Table 1).

<table>
<thead>
<tr>
<th>Reason</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>No driver’s license obligation</td>
<td>No driver’s license is required when driving motorcycle of smaller than fifty-cc displacement.</td>
</tr>
<tr>
<td>Asset value</td>
<td>The price of used motorcycle does not depreciate significantly (e.g. USD 2,300 for new one versus USD 2,000 for used one, in the case of the most popular Honda Dream II). Motorcycle holds asset value among others like real estate and gold.</td>
</tr>
<tr>
<td>Convenience</td>
<td>The city area is not still wide enough, so that people can commute almost everywhere easily by motorcycle.</td>
</tr>
</tbody>
</table>
The modal shares of bus, which is practically the only public transportation mode, account for less than six percent, and are very lower than other Asian cities (Figure 2).

![Modal Split Comparison among Asian Cities](image)

Source: Each city's statistics

**Figure 2: Modal Split Comparison among Asian Cities**

**Urban Transportation Policy and Planning**

Master Plans of both cities expect that populations will be nearly doubled by 2020 and urbanized areas will largely spread out beyond the city boundaries. Both Plans target to develop decentralized spatial structure with expanded road network (Table 2).

“The Master Plan of Urban Transport for Hanoi City in Viet Nam” was prepared by JICA in 1997, and “HCMC Transport Study” by DFID in 1998. Both studies estimate the capital requirement, but its financing sources are not so fully examined because both cities’ detailed budgets has not been disclosed.

**Table 2: Development Framework**

<table>
<thead>
<tr>
<th></th>
<th>Present</th>
<th>Projection/Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1997</td>
<td>2005</td>
</tr>
<tr>
<td>Population (thousand)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hanoi</td>
<td>1,312</td>
<td>1,730</td>
</tr>
<tr>
<td>HCMC</td>
<td>4,990</td>
<td>6,200</td>
</tr>
<tr>
<td>Road space against city area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hanoi</td>
<td>7.7%</td>
<td>n.a.</td>
</tr>
<tr>
<td>HCMC</td>
<td>7.0%</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Note: HCMC has much wider area thus the percentage of road space at present is lower than Hanoi. But in the city center HCMC has spacious grid roads.

Source: Each city's Master Plan 2020

**Outlook of Urban Transportation Development**

Increasing commuter needs and extending trip length will together generate huge traffic volume in both cities. Modal shift from motorcycle to motorcar is also emerging, and is anticipated to bring about heavy traffic congestion and severe air pollution. For the decentralization of spatial structure targeted by the Master Plans, the public transportation mode linking the city center with suburbs is indispensable, since
motorcycle is not so suitable for longer trip length.

The People’s Committees of both cities put high priority on the promotion of bus transportation, bearing in mind the possibility of future upgrading to higher capacity modes such as LRT and MRT in the mid- and long-term perspective. According to the transportation studies of both cities, the modal shares of public transportation (i.e. bus) are estimated to increase to nearly ten percent in 2020 (Table 3), and in Hanoi, for example, the number of bus vehicles required will reach approximately 3,000 in 2010 and 4,000 in 2020, while the figure at present is less than one hundred.

### Table 3: Projection of Modal Share of Public Transportation

<table>
<thead>
<tr>
<th></th>
<th>Present</th>
<th>Projection/Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hanoi 3.3 mil. (1995)</td>
<td>8.9 mil.</td>
</tr>
<tr>
<td>Travel demand</td>
<td>Hanoi Policy Goal</td>
<td>n.a. 50%</td>
</tr>
<tr>
<td>(the number of trips)</td>
<td>JICA Study 3.6% (1995)</td>
<td>9.5%</td>
</tr>
<tr>
<td></td>
<td>Hanoi Policy Goal</td>
<td>n.a. 50%</td>
</tr>
<tr>
<td>Modal share of public transportation</td>
<td>HCMC DFID Study 5.5% (1996)</td>
<td>8.5%</td>
</tr>
</tbody>
</table>

Note: Figures of HCMC refer only to data of the AM peak hour.
Source: Each transportation study

Chapter II Overview and Regulatory Issues of Bus Transportation

Overview of Bus Transportation

Bus operation within both cities are basically monopolized by the municipal bus companies under each TUPWS (Table 4). In the early 1980s, the modal shares accounted for twenty-five to thirty percent, but the number of bus routes and the frequency have decreased after Doi Moi, when subsidies for public companies began to get curtailed.

In Hanoi, an entry proposal for the bus business was made by a Korean conglomerate in the mid 1990s, but was rejected because the authority and the conglomerate could not agree upon the investment scale and fare level etc. In HCMC, an Australian investor formed a join-venture with the municipal bus company and entered upon the business in 1993, but withdrew for a financial reason in 1997.

### Table 4: Outline of Municipal Bus Companies

<table>
<thead>
<tr>
<th></th>
<th>The number of companies</th>
<th>The number of registered vehicles</th>
<th>The number of passengers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hanoi (1997)</td>
<td>1</td>
<td>83</td>
<td>18,000</td>
</tr>
<tr>
<td>HCMC (1998)</td>
<td>2</td>
<td>86</td>
<td>16,000</td>
</tr>
</tbody>
</table>

Note: This table excludes minibus cooperatives, mainly serving suburban routes.
Source: Each transportation study
Regulatory Issues of Bus Transportation

Bus business generally has a competitive and contestable nature that provides an easy access for the private sector to enter into the market. In both cities, however, the public sector plays a dominant role as regulator-operator. Regulatory framework is designed mainly for the municipal bus companies, and thus holds the following issues in the light of the private investment.

- **Unclear and complicated procedures:** The entry proposals are assessed throughout the relevant authorities including MOCPT, TUPWS, HAPI/DPI, People's Committees, MOT and MPI, but the regulations don't strictly define who evaluates what with what criteria.

- **Huge capital investment requirement:** The authorities expect candidates from the private sector, especially foreign investors, to equip a large number of buses, e.g. more than 100 vehicles, and thus impose harder hurdle for small-scale operators who are active in suburban and inter-city services.

- **Limited operational autonomy:** The operators must comply with the approval on almost every operational aspect, e.g. routes, operation hours, frequency etc., and can not flexibly alter it on demand.

- **Rigid fare regulation:** The fare level is regulated politically very low. Rigid fare regulation discourages the private investment, and rather shrinks the bus services.

- **Ineffective subsidization:** Subsidy is calculated by a vehicle-kilometer basis, and is offered only to the municipal bus companies. But this method does not give them an incentive to achieve efficiency gains.

Chapter III  Measures for Regulatory Improvements of Bus Transportation

Proposals by the Both Cities

For the promotion of bus transportation, each TUPWS proposed, to the respective People's Committees and MOT, policy instruments such as vehicle procurement by ODA and reduction of tax and levy for the municipal bus companies. These instruments, however, aim to enlarge the preferential treatment for the municipal bus companies under the current regulatory framework. Meeting the public transportation needs in the future only by the public sector could not solve the existing constraints and would not develop the bus transportation market.

Recommendations of This Study

In order to promote the private investment to the bus business, a business-friendly environment, under which the private sector can operate and compete flexibly, must be enhanced. This study, therefore, recommends to redesign the regulatory framework for increased clarity, flexibility and efficiency as follows.

- **Simplified and clarified procedure:** The operator (municipal bus company) and the regulator (MOCPT) must not be under the same authority (TUPWS), to secure the
fair competition between the incumbent and the newcomer. MOCPT should be separated from TUPWS and vested with much authority to simplify the procedures and to clarify who is responsible for what in evaluating entry proposals.

- Lowered capital investment requirement: Huge capital investment requirement should be lowered or repealed for an easy entry to the bus business, so that the new, additional and upgraded services are offered to the potential users who have neither access nor convenience to ride the buses at present.

- Increased operational autonomy: The operator must be given a greater operational autonomy for flexible service delivery. The operator needs not apply for an approval on, but should notify of, every little operational aspects such as route, operation hour, and frequency.

- Deregulated fare control: To make the bus business much more attractive for the private sector, the maximum fare level can be somewhat raised with an introduction of the price-cap control, under which the operator is allowed to flexibly set the fare level below the maximum. Otherwise, the bus transportation might get shrunk further without capturing new private investments.

- Rationalized subsidization: Subsidy must not deprive the operator of an incentive to become cost-effective. The receiver of subsidy should compete for either better service quality under the same subsidy amount or lesser amount keeping the same quality.

Pilot projects, such as bus-dedicated lanes with limited-terms in selected routes, can be also considered to demonstrate usefulness of the bus service for the citizens, marketability for the investors, and policy directions of the People’s Committees for both of them. Lessons to be learned from the pilot project will help materialize the regulatory improvements and hence promote the public transportation.
Introduction

Background and Objective of the Study

Viet Nam is experiencing rapid urbanization and motorization owing to economic development after the introduction of Doi Moi policy. Urban transportation problems such as traffic congestion and air pollution are becoming important challenges for the nation's two major cities of Hanoi and Ho Chi Minh.

OECF, whose functions have been transferred to J BIC, had provided the ODA loans for the urban development from road to drainage in Hanoi, and had conducted the SAPROF studies on transportation infrastructure development of Hanoi and HCMC. As a major donor agency in Viet Nam, now J BIC also needs to focus upon the regulatory and institutional improvements to make every development effort much more effective.

This study aims at examining the regulatory improvements for the promotion of public transportation in Hanoi and HCMC. The study outlines the current status and issues of motorcycle-dominated urban transportation of both cities, reviews the present regulatory framework regarding the bus transportation, and recommends the regulatory improvements.

Methodology of the Study

In October and December 1998, the study team interviewed with relevant Vietnamese governmental bodies, donor agencies and private firms in Hanoi and HCMC. The advisory group provided valuable comments on the study findings and recommendations in Tokyo. The workshops, organized by the People's Committees of Hanoi and HCMC and OECF, were held in March 1999 in both Hanoi and HCMC to verify the study findings and to discuss the regulatory improvements recommended. The study team has tried to reflect information and comments obtained from interviews, advisory meetings and workshops in completing the report.

Composition of the Report

The report consists of three chapters. Chapter I examines transportation master plans, characteristics and outlook of urban transportation and its forthcoming challenges. Chapter II outlines bus transportation service in both cities and examines its scheme and issues of regulatory framework. Chapter III reviews policy instruments adopted or proposed by the Vietnamese authorities, and recommends the regulatory improvements for the promotion of public transportation in Hanoi and HCMC.
Chapter I

Current Status and Outlook of Urban Transportation

This chapter examines transportation master plans, characteristics and outlook of urban transportation and its forthcoming challenges.

1.1 Transportation Master Plan

(a) Development framework

Hanoi has achieved rapid economic development at an average growth rate of around 11% per annum since the Doi Moi policy. HPC envisages the following economic development targets: 14-15 % (1996-2000), 12-13% (2001-2010) and 11-12 % (2011-2020). That is expected to result in higher share to the national economy, accounting for 17-18% of the GDP in 2020 from 6.5% in 1995.

Hanoi had a population of 2,490 thousand in 1997, with an urban population of 1,312 thousand and its vicinity of 1,177 thousand. The projected population of the Hanoi Capital Region for the year 2020 is as shown in Table 1.1. Total population in the Hanoi Capital Region is to be 4.5 million and of Hanoi proper 2.5 million with an average density of 100 persons/ha.

Table 1.1 Population Projection of Hanoi Master Plan 2020

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I Hanoi Capital Region</td>
<td>1,433</td>
<td>2,465</td>
<td>4,500</td>
</tr>
<tr>
<td>II Hanoi City</td>
<td>1,312</td>
<td>1,725</td>
<td>2,500</td>
</tr>
<tr>
<td>II-1 Development Restricted Area (South Hanoi City)</td>
<td>900</td>
<td>839</td>
<td>800</td>
</tr>
<tr>
<td>II-2 The Right Bank of Red River (South Hanoi City)</td>
<td>322</td>
<td>566</td>
<td>700</td>
</tr>
<tr>
<td>II-3 The Left Bank of Red River (North Hanoi City)</td>
<td>89</td>
<td>320</td>
<td>1,000</td>
</tr>
<tr>
<td>III Urban area of satellite cities and well-balanced development area</td>
<td>84</td>
<td>390</td>
<td>1,500</td>
</tr>
<tr>
<td>IV Western Satellite Cities</td>
<td>54</td>
<td>280</td>
<td>1,000</td>
</tr>
<tr>
<td>V Northern Satellite Cities</td>
<td>31</td>
<td>110</td>
<td>500</td>
</tr>
<tr>
<td>IV Other Satellite Cities</td>
<td>294</td>
<td>350</td>
<td>500</td>
</tr>
</tbody>
</table>

Source: Summary Report of the Master Plan 2020 of Hanoi City, HPC

1 Urban area consists of urban districts: Hoan Kiem, Dong Da, Hai Ba Trung, Ba Dinh, and Tay Ho; and rural area, Soc Son, Dong Anh, Gia Lam, Tu Liem, and Thanh Tri.
2 The Hanoi Capital Region stretches an area of 30-50 km radius from the center of Hanoi.
3 The area category for population projection is not necessarily compatible to the administrative area definition because the Hanoi Master Plan does not specify the area by stating the names of districts.
(b) Transportation master plan

Road network

Hanoi has a well developed street system in the central districts including Hoan Kiem, Hai Ba Trung, Dong Da and Ba Dinh. The urban street system has in general a grid and circumferential shape with some missing links, and its carriage-way width is generally narrow, around 10 meters on average. Three major arterial roads, namely National Highway No.1, No.6 and No.32 are connected to the densely inhabited urban area. These arterial and radial roads meets the Ring Road 2, which is the only ring road that presently functions. In recent years, housing development has been expanded outwards from the old urban area alongside those radial roads. River-crossings over Red River are only at two bridges of Thang Long and Long Bien at present.

Since there are very few public transportation services available at new housing areas as well as along less developed secondary arterial and local roads, most of the travel demand generated from the areas are mechanized (motorcycle) and use the major arterial roads connecting to the central area, generating heavy traffic volumes on those major roads.

To achieve the above mentioned development framework and to overcome such bottlenecks in the road network, more ring roads and more river-crossings are planned to form a functional road network. Figure 1.1 shows the future road network and urban structure envisaged in the Hanoi Master Plan 2020. The road network will connect six suburban centers between the Third and Fourth Ring Roads. And the radial roads are to be linked to the satellite cities 30 to 50kms off from the city center.

Target of road provision in 2020 is 25% to 30% in urbanized area in terms of road land share to the total city area. Significant effort must be made to meet this target, because the current level is only around 7.7%, with the highest rate of 22.9% for Hoan Kiem district and the lowest rate of 3.2% for Dong Da district.

Public transportation

According to "The Master Plan of Urban Transport for Hanoi City in Viet Nam" prepared by JICA in 1997, the number of daily trips made by public transportation will increase from 124 thousand trips, or 3.6% of the total trips in 1995, to 963 thousand trips, or 9.5% of the total trips in 2015. The number of buses required will reach approximately 3,000 in 2010 and 4,000 in 2020, while the figure at present is less than one hundred. On the other hand, the target modal share of public transportation is set by HPC at 50% in 2020. According to the TUPWS’s bus plan, the bus is hoped to serve 13% of the total trips in 2002 as an interim target.

For the promotion of public transportation, MOCPT, a subordinate organization of TUPWS, has been making continuous efforts to improve bus transportation in the city. And urban railway system in Hanoi is under a feasibility study by German aid.

4 Roads of round 190 km in length are existing in an area of 49 km²
Figure 1.1 Spatial Structure of Hanoi in 2020
(2) HCMC\(^5\)

(a) Development framework

HCMC is the economic center of the country, with a share of 18.6% to the national GDP in 1997. HCMC’s economy is growing at an average of around 13-14% per annum recently. HCMC has a population of 4,990 thousand in 1997 as shown in Table 1.2 below. HCMC is forecast to hold a population of 6.2 million in 2005 and 9 million in 2020.

<table>
<thead>
<tr>
<th>HCMC Total</th>
<th>1997</th>
<th>2005</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development restricted area (12 old districts)</td>
<td>3,541</td>
<td>3,580</td>
<td>3,600</td>
</tr>
<tr>
<td>Newly developed urban area (5 districts)</td>
<td>612</td>
<td>1,270</td>
<td>2,650</td>
</tr>
<tr>
<td>Suburb area (five districts) including new towns, residential areas adjacent to concentrated industrial parks and rural areas.</td>
<td>837</td>
<td>1,350</td>
<td>2,750</td>
</tr>
</tbody>
</table>

Source: Amended HCMC Master Plan 2020

(b) Transportation Master Plan

Road network

There is lack of a comprehensive secondary arterial road system, in particular outside the city center. The central area has a grid road system which is closely spaced and most of the buildings alongside the roads are shop-houses, thereby leading to heavy roadside traffic friction.

Since a series of high-standard radial roads, including four National Highways (No. 1, No. 13, No. 22, and No. 52) and three provincial roads plunge into the narrower roads of the central area, heavy traffic congestion is observed on these roads during peak hours. A system of ring roads may contribute to solving the problem, which however, has been only partially developed as of 1998. Besides, it would take much time and cost to expand the road capacity in the central area by widening constructing new surface roads.

Overcoming the present bottlenecks of the urban road network is the major task. As shown in Figure 1.2, an inner ring road will be developed to encircle the area. In addition, an outer ring road will be developed covering the newly developed urban area.

The target of road infrastructure development in percentage of road land to the city area is 20-30% in 2020 as depicted in the HCMC Master Plan 2020. In other words, that accounts for a road area of 17-20 square-meter per capita. Similar to the situation in Hanoi, this is a severe challenge considering that the present level is 7%, or 2.48 square-meter per capita.

---

5 HCMC consists of 17 districts and five suburban districts that are: twelve existing urban district: Districts 1, 2, 3, 4, 5, 6, 8, 10, 11, Go Vap, Tan Binh, Binh Thanh, and Phu Nhuan; five newly developed districts: Districts 2, 9 Thu Duc, 12 and 7; and five suburban districts: Cu chi, Ho Chi, Binh Chanh, Nha Be and Can Gio.
Public transportation

According to “HCMC Transport Study” by DFID in 1998, the modal share of public transportation will grow from 5.5% of the total trips made during the morning peak two hours to 8.5% in 2020. On the other hand, the target share of public transportation is set at 20-30% in 2000, and 50% in 2020.

The bus plan, prepared by MOCPT of HCMC for the promotion of public transportation, is rather oriented to physical development including construction of transit malls and bus maintenance workshops and purchasing bus fleets. Pre-feasibility study on railways/subways have been already studied by a German university.

Source: HCMC Mater Plan 2020

Figure 1.2 Spatial Structure of HCMC in 2020
1.2 Characteristics and Outlook

(2) Increasing Motorization

(a) Motorcycle driven society

Car ownership in Hanoi and HCMC has still been very low, which is following the experiences of other Asian cities as shown in Figure 1.3. Instead, motorcycle ownership in both cities is extremely high in comparison even with the countries of a middle income group. The motorcycle ownership has reached around one motorcycle per household in both cities.

Source: Each city's statistics

Figure 1.3 GRP per Capita and Vehicle Ownership

Accordingly the modal share of motorcycle among the mechanized trips is very high. An urban transportation study in Hanoi\(^6\) indicates that the modal share of the motorcycle is estimated at 92% (including bicycles). While the HCMC Transportation Study\(^7\) indicates that 93% of the mechanized trips are made by motorcycles (including bicycles) in HCMC. Although the shares of motorcar are still low in both cities, the cities have been transformed into a much "motorcycle driven society."

Source: Each city's statistics

Figure 1.4 Modal Share of Major Asian Cities

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\(^6\) The Master Plan of Urban Transport for Hanoi City, JICA (1997)

\(^7\) Ho Chi Minh City Transport Study, DFID, UK (1998)
(b) Increase in motor vehicles

**Hanoi**

The number of registered motorcycles increased from 390,000 in 1994 to about 462,000 in 1995 at an annual growth rate of 18.5% (Table 1.3). The number of bicycles was estimated at 790,000 in 1994. The total number of registered vehicles was 47,261 in 1995. The absolute number of the registered vehicles has grown from a mere 3,501 in 1986 to some 47,261 in 1995 at an average annual growth rate of 33.5%.

**HCMC**

HCMC had about 1.4 million motorcycles and 81,000 cars and other vehicles in 1996 as shown in Table 1.4. Though the level of passenger car ownership is still very low, there has been a distinct shift toward passenger cars. The number of passenger cars accounted in 1990 for about 33.8% of all registered vehicles, and its share increased to 46.9% in 1996.

**Table 1.3 Number of Registered Vehicles in Hanoi**

<table>
<thead>
<tr>
<th>Year</th>
<th>Passenger Car</th>
<th>Van</th>
<th>Light Bus</th>
<th>Medium Bus</th>
<th>Heavy Bus</th>
<th>Light Truck</th>
<th>Medium Truck</th>
<th>Heavy Truck</th>
<th>Other</th>
<th>Total Registered</th>
<th>De-registered</th>
<th>Total Exist</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td>902</td>
<td>1</td>
<td>92</td>
<td>4</td>
<td>26</td>
<td>3</td>
<td>1213</td>
<td>192</td>
<td>1068</td>
<td>3501</td>
<td>1138</td>
<td>2363</td>
</tr>
<tr>
<td>1987</td>
<td>1469</td>
<td>2</td>
<td>142</td>
<td>7</td>
<td>75</td>
<td>6</td>
<td>2461</td>
<td>343</td>
<td>1677</td>
<td>6182</td>
<td>803</td>
<td>5379</td>
</tr>
<tr>
<td>1988</td>
<td>1843</td>
<td>3</td>
<td>170</td>
<td>9</td>
<td>131</td>
<td>11</td>
<td>3682</td>
<td>420</td>
<td>1974</td>
<td>8243</td>
<td>579</td>
<td>7664</td>
</tr>
<tr>
<td>1989</td>
<td>2798</td>
<td>154</td>
<td>341</td>
<td>24</td>
<td>232</td>
<td>22</td>
<td>7014</td>
<td>512</td>
<td>3329</td>
<td>14426</td>
<td>1604</td>
<td>12822</td>
</tr>
<tr>
<td>1990</td>
<td>3750</td>
<td>537</td>
<td>496</td>
<td>57</td>
<td>404</td>
<td>63</td>
<td>9012</td>
<td>528</td>
<td>6651</td>
<td>21498</td>
<td>1683</td>
<td>19815</td>
</tr>
<tr>
<td>1991</td>
<td>6502</td>
<td>1016</td>
<td>784</td>
<td>135</td>
<td>649</td>
<td>182</td>
<td>11847</td>
<td>535</td>
<td>10082</td>
<td>31732</td>
<td>1995</td>
<td>29737</td>
</tr>
<tr>
<td>1992</td>
<td>8190</td>
<td>1048</td>
<td>882</td>
<td>207</td>
<td>786</td>
<td>238</td>
<td>12547</td>
<td>538</td>
<td>11304</td>
<td>35740</td>
<td>646</td>
<td>35094</td>
</tr>
<tr>
<td>1993</td>
<td>10051</td>
<td>1175</td>
<td>1025</td>
<td>366</td>
<td>852</td>
<td>450</td>
<td>13209</td>
<td>539</td>
<td>11563</td>
<td>39230</td>
<td>169</td>
<td>39061</td>
</tr>
<tr>
<td>1994</td>
<td>11541</td>
<td>1355</td>
<td>1165</td>
<td>574</td>
<td>908</td>
<td>1066</td>
<td>13901</td>
<td>539</td>
<td>11684</td>
<td>42733</td>
<td>32</td>
<td>42701</td>
</tr>
<tr>
<td>1995</td>
<td>12581</td>
<td>1441</td>
<td>1250</td>
<td>646</td>
<td>952</td>
<td>2608</td>
<td>14942</td>
<td>547</td>
<td>12293</td>
<td>47261</td>
<td>10</td>
<td>47251</td>
</tr>
</tbody>
</table>


**Table 1.4 Changes in Composition of Registered Vehicles in HCMC**

<table>
<thead>
<tr>
<th>Year</th>
<th>Motorcycles</th>
<th>Cars</th>
<th>Buses</th>
<th>Goods Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>NA</td>
<td>12.3</td>
<td>9.9</td>
<td>14.2</td>
</tr>
<tr>
<td>1991</td>
<td>500</td>
<td>13.5</td>
<td>10.9</td>
<td>15.7</td>
</tr>
<tr>
<td>1992</td>
<td>NA</td>
<td>14.7</td>
<td>12.0</td>
<td>17.0</td>
</tr>
<tr>
<td>1993</td>
<td>NA</td>
<td>16.1</td>
<td>12.9</td>
<td>18.3</td>
</tr>
<tr>
<td>1994</td>
<td>844</td>
<td>17.5</td>
<td>14.0</td>
<td>19.8</td>
</tr>
<tr>
<td>1995</td>
<td>NA</td>
<td>19.4</td>
<td>15.3</td>
<td>21.4</td>
</tr>
<tr>
<td>1996</td>
<td>1400</td>
<td>38.0</td>
<td>18.0</td>
<td>25.0</td>
</tr>
</tbody>
</table>

Source: HCMC DPI, TUPWS and Traffic Police.

---

8 According to the household income survey conducted under the HCMC Transport Study, car ownership in HCMC seems to jump in the US$480 - $910 income group. A cross country analysis suggests that the threshold for private car ownership is usually US$1,000 per capita income.
(c) Reasons for high usage of motorcycle
High usage of motorcycle can be explained by three reasons, i.e. no driver’s license obligation, its asset value and convenience (Table 1.5).

<table>
<thead>
<tr>
<th>Reason Description</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>No driver’s license is required when driving motorcycle of smaller than 50cc displacement.</td>
<td>No driver’s license obligation</td>
</tr>
<tr>
<td>The price of used motorcycle does not depreciate significantly (e.g. USD 2,300 for new one versus USD 2,000 for used one, in the case of the most popular Honda Dream II). Motorcycle holds asset value among others like real estate and gold.</td>
<td>Asset value</td>
</tr>
<tr>
<td>The city area is not still wide enough, so that people can commute almost everywhere easily by motorcycle.</td>
<td>Convenience</td>
</tr>
</tbody>
</table>

(3) Decreasing Public Transportation
(a) Deterioration of urban public transportation
Modal shares of public transportation in Hanoi and HCMC were around 25-30% in early 1980’s, when there were about 60 bus routes and several tram lines in Hanoi. However, at present the bus transportation usage in Hanoi is considerably low, only 18,000 rider-ship a day. Likewise, the bus transportation usage in HCMC is also very low. The municipal bus companies (Hanoi Bus Company, Saigon Star, Saigon Bus) have limited number of vehicles (Table 1.6).

Table 1.7 shows that the number of bus per 1,000 population is just 0.18 (465veh/2.5mil. people: population in the urban districts), which is almost one-fifth of the Singapore’s figure in twenty years ago. Thus, the number of routes and service coverage are limited, besides bus stops are located far away from the newly developed residential areas and the quality of bus vehicles are generally very poor. Bus transportation at both cities are now no longer an attractive mode.

<table>
<thead>
<tr>
<th>Company</th>
<th>Fleet size</th>
<th>Allocation scheduled</th>
<th>Ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hanoi</td>
<td>213</td>
<td>196</td>
<td>State-owned</td>
</tr>
<tr>
<td>Hanoi Bus Company</td>
<td>196</td>
<td>State-owned</td>
<td></td>
</tr>
<tr>
<td>Tram Company</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HCMC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saigon Star</td>
<td>43</td>
<td>36</td>
<td>Joint venture</td>
</tr>
<tr>
<td>Saigon Bus</td>
<td>43</td>
<td>32</td>
<td>State-owned</td>
</tr>
<tr>
<td>Six Cooperatives</td>
<td>379</td>
<td>244</td>
<td>Cooperative (private)</td>
</tr>
<tr>
<td>Mini-bus cooperatives</td>
<td>2,577</td>
<td>658</td>
<td>Cooperative (private)</td>
</tr>
</tbody>
</table>

Source: Each MOCPT
Table 1.7 Number of Bus per Thousand People in Select Asian Cities

<table>
<thead>
<tr>
<th>City</th>
<th>Bus vehicles per 1,000 people</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangkok</td>
<td>1.22</td>
<td>1980</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>1.83</td>
<td>1980</td>
</tr>
<tr>
<td>Kuala Lumpur</td>
<td>1.18</td>
<td>1980</td>
</tr>
<tr>
<td>Singapore</td>
<td>2.70</td>
<td>1980</td>
</tr>
<tr>
<td>Jakarta</td>
<td>0.72</td>
<td>1980</td>
</tr>
<tr>
<td>Hanoi</td>
<td>0.16</td>
<td>1997</td>
</tr>
<tr>
<td>HCMC</td>
<td>0.18</td>
<td>1998</td>
</tr>
</tbody>
</table>

Source: Each city’s statistic

(b) People’s preference to buses

Travel Cost Comparison for Hanoi

The most popular new motorcycle in Viet Nam is Honda Dream II. The price of the new one is around 2,300 US$. According to the interviews in the field survey of this study, the price of used motorcycles may not differ significantly from that of the new products in the market (the price of used one is around 2,000 US$). Therefore, a depreciation cost of the motorcycle seems to be negligible.

Since the depreciation cost of motorcycle is valued at mostly zero, the cost to own and run motorcycle is very low in Hanoi, being estimated at 216 VND/km. Thereby, using a motorcycle within a distance of 4.5 km costs lower than buses (1,000VND/trip for regular bus in Hanoi). It indicates that there are no huge volume of bus users within the city center of Hanoi as far as motorcycles are available.

Travel Cost Comparison for HCMC

Fares in HCMC are set on a route by route basis. The fare for non-air conditioned buses varies from 150 to 200 VND/km, while from 200 to 300 VND for air-conditioned buses. Since there is no significant difference between bus and motorcycle in the unit cost, a cost for 10km travel by bus is lower than the motorcycle at 400 VND, which is not attractive enough for people in HCMC to use buss in terms of cost savings (Figure 1.5).

Figure 1.5 Bus Fare and Motorcycle Cost
(c) Affordable transportation expenditure

Household income in the city center is relatively high, reaching around 1.5 million VND per month in Hanoi. Comparison between the estimated monthly cost of motorcycle usage (134,800 VND) and average affordable transportation expenditures of a household suggests that most of the households in the central Hanoi can purchase, own and use one motorcycle without significant burden. Likewise, more than 40% of the households in HCMC can use motorcycles within their disposable expenditure on transportation.

(4) Increasing Traffic Volume and Congestion

As mentioned earlier, both cities will extend their urbanized area outwards as a result of increasing migrated people from rural areas and emerging relocation needs by urban redevelopment from downtown to suburbs. At the same time, several suburban centers will be developed to disperse/relocate the centralized function of the existing urban centers. Thereby, much larger travel demand with longer average travel distances will be expected.

(a) Future Traffic Demand

Hanoi

The total number of daily trips is expected to increase to three times as much as the current travel demand within the next twenty years. The motorcycle trip demand will sharply increase, reaching almost five times as much as the current trip (Table 1.8).

<table>
<thead>
<tr>
<th></th>
<th>1995</th>
<th>2015</th>
<th>Growth factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycle</td>
<td>2,606</td>
<td>4,183</td>
<td>1.6</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>1,345</td>
<td>6,521</td>
<td>4.8</td>
</tr>
<tr>
<td>Bus</td>
<td>239</td>
<td>1,840</td>
<td>7.7</td>
</tr>
<tr>
<td>Car</td>
<td>30</td>
<td>351</td>
<td>11.7</td>
</tr>
<tr>
<td>Truck</td>
<td>33</td>
<td>264</td>
<td>8.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4,254</td>
<td>13,158</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Note: “With new CBD and With Control” case
Source: The Master Plan of Urban Transportation for Hanoi City (1997), JICA

HCMC

The peak-hour travel demand will be mostly doubled in 2020 (Table 1.9). The modal share of car will reach 6.5%, while that of motorcycle will decrease from 76.5% to 65.2%. Since the passenger car unit (pcu) of cars is three to four times as much as that of the motorcycle, the increase of cars in HCMC will bring about much more severe impacts on the traffic congestion. A much faster modal shift to private cars could be expected since domestically produced 4-wheeled vehicles are now available at affordable prices, ranging 7,000 to 10,000 US$. 

Table 1.9 Predicted Traffic Demand in HCMC

<table>
<thead>
<tr>
<th></th>
<th>1995</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycle</td>
<td>1,460</td>
<td>2,228</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>1,231</td>
<td>2,115</td>
</tr>
<tr>
<td>Bus</td>
<td>248</td>
<td>2,188</td>
</tr>
<tr>
<td>Car</td>
<td>23</td>
<td>218</td>
</tr>
<tr>
<td>Truck</td>
<td>32</td>
<td>264</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4,391</td>
<td>5,905</td>
</tr>
</tbody>
</table>
Table 1.9 Predicted Traffic Demand in HCMC

(1,000 trips/morning peak hour)

<table>
<thead>
<tr>
<th></th>
<th>1996</th>
<th>2020</th>
<th>Growth factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycle</td>
<td>118</td>
<td>302</td>
<td>2.6</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>442</td>
<td>787</td>
<td>1.8</td>
</tr>
<tr>
<td>Bus</td>
<td>1</td>
<td>7</td>
<td>7.0</td>
</tr>
<tr>
<td>Car</td>
<td>13</td>
<td>78</td>
<td>6.0</td>
</tr>
<tr>
<td>Truck</td>
<td>4</td>
<td>33</td>
<td>8.3</td>
</tr>
<tr>
<td>Total</td>
<td>578</td>
<td>1,207</td>
<td>2.1</td>
</tr>
</tbody>
</table>

Note: “Trend scenario and Do Minimum Network” case
Source: Ho Chi Minh City Transportation Study (1998), DFID

(b) Traffic congestion

The average travel speeds in Hanoi is around under 20km/hr as illustrated in Figure 1.6 and that of HCMC is 13-26km/hr. They are slightly higher than those of Jakarta, Kuala Lumpur or Tokyo. In HCMC, the speed of four wheel vehicles has been decreased by 1-8 km/hr in the last three years, while that of motorcycles has been mostly unchanged. It is often pointed out that certain intersections are bottlenecks which causes traffic congestion in both cities.

When the share of four-wheeled vehicle soars further, the situation will become worse and both cities will face up with chaotic traffic congestion as like in Manila or Bangkok.

Source: Each city's statistic

Figure 1.6 Average Travel Speed in Major Asian Cities

9 According to JICA Study, most of the road in the city has traffic less than the capacity for motorized modes. However, many bicycles on the roads make the traffic speed slower down to 20km/hour. In HCMC, the average speed of motorcycles is 18-20km/hr according to DFID’s Study.
1.3 Forthcoming Challenge

(1) Public Transportation Development

Rapid urbanization and increasing population in the already dense city centers and in sprawling suburbs, will cause a huge demand on transportation mode capable of moving a large number of passengers and a huge quantity of freights. Most Asian major cities encountered urbanization and motorization concurrently, while they were equipped with neither enough road space nor LRT/MRT. Therefore, in those cities such transportation demand was unmet, resulting in air pollution, traffic jam and long travel times. In the early stages of traffic management, Asian major cities tried to develop efficient public transportation systems, primarily based on bus transportation. At later stages, the system was upgraded and linked to LRT, and eventually to MRT.

Figure 1.7 and Table 1.10 illustrate the developmental stage of urban growth and transportation, learned from the experiences of Asian cities. Based on such experiences, Hanoi seems to be at the late stage of the first level, and HCMC at the early stage of the second level. A rail-based system such as LRT and MRT becomes inevitable for both cities in the future. In fact, a pre-feasibility study on the urban rail system in HCMC was conducted in 1997 by a German university.

However, the necessary capital investment for such a railway seems to be far beyond the current financial capability of the government of Viet Nam. In this context, bus transportation should play a vital role meanwhile, and it should be the most cost-effective way for the society. At the same time, to maximize the economic value of the existing transportation infrastructure and to transform the motorcycle-driven society into a more environment friendly one, the TDM method should be examined as one of the urban traffic management tools in both cities.

![Figure 1.7 Stages of Transportation Development in Major Asian Cities](source: Asian Development Bank (1996b), p. 46)
<table>
<thead>
<tr>
<th>Sector</th>
<th>Stage/Level of Income (per capita city GDP in US$)</th>
<th>First/Low ($1,000 and less)</th>
<th>Second/Middle ($1,000-10,000)</th>
<th>Third/High ($10,000 and more)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economy</td>
<td></td>
<td>Trade and transportation-oriented, moderate industry</td>
<td>Increasing industrialized but secondary centers developing</td>
<td>Substantially industrialized but some industries moving to lower-cost locations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Informal sector dominant</td>
<td>Moderate impact of global economy</td>
<td>Strong impact of global economy</td>
</tr>
<tr>
<td>Population and labor</td>
<td></td>
<td>Small, middle class; very young population</td>
<td>Substantial middle class; young population</td>
<td>Multiple centers</td>
</tr>
<tr>
<td>City structure</td>
<td></td>
<td>Single or only a few centers</td>
<td>Several to multiple centers</td>
<td>Predominantly formal settlement; redevelopment of city center</td>
</tr>
<tr>
<td>Settlement pattern</td>
<td></td>
<td>Predominantly informal settlement</td>
<td>Mixed formal and informal settlement - growth of extended metropolitan region</td>
<td>Private car, bus, and mass transit</td>
</tr>
<tr>
<td>Transport</td>
<td></td>
<td>Substantial walk and bicycle-to-work; bus transportation predominates</td>
<td>Private car and bus predominate, mass transit being introduced</td>
<td>Traffic restraint schemes become essential; further development of mass rail transit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Traffic management through road design and intersection control; paratransit dominant</td>
<td>Traffic jams emerging; management involves separation of public and private transportation; introduction of mass rail transit</td>
<td>Fiscal mechanisms used to support traffic restraint</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public transportation often subsidized</td>
<td>Public transportation profitable; public-private partnerships established</td>
<td></td>
</tr>
<tr>
<td>Air pollution</td>
<td></td>
<td>Severe problems in some cities using soft coal; indoor exposure for poor</td>
<td>Severe problems from soft coal, manufacturing and/or vehicle emissions</td>
<td>Use of clean-burning fuels helps reduce emissions</td>
</tr>
</tbody>
</table>

Note: Bangladesh, India, and Pakistan for first level; People’s Republic of China, Indonesia, Philippines, and Thailand for second level; and Japan and Korea for third level.

(2) Infrastructure Development

Rapid motorization will increase traffic demand inevitably in Hanoi and HCMC. To accommodate such an increasing traffic volume, enhancement of road capacity should be considered to help solve further traffic congestion and environmental deterioration.

Both cities have to tackle formidable challenges to develop enough road spaces to absorb the future traffic volumes. Firstly, fund shortage is the most critical issue for the cities of Hanoi and HCMC to improve urban transportation infrastructure. The fund has not been able to keep pace with the increasing demand generated from the drastic increase in the number of motor vehicles. In addition to the fund shortage, there has been another emerging obstacle to the development of road infrastructure, namely land acquisition problem, especially in the case where relocation of people from the development site is required. The compensation cost for those who are relocated pushes up road development cost.

(3) Environmental Management

Air pollution control measures in general include legal framework on emission gas and fuel quality standards, pollution sources control, monitoring system, administrative guidance, taxation, financial support and so forth. In Viet Nam, almost all the measures mentioned above should be established or be properly put in effect. Although air pollution is still not serious in Hanoi and HCMC, both cities should be prepared for the emerging environment issues caused by the increasing traffic volume.

It is desirable for both cities to strengthen the monitoring system to obtain baseline data for identification of real pollutants and for comprehensive environmental management plans. Also, economic measures for environmental management should be considered. A challenge regarding environmental management lies who and how to owe the cost of environmental improvements, and polluter-pays-principle would be the most realistic answer. Financial treatments such as soft loan and preferential taxation are effective tool for enterprises and people to opt more environment-conscious actions.

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10 For effective and efficient road network development, it is a prerequisite that urban land use and transport plans should be formulated in coherent and consistent manner.

11 Besides the direct measures to deal with the sources of transportation pollution, there are other measures such as promotion of modal shift to public transportation in order to reduce the total emission gas from automobiles. Development of better traffic management system and more road capacity are also effective measures to realize faster traveling speed and less emission gas.
Chapter II

Overview and Regulatory Issues of Bus Transportation

This chapter outlines bus transportation services in both cities and examines issues of regulatory framework.

2.1 Overview of Bus Transportation
(1) Hanoi

General

The public bus service in Hanoi was started in 1960 with 28 urban routes. In the early 1980's, the number of buses reached about 500 vehicles, carrying about 50 million passengers per year. After an introduction of the Doi Moi policy, however, the number of routes has been reduced to 13 as of 1997, and the capacity has fallen to 7 million passenger per year. An entry proposal for the bus business was made by a Korean conglomerate in the mid 1990's, but was rejected because the authority and the conglomerate could not agree upon the investment scale and fare level etc. There are five public transport modes as follows.

- Public bus: Inner-city service is provided by the municipally owned Hanoi Bus Company under TUPWS. As of 1997, 83 bus vehicles were in operation on 13 routes.
- Private bus: Private bus companies mainly serve inter-provincial long hall routes.
- Taxi: There are about 400 metered taxis. Roughly half of the taxis are owned by the public Hanoi Tourist Car Company, and the balance by private operators. Taxi fares are still too high for the general public (Table 2.1).
- Cyclo: Cyclos are run by the private sector, mainly individuals. Cyclo is a popular mode for short distance trip. However, there is no statistical data on the number of cyclos.
- Train: Vietnam National Railways has several lines which originate from inner Hanoi. But the government prohibits daytime operations throughout the inner city. The train operation ends, therefore, at suburban stations like Giap Bat and Gia Lam.

<table>
<thead>
<tr>
<th>Table 2.1 Taxi Fare Ranges in Hanoi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
</tr>
<tr>
<td>Number of Vehicles</td>
</tr>
<tr>
<td>Fare Range</td>
</tr>
<tr>
<td>1. US$0.75 for the first Km, and</td>
</tr>
<tr>
<td>US$0.46 per Km thereafter.</td>
</tr>
<tr>
<td>2. US$2.00 for the first Km, and</td>
</tr>
<tr>
<td>US$0.67 per Km thereafter</td>
</tr>
</tbody>
</table>

Source: The Master Plan of Urban Transport for Hanoi City, Jan. 1997, JICA

1 There are said to be 25 urban routes in Hanoi as of December 1998, but the statistical data was not available.
2 Hanoi has three inter-city bus terminals. The South Passenger Transportation Company owns Giap Bat and Kim Ma bus terminals, and operates inter-provincial lines to the south and the west. The North Passenger Transportation Company owns Gia Lam bus terminal, and operates inter-provincial lines to the east and to the north.
Bus Fare
The bus fare is 1,000 VND/trip, equivalent to roughly 0.08 US$ (at an exchange rate of 12,000 VND/1US$), and a monthly pass is available for students at 15,000 VND.

Bus Routes and Operation
The characteristics of the 13 major bus routes are summarized in Table 2.2. The busiest bus routes are No.1, No.2 and No.3, connecting three major inter-city bus terminals. During peak hours, the average number of passengers onboard ranges from 13 to 36.3

<table>
<thead>
<tr>
<th>Route</th>
<th>Route length (km)</th>
<th>Vehicle (Capacity)</th>
<th>Fare (VND)</th>
<th>Number of Bus Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Yen Phu - Ha Dong</td>
<td>11.6</td>
<td>Karosa (90)</td>
<td>1,000</td>
<td>14</td>
</tr>
<tr>
<td>2 Bac Co - Ha Dong</td>
<td>12.3</td>
<td>Karosa (90)</td>
<td>1,000</td>
<td>14</td>
</tr>
<tr>
<td>3 Giap Bat - Gia Lam</td>
<td>12.6</td>
<td>Karosa (90)</td>
<td>1,000</td>
<td>18</td>
</tr>
<tr>
<td>4 Long Bien - Duoi Ca</td>
<td>9.5</td>
<td>PAZ (54)</td>
<td>1,000</td>
<td>4</td>
</tr>
<tr>
<td>5 PC Chinh - Khon</td>
<td>13.8</td>
<td>W50IFA (60)</td>
<td>1,000</td>
<td>3</td>
</tr>
<tr>
<td>6 Long Bien - Ngoc Hoi</td>
<td>16.1</td>
<td>W50IFA (60)</td>
<td>1,000</td>
<td>3</td>
</tr>
<tr>
<td>7 Bo Ho - Uni. Commerce</td>
<td>9</td>
<td>Hyundai (26)</td>
<td>2,500</td>
<td>4</td>
</tr>
<tr>
<td>8 Bo Ho - Mo - Long Bien</td>
<td>5.8</td>
<td>Hyundai (26)</td>
<td>2,500</td>
<td>4</td>
</tr>
<tr>
<td>9 Long Bien - Cau Bieu</td>
<td>14.4</td>
<td>PAZ (54)</td>
<td>1,000</td>
<td>3</td>
</tr>
<tr>
<td>10 Bac Co - Yen Vien</td>
<td>9.5</td>
<td>W50IFA (60)</td>
<td>1,000</td>
<td>3</td>
</tr>
<tr>
<td>11 Kim Kien - Phu Thuy</td>
<td>19.5</td>
<td>W50IFA (60)</td>
<td>1,000</td>
<td>3</td>
</tr>
<tr>
<td>12 Giap Bat - Kim Ma</td>
<td>8.3</td>
<td>Hyundai (26)</td>
<td>2,500</td>
<td>5</td>
</tr>
<tr>
<td>13 Ba Ho - Nghia Do</td>
<td>7.4</td>
<td>Hyundai (26)</td>
<td>2,500</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>149.8</strong></td>
<td></td>
<td></td>
<td><strong>83</strong></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Route</th>
<th>Total run /day (one direction)</th>
<th>Peak-hour headway (minutes)</th>
<th>Daily Passenger (both direction)</th>
<th>Average loading rate (passenger<em>km/capacity</em>km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Yen Phu - Ha Dong</td>
<td>54</td>
<td>10.0</td>
<td>4,860</td>
<td>26.7%</td>
</tr>
<tr>
<td>2 Bac Co - Ha Dong</td>
<td>54</td>
<td>10.0</td>
<td>4,752</td>
<td>26.0%</td>
</tr>
<tr>
<td>3 Giap Bat - Gia Lam</td>
<td>72</td>
<td>10.0</td>
<td>5,472</td>
<td>22.4%</td>
</tr>
<tr>
<td>4 Long Bien - Duoi Ca</td>
<td>20</td>
<td>30.0</td>
<td>320</td>
<td>8.6%</td>
</tr>
<tr>
<td>5 PC Chinh - Khon</td>
<td>16</td>
<td>30.0</td>
<td>480</td>
<td>14.0%</td>
</tr>
<tr>
<td>6 Long Bien - Ngoc Hoi</td>
<td>16</td>
<td>15.0</td>
<td>192</td>
<td>5.7%</td>
</tr>
<tr>
<td>7 Bo Ho - Uni. Commerce</td>
<td>20</td>
<td>30.0</td>
<td>160</td>
<td>8.9%</td>
</tr>
<tr>
<td>8 Bo Ho - Mo - Long Bien</td>
<td>20</td>
<td>20.0</td>
<td>320</td>
<td>17.8%</td>
</tr>
<tr>
<td>9 Long Bien - Cau Bieu</td>
<td>12</td>
<td>45.0</td>
<td>144</td>
<td>7.3%</td>
</tr>
<tr>
<td>10 Bac Co - Yen Vien</td>
<td>15</td>
<td>30.0</td>
<td>300</td>
<td>7.8%</td>
</tr>
<tr>
<td>11 Kim Kien - Phu Thuy</td>
<td>7</td>
<td>15.0</td>
<td>140</td>
<td>11.7%</td>
</tr>
<tr>
<td>12 Giap Bat - Kim Ma</td>
<td>25</td>
<td>25.0</td>
<td>350</td>
<td>21.8%</td>
</tr>
<tr>
<td>13 Ba Ho - Nghia Do</td>
<td>25</td>
<td>25.0</td>
<td>400</td>
<td>17.9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17,890</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


3 This figure was obtained from the 1995 operation results.
(2) HCMC

General

Bus transportation services in HCMC were provided by two companies before 1992. One is the Saigon Traveling Bus Company, which operated mainly in the urban area. The other is the HCMC Bus Company, which provided services mainly to surrounding towns. Both companies were heavily subsidized like other bus companies in the country. After the introduction of Doi Moi policy, the state-owned enterprises have had to become more self-accounting which generated big challenges for the public bus companies.

The HCMC Bus Company was disbanded in 1992, and its assets were transferred to five private cooperatives to take over the operations. The Saigon Traveling Bus Company, which was the only state-owned bus enterprise in HCMC, was renamed as the Saigon Bus Company in 1992. The Saigon Bus Company formed a joint venture company named Saigon Star Transport J.V. with an Australian investor in 1993, and it started the operation on four urban routes. But the joint venture was disbanded in 1997 when the Australian partner withdrew. HCMC has five public transportation modes as follows.

• Bus: There were about 465 buses in 1998, which operated on 30 routes.
• Lambro\(^4\): It is estimated that there are about 2,200 registered Lambros, however, only about half of them are actually operational on the daily basis.
• Bon Benh\(^5\): There are four Bon Benh cooperatives with a total of 593 vehicles.
• Taxi: There were 14 companies in 1998 with a stock of some 4,000 vehicles. Fares vary among companies, but the average was recorded at about 6,000 VND for the first 1km.
• Cyclo: It is estimated that there are about 50,000 licensed cyclos. Cyclos are banned on certain streets in the city center.

Bus Fare

Operators set up fares on a route by route basis in accordance with an agreement with TUPWS. Fare structures follow the guideline as summarized in Table 2.3.

<table>
<thead>
<tr>
<th>Route type</th>
<th>Service type</th>
<th>Fare per km (VND/km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban bus route</td>
<td>Non-air conditioned</td>
<td>150 – 200</td>
</tr>
<tr>
<td></td>
<td>Air conditioned</td>
<td>200 – 300</td>
</tr>
<tr>
<td>Suburban bus route</td>
<td>Non-air conditioned</td>
<td>100</td>
</tr>
<tr>
<td>Lambro routes</td>
<td>Non-air conditioned</td>
<td>200 – 300</td>
</tr>
</tbody>
</table>

Source: Ho Chi Minh City Transport Study Draft Final Report, 1998, DFID

Bus Routes and Operation

The characteristics of the bus and Lambro and Bon Benh routes are summarized in Table 2.4. There are 110 bus routes registered in MOCPT as of 1998, however these bus routes were planned in 1975. Middle and large sized buses are operated on 25 routes as

\(^4\) Lambro: 3-wheeled vehicles with longitudinal seating on fixed routes.

\(^5\) Bon Benh: This vehicle is similar to the lambro in size, operating on fixed routes (4-wheeled vehicle).
shown in Table 2.4 (2/3). On the most routes, Lambro and Bon Benh are operated on demand. There are seven air conditioned services operated by the minibuses (25 seats) and the microbuses (12 seats). The majority of the full size buses (55 seats) operate longer routes.

### Table 2.4 (1/3) Bus Route and Operation in HCMC in 1998

<table>
<thead>
<tr>
<th>Buses</th>
<th>Allocation Scheduled (veh.)</th>
<th>Fleet Size (veh.)</th>
<th>Passenger/day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saigon Star Joint Venture</td>
<td>36</td>
<td>43</td>
<td>9,567</td>
</tr>
<tr>
<td>Quyet Thang Cooperative</td>
<td>44</td>
<td>64</td>
<td>10,405</td>
</tr>
<tr>
<td>Quyet Tam Cooperative</td>
<td>34</td>
<td>34</td>
<td>7,250</td>
</tr>
<tr>
<td>Quyet Tien Cooperative</td>
<td>32</td>
<td>60</td>
<td>6,900</td>
</tr>
<tr>
<td>Binh Minh Cooperative</td>
<td>48</td>
<td>59</td>
<td>9,955</td>
</tr>
<tr>
<td>Rang Dong Cooperative</td>
<td>30</td>
<td>35</td>
<td>8,310</td>
</tr>
<tr>
<td>19/5 Cooperative</td>
<td>56</td>
<td>127</td>
<td>13,860</td>
</tr>
<tr>
<td>Sai Gon Bus Company</td>
<td>32</td>
<td>43</td>
<td>5,760</td>
</tr>
<tr>
<td>TOTAL</td>
<td>312</td>
<td>465</td>
<td>72,007</td>
</tr>
</tbody>
</table>

Source: Ho Chi Minh City Transport Study Draft Final Report, 1998, DFID

### Table 2.4 (2/3) Bus Route and Operation in HCMC in 1998

<table>
<thead>
<tr>
<th>Bus Company</th>
<th>Route No.</th>
<th>Fleet Size per Route (veh.)</th>
<th>Length of Route (km)</th>
<th>One-way travel time (min)</th>
<th>Avg. Travel Speed (kph)</th>
<th>Hours of Oper. per Day</th>
<th>Fare range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Saigon Star</td>
<td>1</td>
<td>15</td>
<td>9</td>
<td>25</td>
<td>22</td>
<td>17</td>
<td>2000-3000</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>40</td>
<td>18</td>
<td>15</td>
<td>3000-4000</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>8</td>
<td>12</td>
<td>40</td>
<td>18</td>
<td>15</td>
<td>2000-3000</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>10</td>
<td>14</td>
<td>40</td>
<td>21</td>
<td>15</td>
<td>3000-4000</td>
</tr>
<tr>
<td>2 Saigon Bus</td>
<td>7</td>
<td>10</td>
<td>12</td>
<td>50</td>
<td>14</td>
<td>17</td>
<td>2000-3000</td>
</tr>
<tr>
<td>17</td>
<td>7</td>
<td>13</td>
<td>50</td>
<td>17</td>
<td>17</td>
<td>2000-3000</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>12</td>
<td>13</td>
<td>50</td>
<td>16</td>
<td>17</td>
<td>2000-3000</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>7</td>
<td>12</td>
<td>40</td>
<td>18</td>
<td>19</td>
<td>2000-3000</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>6</td>
<td>8</td>
<td>40</td>
<td>12</td>
<td>18</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>5</td>
<td>7</td>
<td>40</td>
<td>12</td>
<td>18</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>3 Quyet Thang</td>
<td>5</td>
<td>8</td>
<td>36</td>
<td>90</td>
<td>24</td>
<td>17</td>
<td>2000-5000</td>
</tr>
<tr>
<td>6</td>
<td>24</td>
<td>22</td>
<td>70</td>
<td>19</td>
<td>17</td>
<td>1000-3000</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>28</td>
<td>26</td>
<td>70</td>
<td>22</td>
<td>17</td>
<td>1000-3500</td>
<td></td>
</tr>
<tr>
<td>2 Quyet Tam</td>
<td>9</td>
<td>16</td>
<td>25</td>
<td>70</td>
<td>22</td>
<td>18</td>
<td>1000-3000</td>
</tr>
<tr>
<td>10</td>
<td>11</td>
<td>15</td>
<td>90</td>
<td>10</td>
<td>18</td>
<td>1000-2500</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>3</td>
<td>30</td>
<td>60</td>
<td>30</td>
<td>18</td>
<td>1000-3500</td>
<td></td>
</tr>
<tr>
<td>5 Quyet Tien</td>
<td>11</td>
<td>12</td>
<td>31</td>
<td>17</td>
<td>17</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>21</td>
<td>18</td>
<td>55</td>
<td>20</td>
<td>18</td>
<td>3000-5000</td>
<td></td>
</tr>
<tr>
<td>13(31)</td>
<td>30</td>
<td>36</td>
<td>30</td>
<td>17</td>
<td>13</td>
<td>3000-5000</td>
<td></td>
</tr>
<tr>
<td>6 Binh Minh</td>
<td>14</td>
<td>21</td>
<td>18</td>
<td>55</td>
<td>20</td>
<td>18</td>
<td>2000-3500</td>
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<td>16</td>
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<td>14</td>
<td>50</td>
<td>17</td>
<td>17</td>
<td>2000-3000</td>
<td></td>
</tr>
<tr>
<td>7 Rang Dong</td>
<td>18</td>
<td>8</td>
<td>15</td>
<td>50</td>
<td>18</td>
<td>17</td>
<td>1500-3000</td>
</tr>
<tr>
<td>19</td>
<td>9</td>
<td>15</td>
<td>50</td>
<td>18</td>
<td>17</td>
<td>1500-3000</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>13</td>
<td>16</td>
<td>60</td>
<td>16</td>
<td>18</td>
<td>1000-3000</td>
<td></td>
</tr>
</tbody>
</table>

Source: Ho Chi Minh City Transport Study Draft Final Report, 1998, DFID
### Table 2.4 (3/3) Bus Route and Operation in HCMC in 1998

<table>
<thead>
<tr>
<th>City Managed Mini Bus (Lambro and Bon Banh)</th>
<th>Allocation Scheduled</th>
<th>Fleet Size (veh.)</th>
<th>Passenger/day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hung Dao Cooperative</td>
<td>32</td>
<td>135</td>
<td>4,032</td>
</tr>
<tr>
<td>Ba Chieu - Cho Lon Cooperative</td>
<td>22</td>
<td>110</td>
<td>980</td>
</tr>
<tr>
<td>Bay Hien – Ba Chieu Cooperative</td>
<td>26</td>
<td>112</td>
<td>3,136</td>
</tr>
<tr>
<td>Cooperative 05</td>
<td>18</td>
<td>219</td>
<td>2,560</td>
</tr>
<tr>
<td>Cooperative 07</td>
<td>28</td>
<td>113</td>
<td>2,694</td>
</tr>
<tr>
<td>Cooperative 08</td>
<td>20</td>
<td>52</td>
<td>2,688</td>
</tr>
<tr>
<td>Cooperative 09</td>
<td>8</td>
<td>40</td>
<td>1,344</td>
</tr>
<tr>
<td>Cooperative 10</td>
<td>50</td>
<td>113</td>
<td>4,032</td>
</tr>
<tr>
<td>Cooperative 11</td>
<td>14</td>
<td>31</td>
<td>1,440</td>
</tr>
<tr>
<td>Cooperative 12</td>
<td>34</td>
<td>152</td>
<td>3,840</td>
</tr>
<tr>
<td>Cooperative 13</td>
<td>22</td>
<td>127</td>
<td>3,808</td>
</tr>
<tr>
<td>Cooperative 14</td>
<td>64</td>
<td>172</td>
<td>6,840</td>
</tr>
<tr>
<td>Cooperative 15</td>
<td>86</td>
<td>71</td>
<td>1,530</td>
</tr>
<tr>
<td>Cooperative 16</td>
<td>42</td>
<td>115</td>
<td>6,720</td>
</tr>
<tr>
<td>Cooperative 17</td>
<td>16</td>
<td>198</td>
<td>1,104</td>
</tr>
<tr>
<td>Cooperative 19</td>
<td>16</td>
<td>91</td>
<td>2,688</td>
</tr>
<tr>
<td>Cooperative 20</td>
<td>8</td>
<td>30</td>
<td>1,344</td>
</tr>
<tr>
<td>Cooperative 21</td>
<td>8</td>
<td>63</td>
<td>1,344</td>
</tr>
<tr>
<td>Cooperative 22</td>
<td>16</td>
<td>45</td>
<td>1,760</td>
</tr>
<tr>
<td>Cooperative 25</td>
<td>32</td>
<td>110</td>
<td>4,160</td>
</tr>
<tr>
<td>Cooperative 26</td>
<td>38</td>
<td>75</td>
<td>4,220</td>
</tr>
<tr>
<td>Cooperative 27</td>
<td>10</td>
<td>73</td>
<td>1,344</td>
</tr>
<tr>
<td>Cooperative 28</td>
<td>34</td>
<td>167</td>
<td>4,480</td>
</tr>
<tr>
<td>Cooperative 30</td>
<td>14</td>
<td>163</td>
<td>1,300</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>658</strong></td>
<td><strong>2,577</strong></td>
<td><strong>69,388</strong></td>
</tr>
</tbody>
</table>

Source: Ho Chi Minh City Transport Study Draft Final Report, 1998, DFID
2.2 Regulatory Framework

Quality and quantity of bus services in both cities have deteriorated for years. Several reasons for this deterioration can be found in the field of traffic engineering and urban planning on one hand, and in its regulatory and institutional aspects on the other hand. Since the transportation studies by JICA and DFID have already focused on the former field, this study addresses the latter.

(1) Relevant Authorities

The Decision No.3385QD/PC-VT of MOT issued on 23rd December, 1996, among others, provides for the most comprehensive regulations on BPPT\(^6\). There are five entities involved in BPPT service delivery; namely, 1) MOT, 2) People’s Committee of a province or a city, 3) TUPWS or Transport Department under each People’s Committee, 4) MOCPT under each TUWPS or Transport Department, and 5) operators.

In addition, MPI, HAPI and DPI assess and authorize capital investment projects.

Role of MOT

MOT shall approve a BPPT project proposed by TUPWS or Transport Department after written comments from the People’s Committee of provinces and cities (Article 6).

Role of People’s Committee

The People’s Committee of provinces and cities shall instruct and guide BPPT operators, in conformity with the laws, by determining fare rates, opening and closing bus routes, approval of operation schedule, regulating compensation for the loss (Article 4).

Role of TUPWS

The General Directors of TUPWS or Transport Department shall be fully responsible to MOT and Chairman of People’s Committees of provinces and cities (Article 5-2).

Role of the MOCPT

The MOCPT shall be responsible for supervising the performance of contracts signed between the MOCPT and BPPT organizations, especially implementation of the regulations on bus routes, operation schedule, service quality and fare level (Article 19-2). The provinces and cities need to establish a MOCPT in order to manage, control and coordinate activities of organizations and individuals involved in BPPT (Article 16). Conditions for establishment of MOCPT is that the number of buses used for BPPT is over 100 and the number of operators is over three (Article 17). In a more concrete term, the regulations for HCMC’s MOCPT (Figure 2.1), for example, indicate the followings as its functions and duties.

- Management of public transportation, including making infrastructure plans, investment plans for public transport, route plans, adjustment of inappropriate routes, bus depot, bus stops, central monitoring station, passenger transit terminals, communication system, etc.
- Monitoring public transportation, including inspection of service quality, routes,

\(^6\) BPPT is defined as a mean of transport with charges, operating under a regulated schedule and route, in order to serve daily travel demand in large cities and residential areas (Article 1).
frequency, etc.

- Making proposals on policies, fare level, transport tariff, parking fee, regulations on public transport, and submitting them to the People’s Committee.

**Figure 2.1 Organizational Chart of HCMC’s MOCPT**

(2) Entering Bus Business

(a) Requirements for BPPT project

Article 8 of the Decision No.3385QD/PC-VT defines requirements for a BPPT project as follows:

- Fixed routes, terminals and fixed bus stops within the city area or concentrated residential area,
- Bus operation in accordance with determined operation schedule, ensuring 35 minutes headway during peak hours and 10-20 minutes during off-peak hours, and
- A potential travel demand made by a population of 100,000 people.

(b) Obligations to obtain approval

A candidate bus operator must clear two major obligations to obtain an approval for the bus business. One is the compliance with the Decision No. 3385/QD/PC-VT, and the other is that with the operation plan by TUPWS or Transport Department defining, among others, routes, frequency and fare level.

Also, the candidate must comply with Business Laws, Cooperative Laws, and must meet all requirements on technical safety and sector standards for the public transportation. Sufficient number of vehicles to meet the demand is usually required too.
(c) Necessary procedures

Figure 2.2 exhibits necessary procedures to obtain an approval for the bus business. The explanation of numerals in the Figure is as follows.

1: Instruction and guidance on project formation.
2: Application for entering bus operation (Decision No. 3385/QD/PC-VT).
3: Asking opinions of the People's Committee.
4: Submitting written opinions to MOT
5: Within 30 days after receiving the documents, MOT shall directly approve the project and issue an official response letter to the People's Committee.
6: Contract between MOCPT and the company.

Note: Duties were transferred to the Center based on Decision No. 2424/QD-GTCC (October, 1998)

Source: Interview with MOCPT, HPC

**Figure 2.2 Procedure to Obtain Approval of Bus Operation**

(3) Licensing

While there is not any clear statement on the license holder’s right, the past practice has been that once a route is awarded to a bus company, no other companies is eligible to serve the route to compete. In the case of HCMC, the individual bus owners within a cooperative are entitled to sell their licenses, but there is no real market for such licenses. One of the cooperatives estimated that the license could cost as much as 90 million VND (USD 6,430)7.

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7 Source: MVA Consultancy, Maunsell, Transport Research Laboratory (TRL), Transport Economic and Scientific Institute (TESI); “Ho Chi Minh City Transport Study,” Interim Report, Viet Nam, March, 1998
(4) Operational Regulations

Article 18 of the Decision No.3385/QD/PC-VT stipulates as follows that bus operators are not allowed to decide the fare level, instead it is strictly controlled or affected by the opinion of the People’s Committee.

- The Transport Department or TUPWS shall submit their decisions on route opening and closing, fare level and operation schedule to the People’s Committee.
- MOCPT shall submit a report on periodical travel demand to Transport Department or TUPWS.
- A contract between the representative of MOCPT and organizations and individuals being engaged in BPPT shall be signed on the basis of tender result or appointment by Transport Department or TUPWS.

(5) Taxation

The bus companies pay the following taxes and charges; 120% import tax on vehicles, 45% tax on spare parts, Seat tax of 1,000 VND/seat/month, Land tax of 1,500 VND/m²/year, and 4.8% tax on total capital employed (land, buildings and buses).

Article 5-3 of the Decision No.3385/QD/PC-VT allows the BPPT operators to be exempted from import tax and special consumption tax. Utilization period for buses, which is calculated from import date, must be at least ten years for new vehicles and five years for second-hand vehicles. If, during amortization, the buses are used for purposes other than BPPT or resold to other owners not being engaged in BPPT business, the seller shall be entitled to import tax and special consumption tax corresponding with its remaining value.

In addition, discussion on and examination of further preferential treatments among relevant ministries are also encouraged by a number of governmental documents as shown in Figure 2.3.
The Prime Minister

Ministry of Transport (MOT)

Ministry of Planning and Investment (MPI)

Ministry of Finance (MOF)

1: The PM’s decision on preferential policy on public passenger transport services in cities.
2: Report to the PM from MOT (Doc. No. 1876/GTVT-PCVT 19th June)
3: Recommendations from MOF (Doc. No 2454/TC-CSTC, 16th July, 1998)
4: Recommendation from MPI (Doc. No. 4919/BHK-CSHT-TC, 17th July, 1998)
5: Report to the PM from MOT (Doc. No. 2619/GTVT-PCVT, 22 August, 1998)
and a Draft of Revised PM’s decision

Source: Each relevant document mentioned in the Figure

Figure 2.3 Inter-ministerial Negotiation Structure on Preferential Treatment

(6) Subsidization

Subsidy amount is calculated by a vehicle-kilometer basis and provided with the public sector-owned companies, while it is unavailable for the private operators and the public-private J.V.. Figure 2.4 shows an example of approval procedures for the subsidy in Hanoi (Table 2.5 and 2.6). The explanation of numerals in the Figure is as follows.

1: Subsidy amount estimation based upon the operation plan approved by TUPWS.
2: Agreement regarding the subsidy amount estimation among the relevant parties.
3: Minutes of Acceptance between PMU and the Hanoi Bus Company.
4: PMU issues a letter requesting Pricing and Financial Department (the State Treasury of Hanoi City) to transfer the necessary amount to the account of PMU.
5: Contract between the MOCPT and the Hanoi Bus Company: MOCPT dispatches a supervisor for inspection of the agreement and coordination with the company.
6: Subsidy Payment: 30% of the contract amount is paid after signing the contract and the remainder is paid according to the operational performance.
Table 2.5 Subsidy Budget of HPC for Bus Operation

<table>
<thead>
<tr>
<th>Year</th>
<th>Budget (billion VND)</th>
<th>USD equivalent (million)</th>
<th>Number of buses</th>
<th>Average subsidy per vehicle (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>8.5</td>
<td>0.61</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1998 (estimates)</td>
<td>9.0</td>
<td>0.64</td>
<td>292</td>
<td>2,200</td>
</tr>
</tbody>
</table>


Table 2.6 Estimated Subsidy for HBC in the 4th Quarter, 1998

<table>
<thead>
<tr>
<th>No</th>
<th>Subsidized Routes</th>
<th>Planned vehicle runs</th>
<th>Unit price (VND)</th>
<th>Estimated subsidy (1,000 VND)</th>
<th>Estimated subsidy (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yen Phu - Ha Dong</td>
<td>9,752</td>
<td>35,605</td>
<td>347,220</td>
<td>24,801</td>
</tr>
<tr>
<td>2</td>
<td>Bac Co - Ha Dong</td>
<td>9,752</td>
<td>39,053</td>
<td>380,845</td>
<td>27,203</td>
</tr>
<tr>
<td>3</td>
<td>Duoi Ca - Long Bien</td>
<td>3,680</td>
<td>25,414</td>
<td>93,524</td>
<td>6,680</td>
</tr>
<tr>
<td>4</td>
<td>Long Bien - Cau Bieu</td>
<td>1,840</td>
<td>47,536</td>
<td>87,466</td>
<td>6,248</td>
</tr>
<tr>
<td>5</td>
<td>Bac Co - Yen Bien</td>
<td>1,840</td>
<td>42,017</td>
<td>77,311</td>
<td>5,522</td>
</tr>
<tr>
<td>6</td>
<td>Long Bien - Thuong Tin</td>
<td>1,840</td>
<td>67,928</td>
<td>124,988</td>
<td>8,928</td>
</tr>
<tr>
<td>7</td>
<td>Phan Chu Trinh - Troi</td>
<td>1,840</td>
<td>49,120</td>
<td>90,381</td>
<td>6,456</td>
</tr>
<tr>
<td>8</td>
<td>Kim Lien - Phu Thuy</td>
<td>1,288</td>
<td>62,390</td>
<td>80,358</td>
<td>5,740</td>
</tr>
<tr>
<td>9</td>
<td>Long Bien - Van Dien</td>
<td>3,680</td>
<td>29,953</td>
<td>110,227</td>
<td>7,873</td>
</tr>
<tr>
<td>10</td>
<td>Giap Bat - Kim Ma</td>
<td>4,600</td>
<td>23,702</td>
<td>109,029</td>
<td>7,788</td>
</tr>
<tr>
<td>11</td>
<td>Bow Ho - Nghia Do</td>
<td>4,600</td>
<td>11,110</td>
<td>51,106</td>
<td>3,650</td>
</tr>
<tr>
<td>12</td>
<td>Bo Ho - Dien</td>
<td>4,048</td>
<td>12,866</td>
<td>52,082</td>
<td>3,720</td>
</tr>
<tr>
<td>13</td>
<td>Bo Ho - Yen Lang</td>
<td>2,760</td>
<td>34,478</td>
<td>95,159</td>
<td>6,797</td>
</tr>
<tr>
<td>14</td>
<td>Giap Bat - Dichj Vong</td>
<td>4,600</td>
<td>28,752</td>
<td>132,259</td>
<td>9,447</td>
</tr>
<tr>
<td>15</td>
<td>Long Bien - Phu Lo</td>
<td>2,208</td>
<td>94,713</td>
<td>209,126</td>
<td>14,938</td>
</tr>
<tr>
<td>16</td>
<td>Giap Bat - Gia Lam</td>
<td>300</td>
<td>74,000</td>
<td>22,200</td>
<td>1,586</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>58,628</td>
<td>678,637</td>
<td>2,063,281</td>
<td>147,377</td>
</tr>
</tbody>
</table>

Source: A letter to TUPWS from Hanoi Bus Company dated 11th April 1997

Note: Duties were transferred to the Center based on Decision No. 2424/QD-GTCC (October, 1998)

Source: Interview at the Center for Public Transport Management and Operation, Hanoi
2.3 Regulatory Issues

(1) Issues Identified by MOT

The Ministry of Transport (MOT) has reported, in the Letter No.2619/GTVT-PCVT on August 22, 1998, the following obstacles to the promotion of public transportation.

(a) Too many government’s documents

MOF has issued several instruction documents listed in the right box. In addition, HCMC People’s Committee has five regulating documents, while HPC has not issued any instructing documents yet. Insufficient coordination was made among those governmental bodies.

(b) Inconsistency in incentive policy

Although MOF introduced in 1996 the incentive policy for promotion of the bus business valid two years (1996–1997), there is no new instruction documents available in 1998 and thereafter. Bus operators are therefore confused in the policy application.

(c) Additional taxes

The law on value added tax and enterprises’ income tax may affect badly the existing preferential policy for the public transportation business to some extent.

(d) Responsibility of municipalities

The role of public transportation in large cities is not clearly recognized, and the responsibility of municipalities is not clearly defined.

(2) Issues Identified by the Study

Bus business generally has a competitive and contestable nature that provides an easy access for the private sector to enter into the market. In both cities, however, the public sector plays a dominant role as regulator-operator. The present regulatory framework is designed mainly for the municipal bus companies. It seems to be no longer attractive enough for domestic and foreign private investors, and holds the following issues in the light of the private investment.

(a) Unclear and complicated procedures

As shown in Figure 2.2, a candidate for bus operator should at first consult with MOCPT under TUPWS before submitting a proposal addressed to MOT. Then MOCPT shall transfer the letter together with necessary documents to the People’s Committee through TUPWS and HAPI or DPI, after which the Committee submits a comment on the proposal to MOT. After every procedure is cleared, then the contract is finally signed between MOCTP and the operator. The authorization is processed throughout too many authorities, namely MOCPT, TUPWS, HAPI/DPI, People’s Committees, MOT and MPI. Besides the relevant regulations don’t strictly define who evaluates what with what criteria. Those unclear and complicated procedures make potential investors, especially large or foreign...
investors, hesitate to enter into the bus business.

**(b) Huge capital investment requirement**

Since a potential bus operator is generally required to prepare a large number of buses (100 to 300 vehicles) by the authority, the necessary scale of capital investment to commence the bus business is considerably expensive. Such a requirement is not always enforced, but it eventually imposes harder hurdle even for small-scale operators who are very active at suburban and inter-city routes. The winner is the incumbent, whereas the loser is the potential user who can not benefit from additional services that had to be provided by the newcomer operator.

**(c) Non negligible sunk cost**

Several tax duties including import tax and special consumption tax on bus vehicles are exempted or reduced, as far as the vehicles are used for the public transportation purpose. However, when an owner sells the vehicles to someone else engaged in another business or uses them for other purposes like sightseeing tour, it should pay the duties corresponding with the remaining asset values (maximum 120% of the price). On the ground that there is no good secondary market for used bus vehicles, it is rather difficult for the operators to go out of the business without losing substantial sunk cost.

**(d) Limited operational autonomy**

Almost every aspect of the operation is determined by the authority, and even small-sized transportation modes such as Lambro should follow the fixed operation routes. There is very little autonomy for the operator to improve service level, e.g. routes, operation hours, frequency etc., by its own initiative in flexibly corresponding to demands. Detailed data on the distribution of population, household income and commuting destinations etc. is unobtainable or quite limited even for the authority, so it must not be always superior to the operator in deciding the service level, and in finding and meeting the customer needs.

**(e) Rigid fare regulation**

The fare level is regulated at 1,000 VND per trip for non air-conditioned buses in Hanoi. The authority tries to keep the fare level lower as possible for political and social reasons such as transportation access for the general public, particularly urban poor. But lower fare level results in lower profitability, and lower profitability discourages investments to the bus business and shrinks the bus service delivery consequently. Such a rigid fare regulation seems to bring about downturn spiral. Deregulation of fare level must be explored to attract both public and private investments to the bus business, otherwise the bus transportation might get shrunk further.

**(f) Ineffective subsidization**

Subsidy is provided on a vehicle-kilometer basis to the publicly-owned companies to offset the operational losses as already shown in Table 2.6. In other words, the authority

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8 A simple financial analysis indicates that if a new operator starts its bus business with a new bus vehicle of 20,000 USD, running 5km distance route, making ten round trips a day, carrying the current level of passenger demand, and the fare is fixed at 1,000 VND per trip, no profit can be derived from this business. If only the fare is doubled, the benefit-cost ratio exceeds 1.0 slightly and the business becomes sustainable.
(TUPWS) subsidizes its subsidiary, the municipal bus company. This scheme, however, gives an incentive for the subsidiary not to cut the operational cost and provide better services, but rather to just follow the operational specifications stated in the contract to enjoy the subsidy. What is worse still, the operation plan is drawn and approved on the premises that the operator would receive the subsidy, so the subsidization budget might set limit on scale of the bus service. As the subsidization budget curtails, the frequency and routes provided decrease accordingly.
Chapter III

Measures for Regulatory Improvements of Bus Transportation

This chapter reviews policy instruments adopted or proposed by the Vietnamese authorities, and recommends the regulatory improvements for the promotion of public transportation.

3.1 Policy Instruments by Vietnamese Authorities

(1) The Prime Minister’s Directive

The Prime Minister ordered the People’s Committees of Hanoi and HCMC to further develop the urban bus transportation by the Directive No. 236/TTg of the Prime Minister, 11th April, 1997. The Directive can be outlined as follows.

- The People’s Committees of Hanoi and HCMC should elaborate plans for the bus transportation, including bus stops location, timetable for each route, coordination program among bus operators.
- The People’s Committees of Hanoi and HCMC should develop plans for taxi transportation, including parking spaces and coordination program between buses and taxis.
- The People’s Committees of Hanoi and HCMC should encourage all domestic resources, in particular public and state-owned enterprises, to enter into the bus transportation business.
- Foreign joint-ventures are permitted to begin the business, as far as the benefits of Vietnamese side are ensured.
- MOF should coordinate with MOT and the People’s Committees of Hanoi and HCMC in formulating financial policies to minimize a subsidy from the state budget.
- The People’s Committees of Hanoi and HCMC are allowed to surcharge extra levies for motorcycles and private cars and to examine some regulatory measures on taxi operation, in order to acquire more financial resources for subsidization to the public transportation.
- MOF should formulate a preferential tax treatment to attract all economic sectors into the bus transportation business in the cities.
- The People’s Committees of Hanoi and HCMC should establish centers for urban transportation management and operation under the guidance of MOT, and the centers are managed as profit-making organizations.
- MOF should coordinate with MOT and the People’s Committees in carrying out a study on formulation of a company under the centers, in order to mobilize fund sources for purchasing buses.
(2) Proposals by Both Cities

In accordance with the Decision of the MOT No.3385QD/PC-VT, each TUPWS of Hanoi and HCMC has proposed, to the respective People’s Committee and MOT, policy instruments for the bus operators (Table 3.1). TUPWS of HCMC also proposes to establish “Development Fund for Public Transportation.” These instruments call for vehicle procurement by ODA, reduction of tax and levy for the municipal bus companies etc., and seem to aim at enlarging the preferential treatments for the municipal bus companies under the current regulatory framework.

Table 3.1 Proposed Policy Instruments for Bus Operators

<table>
<thead>
<tr>
<th>Item</th>
<th>Proposal by TUPWS, Hanoi</th>
<th>Proposal by TUPWS, HCMC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle purchasing</td>
<td>Establishing a bus leasehold entity to reduce financial burden of the operators.</td>
<td>Allowing vehicle supplier for monopolistic business, if it provides payment in installment of 7 to 10 years at the interest rate of 5-7%.</td>
</tr>
<tr>
<td></td>
<td>Buying domestic vehicles (Hoa Binh Motor, Hanoi Motor, etc.) at less expensive prices.</td>
<td></td>
</tr>
<tr>
<td>Soft loans for purchasing bus vehicles</td>
<td>Domestich soft loans.</td>
<td>Loan from the state budget for capital investment with interest rate of 0%.</td>
</tr>
<tr>
<td></td>
<td>Grant aid and export/import credits guaranteed by the Government.</td>
<td>Japanese ODA loan with interest rate of 0.75%.</td>
</tr>
<tr>
<td></td>
<td>Japanese ODA</td>
<td></td>
</tr>
<tr>
<td>Infrastructure development by the government</td>
<td>Allocation of the state budget for construction of depots, bus stops and parking space.</td>
<td>Governmental capital investment for terminals, shelter, bus stops, operation stations (Cho Lon, Gia Dinh), garages and depots (23,000 m²)</td>
</tr>
<tr>
<td>Affordable Fare Level</td>
<td>1,000–1,500 VND/trip</td>
<td>Reduce by 50% of the current rates to 1,000 VND/trip (less than 15km) and 2,000 VND/trip (over 15km).</td>
</tr>
<tr>
<td></td>
<td>30,000 VND/month</td>
<td></td>
</tr>
<tr>
<td>Subsidy</td>
<td>Subsidy in accordance with the volume of passenger-kilometers with a ratio not more than 45% of the total approved cost.</td>
<td>Procedures for enjoying tax exemption should be simple: Once the contract on bus operation is signed with MOCPT, the operators do not need to submit their application for tax exemption to MOT and MOF. The People’s Committee of HCMC should be the final authority for this task.</td>
</tr>
<tr>
<td></td>
<td>Source of subsidy is surcharges for motorcycle of 100,000 VND p.a. and car of 2,500,000 VND p.a.</td>
<td></td>
</tr>
<tr>
<td>Tax exemption</td>
<td>100 % import tax exemption.</td>
<td>100 % import tax exemption.</td>
</tr>
<tr>
<td></td>
<td>Business tax exemption.</td>
<td>Duration of the current tax exemption should be extended from one year to 8-10 years.</td>
</tr>
<tr>
<td></td>
<td>Land use tax exemption for depots, workshop etc.</td>
<td></td>
</tr>
</tbody>
</table>

1 Objectives of the Fund can be twofold. One is to subsidize the public transportation operation for the opening of new routes that have a few passengers at the initial stage, the reduction of fare level to encourage people to use the public transportation modes, and the provision of preferential treatments with pupils, students and employees. The other is to develop relevant infrastructure, for example, shelters, bus stops and depots, which contributes to bus transportation. Sources for the Fund include environmental fee to be imposed on motorized vehicles to discourage vehicle ownership, advertisement fee on shelters and bus stops, parking charge, taxi revenue and its profit tax, and sales tax on new taxis.
<table>
<thead>
<tr>
<th>Levy exemption</th>
<th>Remove other competitor</th>
<th>Others</th>
</tr>
</thead>
</table>
| - Capital use tax exemption for the state-owned enterprises.  
- 100% revenue tax exemption.  
- Profit tax exemption. | - Remove/prohibit other public transport means (tuk tuk and cyclo) in the urban area. | - Allowing transportation companies to undertake other business activities to reduce the amount of subsidy. |
| | | | - Establishment of “Development Fund for Public Transportation.” |
| | | | - 12 seat vehicles should be included into the tax exemption scheme (Buses of over 15 seats are beneficiaries of the current scheme).  
- Revenue tax and profit tax should be exempted at 100%.  
- License tax should be paid by each enterprise, not by each vehicle base. |
| | | | - 50% reduction of registration fees, and 100% exemption of bridge and road tolls and parking fees.  
- Transportation fee (levied on petrol consumption) exemption: Financial body should refund the amount of transportation fee in accordance with the volume of fuel used.  
- Bus depot use fee exemption  
- Bridge toll exemption |
| | | | - 100% exemption of bridge and road tolls, parking charges in inter-provincial depots. (Official Letter No.5392/UB-QLDT of HCMC, 15th December 1997) |

Source: Each TUPWS of Hanoi and HCMC
3.2 Recommendations

(1) Regulatory Improvements

Meeting the public transportation needs only by the public sector could not solve the present regulatory issues and would not develop the bus transportation market in the future. Policy shift from the public monopoly to the deregulated competition among various operators, especially private companies, is necessary for the promotion of bus transportation in both cities. In order to promote the private investment to the bus business, the regulatory improvements must be examined to create a business-friendly environment, under which the private sector can operate flexibly and compete for better service. This study, therefore, recommends to redesign the regulatory framework under the following concepts for increased clarity, flexibility and efficiency.

(a) Simplified and clarified procedure

The operator (municipal bus company) and the regulator (MOCPT) must not be under the same authority (TUPWS), to secure the fair competition between the incumbent and the newcomer. MOCPT should be separated from TUPWS and vested with much authority to simplify the procedures and to clarify who is responsible for what in evaluating business proposals. In HCMC where a lot of cooperatives are running Bon Benhs mainly on suburban routes, a candidate investor whose equity is less than 10 million VND, or approximately 750 US$, needs only to apply for and acquire an approval from TUPWS through MOCPT. An application of this treatment to much larger investors should be explored in order to simplify the procedures in HCMC as well as Hanoi.

(b) Lowered capital investment requirement

Making an entry hurdle higher by any means to the investors discourage new service providers. Huge capital investment requirement should be lowered or repealed for an easy entry to the bus business, so that the new, additional and upgraded services are offered to the potential users who have neither access nor preference use bus transportation at present. In Asian cities such as Hong Kong, Manila and Bangkok, many small-sized operators only with a few buses carry a significant number of passengers. They are good at finding the potential market needs and expanding services in a flexible manner, although the coordination on routes and schedules is sometimes required among the small-sized operators or between them and the dominant operator. The expansion of bus services must come first in Hanoi and HCMC, rather than well conceived route and schedule planning or anxieties for destructive competition.

(c) Increased operational autonomy

The operator must be given a greater operational autonomy for flexible service delivery. The operator needs not apply for an approval on, but should notify of, every little operational aspect, e.g. route, operation hour, and frequency etc. When a newcomer opens a new bus route, for example, no one is able to forecast the demand perfectly even though some estimation may be prepared. Likewise, the authority does not always have superior information than operators in deciding service level. Rather, the private operators in
general are good at exploring the potential demands and unmet market needs.

(d) Deregulated fare control

To make the bus business attractive enough for the private sector, the maximum fare level could be raised with an introduction of the price-cap control, under which operator is allowed to set the fare level flexibly below the maximum\(^2\). Otherwise, bus transportation might get shrunk further without capturing new private investments. Enhanced competition and contestability also enforce operators to keep the fare level competitive. The fare control can be deregulated even now in both cities, because the operators can not set the fare too high to compete with the popular and convenient motorcycles. Generally, operators in the market knows better than the authority about the user's affordability and price elasticity to the bus transportation.

(e) Rationalized subsidization

Subsidy must not deprive operators of an incentive to become cost-effective. Receivers of subsidy should compete for either better service quality under the same subsidy amount or lesser amount keeping the same quality. At the same time, the necessity of subsidization as well as its amount must be recalculated and verified in a route-by-route or area-by-area basis. Subsidy must go to unprofitable routes to make those routes sustainable, but not to every routes. As far as a necessary route can be sustained with the subsidy, private operators may be eligible to compete for the subsidy. Competition for the subsidy between the public and private operators will procure the value for money.

(2) Pilot Project

Since the most people in both cities prefer private transportation modes and have no or few experiences to use the bus services, it would be very difficult to alter entrenched behavior patterns without publicizing how the bus services benefit them. The public involvement is inevitable to change the public perception of the bus service, in addition to the regulatory and institutional improvements and the transportation infrastructure development. Pilot projects, such as bus-dedicated lanes with limited-terms in selected routes, could be very effective demonstrating usefulness of the bus service for the citizens, marketability for the investors, and policy directions of the People's Committees for both.

The objectives of the pilot project may include:

- To disseminate the governments' strong intention for the improvements of bus transportation;
- To identify problems of the current bus transport services from the users' viewpoint, taking a market research approach;
- To make the people be interested in the bus transportation through participatory planning and evaluation process;
- To improve capability of the staff of the authorities and the operators; and

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\(^2\) The maximum is usually set to increase by the same rate with RPI, with considering some economic (not political or social) factors such as incentives for efficiency gains and capital investment to adjust the rate.
To obtain information and data to better examine the introduction of traffic engineering measures and TDM instruments, such as the conventional trunk bus system as shown in Figures 3.1, in the near future.

The routing images of the pilot project of the bus-dedicated lane in Hanoi and HCMC are exhibited in, respectively, Figure 3.2 and Figure 3.3. Lessons to be learned from the pilot projects will help materialize the regulatory improvements and hence promote the public transportation.

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3 The trunk bus system has railway-like characteristics and offers a frequent service in a certain fixed route. An example of the trunk bus system employed in Nagoya, Japan is shown in Figure 3.1. Buses run through exclusive lanes in the midth of the roadway, which are separated from the lanes for other vehicles. Since buses run the dedicated space, conflicts between buses and access traffics to building alongside the streets are avoidable. Buses stop for passengers’ embarkation and disembarkation at designated bus stops and bus terminals. Interval of bus stops is around 1.0 km to 1.5 km, which is longer than usual for conventional operations.
Source: Brochure of Nagoya City

Figure 3.1 Example of Trunk Bus system
Figure 3.2 Routing Image of Pilot Project in Hanoi
Figure 3.3 Routing Image of Pilot Project in HCMC
Bibliography

ADB (1989), Review of the Scope for Bank Assistance to Urban Transport, Manila
DFID (1998), Ho Chi Minh City Transport Study, Draft Final Report, Viet Nam
Doi, Masayuki (1992), “Hattentojoukoku no koutsuu keizairon,” Transportation Economics in Developing Countries, Toyo Keizai Sinpou, Tokyo
Dresden Combined Technical University (1997), Pre-Feasibility Study: Transport Construction and Reinforcement System HCMC, Summary, HCMC
HCMC People’s Committee (1998a), Adjusted Mater Plan 2020, HCMC
HCMC-TUPWS (1998b), Feasibility Study on Urban Transport Environment Improvement Project in Ho Chi Minh City in Viet Nam, HCMC
HPC (1997), Hanoi Master Plan 2020, Hanoi
Japan Automobile Association (1997), Research on the Traffic Problems in the South East Asia, Tokyo.
JICA (1998), The Master Plan of Urban Transport for Hanoi City in Viet Nam, Tokyo
OECF (1998), Urban Infrastructure Development Project in Ha Noi Capital Region, SAPROF; Final Report, Tokyo
Shaw, L. Nicola, and Kenneth M. Gwilliam and Louis S. Thompson, Concessions in Transport, TWU papers No.27., WB, Washington, D.C.

Statistics
HCMC Statistical Office, HCMC Statistical Yearbook 1997
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