

A Study on Competition and Organizational Arrangement in Urban Public Transit: Approach to Constructive Regime in Bus Service*

by THATREE Doungporn** and IEDA Hitoshi***

1. Introduction

During past three decades, tremendous changes in urban bus services have been observed both in terms of mechanism as well as entities. Mechanism refers to competition either among bus service providers or other means of transport modes. On the other hand, entities refer to changing in organizational arrangement, setting relation between transport authority and entrepreneurs, which has been moved around or in between public ownership, monopoly provision, and private liberalization. A variety options to practice have brought doubts and concerning to transport authority. This study concludes trend of competition that has evolved during past three decades. It also illustrates various types of organizational forms related to stated competition as well as their consequences. It is expected that an insight through competition and organizational arrangement and their consequences would be beneficial for transport authority in making decision in designing appropriate and constructive regime for its system.

2. Competition in Urban Public Transit and Roles in Urban Public Transit

2.1 Type of Competition in Urban Public Transit

Generally, competition in urban public transit could be classified as follows;

(1) “Intra-modal Competition”

To begin with a narrow scope in only one mode, when there are more than one service providers in the same territory, two kinds of competition could be observed as;

a) “Competition in the Market”: allows operators compete directly with each other for customers. Transport authority may or may not put some restrictions for operators. This may be close to an open market.

b) “Competition for the Market”: allows operators compete indirectly with each other for right of operation through screening procedure. Transport authority may put some preferable conditions in the screening process in order to obtained qualified operators.

(2) “Inter-modal Competition”

In wider scope, there are other transport modes provided as alternatives for user in the same territory. For examples, bus service may have to compete with private car or even other type of public transit like subway for the same target of customers.

2.2 Role of Competition in Urban Public Transit

“Competition in the market” contributes to an open market. Theoretically, this type of mechanism would motivate operators to compete to each other on attracting customers by for example improving their quality of service, reducing fare, and etc. As a result, users are expecting to obtain the most qualified service. However, in practice “competition in the market” is considered to cause chaos in many cases like traditional bus of Seoul of South Korea, Bogota of Columbia and even Rhein-Main-Verkehrsverbund of Germany¹⁾³⁾. Too much direct and fierce competition for customers resulted in excessive low condition vehicles and high accidental rate. These consequences had motivated transport authority finally reforming organizational arrangement and turn to “Competition for the market” to control access to the market.

*Keywords: competition, public transport planning, public transport management

** Graduate Student, Department of Civil Engineering, the University of Tokyo,
7-3-1 Hongo, Bunkyo-ku, Tokyo, 113-8656, Tel: (03) 5841-6118, e-mail: thatree@trip.t.u-tokyo.ac.jp

*** Professor, Department of Civil Engineering, the University of Tokyo

7-3-1 Hongo, Bunkyo-ku, Tokyo, 113-8656, Tel: (03) 5841-6118, e-mail: ieda@civil.t.u-tokyo.ac.jp

However, many cases could take advantages of competition in the market in improving system quality of service and reducing subsidy budget like in Britain⁴ and Hongkong³. Once reforming the system to deregulation, customer could enjoy variety of service and at appropriate price. However, it is criticized that finally competition would reach stable state of collusion among operators

On the contrary, “Competition for the market” contributes to a controlling market access of operators. Its advantages are that transport authority could put desirable conditions to selecting qualified operators into the system. Furthermore, variety types of organizational arrangement could be derived from this type of competition for examples franchising, concession and quality licensing. This mechanism is now in focus by many transport authorities as it has proved its success in many case studies for example in Bogota of Colombia. However, it should be observed that more or less motivation in improving service that is embedded instinct in competition in the market has been lost from operator. As a result, operators are hesitated to making any changes unless request by transport authority.

3. Organizational Arrangement

In supply side, two main entities in urban public transit are transport authority and operators. Van de Velde⁵ presented two fundamentally categories of organizational arrangement as

(1) “Authority Initiative”: in this regime, only transport authority has legal right to define system characteristic and market entry of operators

(2) “Market Initiative”: on the other hand, market initiative regime allows autonomous market entry of operators resulting from a market process with more or less regulatory could be checked at the entrance. Moreover, operators also have legal right to take part in defining system characteristic.

Anyway, it should be noted that monopoly provision and multiple-operator provision could be found in any regimes.

In more detailed of organizational arrangement, Finn and Nelson⁶ further classified authority initiative regimes into two more categories as “old-style public sector model” and “new-style public sector model” which is named as “competition for the market model”. In the first model, transport authority is responsible to vest, plan and directly operate transport service as can be seen in Vienna of Austria⁷. In the second one, transport authority retains right to plan for service and allocates the right to operate service and any associated financing through an evaluation of available potential operators as can be seen in Bogota of Columbia

Furthermore, market initiative regimes are also classified into “light-touch regulation model” and “deregulated market” by Finn and Nelson⁶. In the former one, transport authority considers application from operators and grants license or other permissions based on relevant criteria. In the latter one, it is opened to operators to choose what service to provide as best suits their core objectives.

4. Direction toward Constructive Competition

As stated previously, as there are a variety options of organizational arrangement and type of competition to be practiced, transport authority should put carefully consideration in organizational arrangement and design appropriate environment to create suitable degree of competition among operators. In order to do so, the following attributes should be taking into account

- The basic network structure,
- Detailed route design,
- Detailed time table design,
- Fare structure and ticket types,
- Price levels for basic fare and for specific fare product,
- Vehicle technology e.g. characteristic, type, and capacity,
- Service quality,
- Degree of integration,
- Customer support service e.g. ticketing information,
- Potential operators,
- Freedom of innovation adaption by operator, and

- Inclusion of societal or other goals.

Once these attributes have been taken into consideration, transport authority could appropriately select the best suited regimes to their system. The detailed framework for real practice would be a further topic for research.

References

- 1) Pucher J. and Kurt S.: Verkehrsverbund: the success of regional public transport in Germany, Austria and Switzerland, *Transport Policy*, vol.2, No.4, pp. 279-291, 1996.
- 2) Hook W.: Institutional and regulatory options for bus rapid transit in developing countries, *The Institute for Transportation and Development Policy*, New York, 2005
- 3) Kang M.: *Toward Better Public Transport: Experiences and Achievements of Seoul*, Seoul Development Institute, Seoul, 2005
- 4) Gomez-Ibanez, J.A. and Meyer, J. R.: Alternatives for urban bus services: an international perspective on the British reforms, *Transport Reviews*, Taylor & Francis Ltd., Vol.17, No. 1, pp.17-29, 1997.
- 5) Van de Velde, D.M.: Organizational Forms and Entrepreneurship in Public Transport Part 1: Classifying Organizational Forms, *Transport Policy*, Pergamon, Vol. 6, pp.147-157, 1999
- 6) Finn, B. and Nelson, J.: International Perspective on the Changing Structure of the Urban Bus Market, *Transportation Research Record*, Transportation Research Board of the National Academies, Vol. 1799, Paper No. 02-3967, pp.89-96
- 7) Knoflachner, H.: Success and Failures in Urban Transport Planning in Europe-understanding the transport system, *Sadhana*, Vol. 32, Part 4, pp.293-307, 2007