# ATTITUDE OF ADMINISTRATION TOWARDS PUBLIC TRANSPORT

- A COMPARISON BETWEEN EAST ASIA AND EUROPE THROUGH MULTINATIONAL OPERATORS -

Takeru Shibayama, Doctorate, Research Center for Transport Planning and Traffic Engineering, Institute for Transportation, Vienna University of Technology, Austria takeru.shibayama@student.tuwien.ac.at

Hitoshi leda, Professor, Transportation Research and Infrastructure Planning Laboratory, Department of Civil Engineering, Faculty of Engineering, University of Tokyo, Japan ieda @civil.t.u-tokyo.ac.jp

#### **ABSTRACT**

This research compares attitudes of the government towards public transport in Europe and East Asia including Japan, South Korea, and China through activities of Multinational Operators for Local Transport Services (MOLTS), which are firms such as Veolia Transport, Arriva, Keolis, and Transdev), as well as through several referential cases. The attitude is affirmative in Europe and South Korea, whilst it is negative in Japan. The Chinese attitude can be either affirmative or negative, whilst it probably depends on the person in charge at the moment. The affirmative aspect in Europe is clearly seen in an EU regulation as well as in White Paper, whilst that in South Korea is found through a practical implementation.

Keywords: Public Transport, Multinational Operators, Organizational Structure, Transport Policy, Public Administration, Comparative Approach

#### 1. INTRODUCTION

Recent research by the authors revealed the status quo and backgrounds of the development of multinational firms for public transport operation (MOLTS: Multinational Operators for Local Transport Services). The MOLTS – firms such as Veolia Transport, Transdev, Keolis, and Arriva – are private firms operating public transport in a number of countries. For example, Veolia Transport in Europe operates sixteen tram networks in France as well as regional trains in Germany and local buses in Slovenia. Further networks such as Stockholm metro and other innumerable local public transport networks in Europe are also operated by the firm. Meanwhile the firm has its Korean and Chinese subsidiaries in Seoul and Nanjing; the Korean subsidiary is the operator of the Seoul Metro Line 9, whilst the Chinese subsidiary operates buses in and around the city of Nanjing. Additionally, MOLTS have several operating businesses in Oceania and the Americas. These rapid international developments arose in the last two decades.

12th WCTR, July 11-15, 2010 - Lisbon, Portugal

As revealed in the previous research, the business of MOLTS is based on a "low-risk low-profit business with authorities" concept. This implies that public sectors in each locality play very important roles where the MOLTS operate public transport.

This implication provides us with a general concern regarding the public sector's administration on public transport. Is administration for public transport identical around the world so that firms can enter into a new market without barriers? Or, is it as diverse as it has been in each locality and the firms adjust themselves to each? Perhaps the situation is something in between?

Furthermore, if there is any diversity, how different are the thoughts behind the administrative systems? What is the basic idea rooted in each society to implement each administration system? Is there any peculiarity of attitudes toward public transport management in each country or in each social context?

This research aims to reveal basic differences of the attitude of public administration towards public transport, through the activities of multinational public transport operators and further relevant reference cases. With the status quo of the MOLTS (Section 2) and relevant literatures (Section 3) taken into consideration, this paper first set up a framework for the comparison (Section 4). Activities of the multinational operators and other representative cases are described in order to get a picture of administration systems and attitudes behind them (Section 5). The European part focuses on European Union, whilst East Asia includes Japan, South Korea, and China (P. R. C.). The conclusive section (Section 6) makes a comparison and several further discussions are made.

The section 2, which describes the status quo of MOLTS, as well as MOLTS-activity part of the section 5, is summary of the authors' previous publications.

## 2. MOLTS (MULTINATIONAL OPERATORS FOR LOCAL TRANSPORT SERVICES)

MOLTS (Multinational Operators for Local Transport Services) are, in short, private firms operating public transport in a number of countries [Shibayama and leda 2009]. In the world, French firms Veolia Transport, Transdev<sup>1</sup>, Keolis, British firms Arriva, First, Group, National Express, Stagecoach, and a Singaporean firm Comfort DelGro are found as the major MOLTS. Recent expansions of MOLTS business are shown in the Figure 1 (Europe) and 2 (Worldwide) in relation to the countries where the firms are headquartered. Europe is the main market of the MOLTS Business, whilst it expands to other parts of the world including the Americas, Oceania, and Asia. The research focusing on MOLTS did not appear until 2005 [Alexsandersson 2005], and, to the best of the authors' knowledge, the first comprehensive ones are the series of researches conducted by the authors in the recent years [Shibayama and Ieda 2007, Shibayama and Ieda 2008a, and so on].

The typical business model of MOLTS is represented with "Low-risk Low-profit Business with Authorities" concept. MOLTS prefers a contracted-based public transport operation with local authorities. There are other types of service provided by MOLTS such as factory-exclusive commuter transport from homes to a factory for its workers (Slovenia),

\_

<sup>&</sup>lt;sup>1</sup> It is reported that Veolia Transport and Transdev are in talk for the merger.

ground transportation in an airport (France), cargo train operation<sup>2</sup> (France and Germany), and so on. However, the main business of MOLTS is in a domain of urban and regional public transport with the "Low-risk Low-profit Business with Authorities" Concept.

The "Low-risk Low-profit Business with Authorities" model is that, with a contract with local government, an operator has an exclusive right for an entire city or for some routs for several years. The deficit is often compensated by subsidiary from a public fund. There are different measures to organize this (such as gross cost contract or net cost contract), but the key of this model is that the government takes responsibility for public transport and the deficit is compensated.

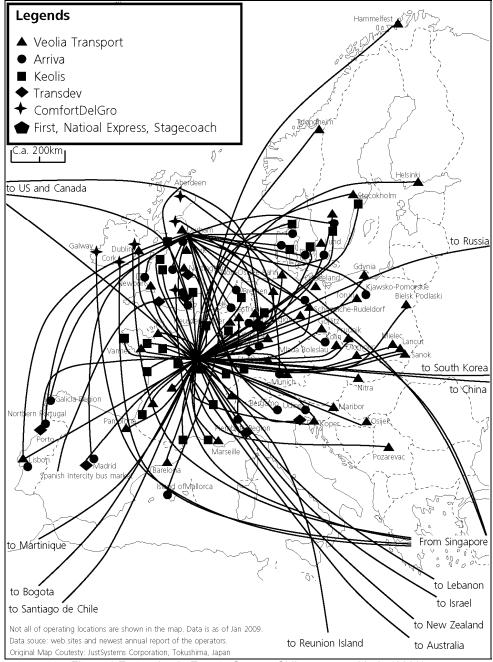


Figure 1 Expansion in Europe Source: Shibayama and leda (2009)

12th WCTR, July 11-15, 2010 - Lisbon, Portugal

\_

<sup>&</sup>lt;sup>2</sup> It is reported that this business section, which is of Veolia Transport, will be sold to another firm

 A Comparison between East Asia and Europe Through Multinational Operators -SHIBAYAMA, Takeru; IEDA Hitoshi

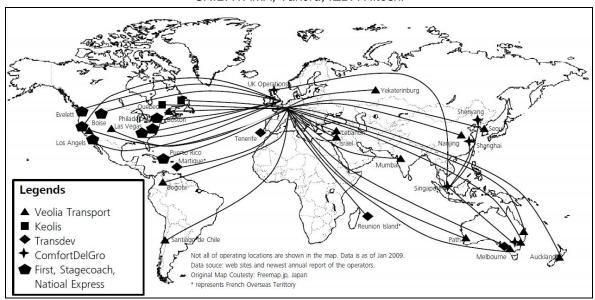


Figure 2 Expansion in the worldwide scope Source: Shibayama and leda (2009)

#### 3. FURTHER LITERATURE REVIEW

Further literature review is made in relation to the regulatory framework of public transport, privatization, organizational structure, and so on for our further discussion.

Vuchic [1999; 2005] provides us with a good overview of the development of public transport stating as a profit-making business of the private sector, with the public sector being involved later. What is called "public" transport today in its origin began as a private business. Other literatures shows that no matter where it is located i.e. whether a system is in London, New York, Buenos Aires, Tokyo, or in Hong Kong, urban public transport system was started in a hand of private sector [leda 2005; Shimosaka et al 2009, etc]. Vuchic points out that public transport business in a domain of a private business brought a severe problem when motorized individual transport mode appeared. For example, in the age of rapid motorization in 1920s and 1930s in the United States, "governments (snip) focused mainly on accommodating highway traffic while treating public transport as the domain of private transit-operating companies" (Vuchic 1999). Thereafter, this "public transport" on the "private" nature is defeated with the competition with automobiles, and in some cases services are suspended, with a few exceptional cases. For example, in Europe, since earlier times, urban public transportation has been in the hand of public sector. For example, Vekehrsverbund (Traffic Union) is one of the government-initiated activities of public transport [Pucher and Kurth 1995; Vuchic 2005]. In short, public transport in public hand is relatively newer tendency in the history of public transport.

Comparative approach to regulatory frameworks of public transport has been made innumerable times from a number of viewpoints. The series of British privatization in 1980s seems a large trigger of this, whilst other comparative studies have been made in a number of times. This makes us confused; the "privatization" provides us with an impression that the role of the government is eliminated or lessened. However, from a long-term viewpoint, the role of the public sector has increased overall compared to the beginning of the public

 A Comparison between East Asia and Europe Through Multinational Operators -SHIBAYAMA, Takeru; IEDA Hitoshi

transport. [Costa 1995; Button and Alvaro 1999; Docherty et al 2004; Glaister 1985; TIS.PT 1997; TIS.PT 2001; ITS Leeds 1998; ITS Leeds 2005; Tyson 1990 etc]

It is also pointed out that these studies are often limited to domestic or European scope. Comparison on a truly international scope including non-European regions is still in lack, although case study specified in one city is often conducted for many cities [for example, Kanyama 2005].

A conceptual structure of organizational structure appears in publications of Van de Velde [1999] and Vuchic [2005]. Both draw a structure with operational, tactic, and strategic level in a hierarchy.

With all these state-of-art researches taken into consideration, however, no research comparing the thoughts behind public transport or the recognition of the role of the government has yet done. Furthermore, in relation to the MOLTS, there is an increased interest of this aspect, whilst no research on such perspective has done.

#### 4. SETTNG A FRAMEWORK OF COMPARATIVE APPROACH

#### 4.1. Multinational operators and attitude of administration

A comparison of "thoughts" or "attitudes" is a highly complex matter and a number of possibilities can be a starting point. Unlike air transport or sea transport, public transport is by its nature rooted in locality; the service is limited to a scale of a city or of a conurbation. Majority of the users are local people, and therefore the need for public transport is a highly local matter. This make us deduce that the idea concerning public transport is highly local issue and therefore a worldwide (or, at least, international) comparison does not make any sense.

Notwithstanding, the worldwide extension of the MOLTS implies that their "Low-risk Low-profit Business with Authorities" concept can be applicable in numerous countries. The MOLTS business is based on the idea that the public sector takes an overall responsibility onto public transport [Shibayama and leda 2007]. Therefore, this basic idea must be somewhat spreading into all over the world. This clearly makes the case for the comparison.

In addition, their newly appearing Asian businesses taken into careful consideration, their business is sometimes expanding to where the public-sector-is-overall-responsible idea may not be applicable, or the idea may not yet be fully integrated into regulatory and legislative framework. Unsuccessful case of MOLTS-expansion can also be put onto the same context.

Therefore, comparative approach through the operational locations of MOLTS will highlight peculiarity or similarity of the thoughts behind administration. Furthermore, this will provide us with another starting point for further studies regarding how this peculiarity or similarity influences on public transport itself and also on the entire transport system.

#### 4.2. Consideration on Data and Information Source

The inherited problem of comparing the thoughts behind administration in an international scope is that a direct and simple comparison is not feasible. A comparison of legislative

 A Comparison between East Asia and Europe Through Multinational Operators -SHIBAYAMA, Takeru; IEDA Hitoshi

documents might provide us with a simple and reasonable framework for a comparison, whilst it is not practically feasible in an international scope as the structure of legislations much differs in each nation. Furthermore, in some nations, legislations for public transport might be in a form of unwritten laws or may not be well established in a formal way.

With the feature of the extension of the MOLTS taken into consideration – there are innumerable operating locations and it's in an established phase in Europe, whilst there are only a few and it's in a beginning phase in East Asia – it is supposed that there must be a common European idea at the EU level, whilst the situation in Asia may be various.

Furthermore, consideration only of MOLTS may lead us to inadequate or insufficient discussion. Therefore, along with the description of MOLTS activities and related aspects in each country or region, several "reference cases" are added to them where available. These reference cases include legislative documents as well as cases in practice.

In the next section, overviews of the MOLTS activities in each country/region are briefly described, partly derived from the authors' former publications. As the reference cases, we used the EU regulation EU Transport White Paper for Europe. For East Asia, we used literature review including press documents as well as interview to responsible personnel from MOLTS as the reference cases.

#### 5. MOLTS ACTIVITIES AND REFERENCE CASES

This section describes both MOLTS activities and reference cases for each country/region. MOLTS activities are provided with for all countries/region, but reference cases are provided only for Europe, Japan, and South Korea; the description of the MOLTS activities in China has some aspect of reference cases.

#### 5.1. Europe

#### 5.1.1. MOLTS Activities

As shown in Figure 2 in the section 2, most of the EU member states have one or more operating locations of MOLTS. Representative ones include the metro in Stockholm, Sweden, a number of tram systems in France, bus operation under the franchise framework of Transport for London, regional railways in Federal States (*Bundesländer*) of Germany, and so on. Most of the operating locations are based on a contract with local government, which enables MOLTS to operate with the "Low-risk Low-profit Business with Authorities" concept. MOLTS themselves highlight this aspect of contracting in their activity reports. [Shibayama and leda 2007; Shibayama and leda 2009]

#### 5.1.2. Reference Cases

A regulation and further documentations are in fact provided in the European level, although European Commission has the principle of subsidiarity, and, as stated before, public transport has its nature of locality. This means that (1) the member states are supposed to

 A Comparison between East Asia and Europe Through Multinational Operators -SHIBAYAMA, Takeru; IEDA Hitoshi

follow this regulation, and therefore (2) the idea implemented this European level will be practically implemented into its administrative and regulatory system, although there will be various measures of implementation. In other words, although various measures and legislatives are seen in each member states or even in each city, a basic European idea towards public transport is in principal unified at the EU level.

The up-to-date regulation is published in 2007 and became effective in 2009 [European Commission 2007]. This regulation is a replacement of a regulation of 1969. This 1969 regulation was revised in 1991 [European Commission 1969; European Commission 1991].

The overall idea of the European regulation is that the authority such as a state, a federal state, a city and so on is responsible to arrange an adequate public transport in each level. For example, in this regulation, a city authority should organize its urban transportation. This idea on public transport in general appeared in the revised edition of 1991, whilst the same idea for national railway network can be seen in the original 1969 regulation. In the preamble of the newest 2007 regulation, the role of the government is clearly written as follows.

At the present time, many inland passenger transport services which are required in the general economic interest cannot be operated on a commercial basis. The competent authorities of the Member States must be able to act to ensure that such services are provided. The mechanisms that they can use to ensure that public passenger transport services are provided include the following: the award of exclusive rights to public service operators, the grant of financial compensation to public service operators and the definition of general rules for the operation of public transport which are applicable to all operators. If Member States, in accordance with this Regulation, choose to exclude certain general rules from its scope, the general regime for State aid should apply. (Cited from [European Commission 2007] Preamble (5))

Considering the nature of the regulation, though this is in a wider scope covering different inland transport modes, it is clear that public transport is included in this context.

Furthermore, the Transport White Paper of European Union [European Commission 2001] states as follows;

Even if the subsidiarity principle dictates that **responsibility for urban transport lies mainly with the national and local authorities**, the ills besetting transport in urban areas and spoiling the quality of life cannot be ignored. (Snip) **The alternative** (to traffic management and private cars) **is to** promote clean vehicles and **develop good-quality public transport**. (Cited from [European Commission 2001], Page 81, highlighting is by the author)

These paragraphs in the regulation and in the White Paper show that the government at each level should take an initiative to organize its public transport. Furthermore, several different measures such as awarding of exclusive rights and financial compensation are

 A Comparison between East Asia and Europe Through Multinational Operators -SHIBAYAMA, Takeru; IEDA Hitoshi

provided. Although a wide diversity is observed in an implementation level, the European idea is clear and embedded in the EU regulation level.

#### 5.2. Japan

#### 5.2.1. MOLTS Activity

At the time of our research, no MOLTS-operated public transport is found in Japan. However, in 2005, one of the MOLTS tried to succeed an operation of a tramway operation in Gifu City, which is located in central Japan, whilst it did not work out in the end. This tram used to be operated by a Japanese operator Nagoya Railroad Co.,Ltd., whilst the operator intended to close several lines including this tramway. Connex (today's Veolia Transport) submitted to a proposal for national and local authorities to continue the operation of the lines, but finally negotiation did not work and the lines were finally closed. [Kato 2005]

After this case, no significant activity of MOLTS is found in Japan.

In relation to this Gifu case, an anonymous blogger reports an interesting case. He/she sent a letter to the mayor of Gifu City in 2005, and, according to him/her, the mayor pointed out that in Japan most of public transport is operated by private firms with financial independence, and public transport is perceived as private profit-making business. He added that (this will be) a problem from a viewpoint of maintaining public transport service, considering the status quo of public transport in Japan. [Anonymous 2005]

#### 5.2.2. Reference Cases

Several reference cases show the Japanese background of public transport. An interview to a responsible person from a MOLTS (Veolia) provides a view on the Japanese situation, in relation to the attempt of the firm to enter into the Japanese market. Furthermore, a recent Japanese representative case provides us with a further insight.

A Japanese feature is highlighted by the answer in the interview to MOLTS-personnel concerning bus-operating business in Japan; Mr. Erdaward Varani, a deputy director responsible for the East Asian market of Veolia Transport at the time of the first interview in January 2007, pointed out that it is unclear which stakeholder takes the responsibility for providing public transport services. He pointed out that the person in charge from a municipality says that it is in the hands of (private) operators, while personnel in charge from operators say that it should be taken by the public sector. In short, the idea of administrative sector is that public transport is a private transit business, whilst the idea of the operators is that public transport is a public service. Consequently, responsibility is indecisive – or "up in the air".

An outrageous case happened in the railway sector. In 2006, a loss-making short-distance private railway in Choshi City, Chiba, published an appeal on its website to ask people to buy a rice snack which the firm produces as its supplementary business so that the company can finance its rolling stock maintenance [ITmedia News 2006]. The answer from the mayor of Choshi City to this appeal is that "unless the firm submits its business plan, publish its financial statements, prepare own money to finance partly, and solve its illegal-

loan problem of the former president, the city will not support the railway" [Okano 2006]. Despite a political complication in the city and an illegality of a former management of the company related to this, this case represents the idea of the public sector in Japan that the public transport is a private business with profit-making in principal.

#### 5.3. South Korea (Seoul Metropolitan Region)

#### 5.3.1. MOLTS Activity

Since 2009, Veolia Transport operates Seoul Metro Line 9 through its joint-venture subsidiary with Hyundai Rotem, a Korean rolling stock manufacturer. This is the first and only the case of MOLTS business in South Korea.

This is operated by Seoul Line9 Operation Co. Ltd., 80% of which is owned by Veolia Transport (one of the MOLTS) and 20% of which is owned by Hyundai-Rotem (a Korean rolling stock manufacturer). The operation contract is made between this operating company and SML9 (Seoul Metro Line 9) consortium, to which Seoul Metropolitan Government awarded the construction and the operation of the line. Detailed organizational structure is shown in the following figure. [Veolia Transport 2009a, Veolia Transport 2009b; Shibayama and leda 2009]

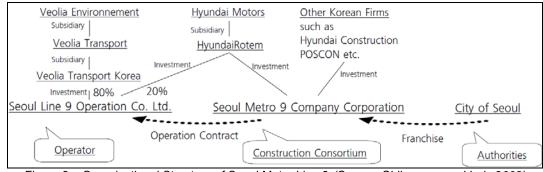


Figure 3 – Organizational Structure of Seoul Metro Line 9 (Source: Shibayama and leda 2009)

#### 5.3.2. Reference Case

The arrangement in South Korea in general is, to the best of our knowledge, not fully documented. However, the recent rearrangement of the bus network in Seoul provides us with a good referential case concerning the attitude of the government towards public transport.

Buses in Seoul Metropolitan Region used to be operated by innumerous private operators. This reorganized these private operators into "a semi-public operation system". The implementation includes public management of revenue, bidding of main routs, establishment of Operation Management Organization, and so on. This series of the "renovation of bus system" is put in the context of a public administration reform. [Won 2007] In other words, this renovation is taken place with recognition of the metropolitan government that the government should take an initiative to offer and organize public transport system.

This reorganization had a clear and strong link to the entire transport policy which is symbolized with the elimination of motorway viaduct over Cheong Gye Cheon River. Furthermore, according to Won, this reorganization of the bus system is to put advantages to

public transport concerning speed, convenience, safety, and social fare, rather than onto private vehicles.

#### 5.4. China (People's Republic of)

#### 5.4.1. MOLTS Activities

Comfort DelGro, the Singaporean multinational, has several bus-operating businesses in China, including the cities of Shenyang and Shanghai. Since 2008, Veolia Transport has a bus operation in the city of Nanjing and in the surrounding Jangzu province through its joint-venture subsidiary Nanjing Zhongbei Veolia Transport. A characteristic of MOLTS activities in China is that they are in the form of joint-venture, which partly consists of MOLTS and partly of local (often state-owned) company.

The author made another interview to Mr. Edward Varani in February 2009. He was a president of Veolia Transport Nanjing Zhongbei at the time. He pointed out that the Chinese public transport operation is highly dependent on "the power of a person in charge from the city administration." According to him, the contract-based scheme which is seen in Europe is not implemented in the city, and subsidy from the city to the operator is not formalized. The subsidy is indirect and it is awarded for fuels instead of the public transport (bus) service provided in the city. In addition, there is another "indirect subsidy to Sinopec (China Petroleum & Chemical Corporation)" regarding fuel.

The result of the interview shows that the MOLTS business in China (at least in Nanjing) is not based on their basic "Low Risk Low Profit with Authorities" business model. As a business of the firm, it is rather a "show case" of the French public transport operating business and "this is more important than the operation itself" according to Mr. Varani. He points out that elimination of fraud in the firm (such as a conductor collecting money but not selling the ticket, and eventually take the money into his/her pocket), establishing statistics of the operator, financial control, institutionalization within the company, and so on are expected.

Furthermore, he added several perspectives in relation to the Chinese situation. As a private firm, in countries such as Brazil, Mexico, and Turkey, profit from public transport without subsidy can be expected. Meanwhile, it is "impossible to imagine the situation without contract in France" (where Veolia is originally from).

#### 6. COMPARISON OF THE ATTITUDES

The MOLTS-business and reference cases provide us with a possibility to compare the recognition of the role of the government. Table 1 summarizes the comparison.

Table 1 – Comparison of the recognition of the role of the government

Country/Region		MOLTS	Attitude of the government towards PT	Implementation and Formalization
Europe (EU)		Yes	Affirmative: "Local government should take responsibility to make sure that adequate service is provided."	Declared in - the preamble of a EU regulation - a Transport White Paper Implemented through contract-based scheme. Difference of implementation is found in each country.
East Asia	Japan	No	<b>Negative</b> : "Public transport is private profit-making business in principal."	Not formalized in a nationwide level. Some spontaneous and/or ad-hoc measure can be possible.
	South Korea	Yes	Affirmative: "Local government should organize public transport, with its priority to the automobiles."	Seen as a practical implementation of organizational structure in the metropolitan region. (Yet unclear in a nationwide level.)
	China (P.R.C)	Yes	Can be either affirmative or negative, probably depending on a person in charge in each local government.	Case-by-case implementation.

Europe and South Korea has a similar feature that the government recognizes its role onto public transport and their attitudes are affirmative in general, although there is a difference concerning whether it is clearly documented or found from practices. Meanwhile, such clear recognition and overall affirmative aspect are not found in Japan and China at the moment.

The result evokes us further questions; why this difference happens? Is it because of the fundamental cultural difference of the attitude towards documentation? Or, perhaps, an economic development may make the authorities busy to provide services meeting the needs and they are not capable to think about their role?

In Europe, earlier motorization in 1950s and 60s made public transport endangered earlier. National railways have been suffered from deficit since 1960s as well to implement the 1969 EEC regulation. In Korean case, considering the fact that the drastic change happened during the governance under the mayor Lee Myung-bak, this mayor played an important role to implement the idea into the system.

In Japan, however, although the motorization level is higher, the attitude of the public sector towards public transport is rather negative. This is probably because of the Tokyo's "successful" cases; in Tokyo, public transport can be served as profit-making private business. This may lead the Japanese idea that public transport should be profit-making private business. Considering the fact that public transport in small cities and in rural areas in Japan are in a severe situation, this may have to be reconsidered. China seems rather busy with infrastructure development; government takes part in overall aspect of public transport, whilst the relationship between authority and operator is rather unclear at the moment.

The consequence of the difference is primarily different business models of public transport operators. Where attitude of a local government is affirmative, operators can provide services with lessened risk. Where attitude of a local government is negative,

### Attitude of Administration towards Public Transport – A Comparison between East Asia and Europe Through Multinational Operators -

SHIBAYAMA, Takeru; IEDA Hitoshi

operators may have to take much more risks; it may consequent a severe situation of public transport, whilst large profit can be expected in some occasions. This different of arrangement appears as a difference of the organizational structure.

#### 7. CONCLUSION

This paper first reviewed the concept, expansion, and the "Low-risk Low-profit Business with Authorities" model of MOLTS as well as further relevant literatures (Section 2 and 3). Then, the research framework is set (Section 4). Based on this, the features concerning the recognition of the role of the government are shown (Section 5). The comparison (Section 6) clarified the following points; in Europe and in South Korea, the attitude of the government towards public transport is affirmative, although this is observed either through legislative and policy documents (in Europe) or in practice of a MOLTS (in South Korea). In Japan and China, through a practice of MOLTS as well as some reference cases, no clear affirmative attitude is found.

These results evokes the interest in arrangements of public transport – in other words the organizational structure – of public transport as a practice implemented based on the recognition. This area in an international and worldwide scope is a future research challenge.

#### REFERENCES

- Anonymous Blogger (2005), "Furansu Koutsu Kokunai Kihon Hou" ("France: Basic Law of Domestic Transport") from http://himagine.cocolog
  - nifty.com/himagine/cat2130833/index.html, Access on 1 February 2010 [in Japanese]
- Alexandersson, G. and Hultén, S. (2005) Public Procurement and the Rise of National Champions in the Deregulated European Markets for Public Transportation, Fourth International Business and Economy Conference, Honolulu, 6-9 January 2005
- Anthony, R. N., "The Management Control Function" (Chapter 2, 3, and 4). Harvard Business School Press, 1988
- Button K and Alvaro C. (1999), "Economic efficiency gains from urban public transport regulatory reform: Two case studies of changes in Europe", The Annals of Regional Science 33 (1999)
- Costa, A. (1995), "The organization of Urban Public Transport Systems in Western European Metropolitan Areas", Transportation Research Part A, Volume 30, Issue 5, pp349-359
- Docherty, I. et al. (2004) "State Intervention in contemporary transport", Journal of Transport Geography 12, pp257-264
- European Commission (2001), "White Paper European transport policy for 2010: time to decide," Office for Official Publications of the European Communities, Luxembourg
- European Commission (c.a. 2008), "Glossary Subsidiarity" available from http://europa.eu/scadplus/glossary/subsidiarity\_en.htm (Access on 22 January 2010)
- European Union (2007), "Regulation (EC) No 1370/2007 of the European Parliament and of the Council of 23 October 2007 on public passenger transport services by rail and by road and repealing Council Regulations (EEC) Nos 1191/69 and 1107/70", Official Journal of European Union

 A Comparison between East Asia and Europe Through Multinational Operators -SHIBAYAMA, Takeru; IEDA Hitoshi

- Glaister S. (1985), "Competition on an urban bus route", Journal of Transport Economics and Policy Vol. 19, No. 1.
- Hellriegel, D. and Slocum, J. W. (1989), "Management" (Chapter 10 and 11), Addison-Wesley
- Ieda H. (1995), "Commuter Railways Can congesting be relieved?" Japan Railway & Transport Review, March 1995
- Ieda H. (2005), "Jinkou-genshou Kankyou-Jūshi Jidai no Toshi Saisei" (*Urban Regeneration in the age of depopulating and environment-friendriness*), the 7<sup>th</sup> chapter of "Eko Bū mu-o Tou Toudaisei to Manabu Kankyougaku" ("Aren't we in ECO –BOOM?-Students at the University of Tokyo work on the Environment Issues"), Gakugei Publishing, Kyoto, ISBN 978-4-7615-2363-8, [in Japanese]
- ITmedia News (2006), "Netto de Choushi Dentetsu o Sukue! Meibutsu Nuresenbei ni Chumon Satto" ("Save the Choshi Railway! Order for Nuresenbei avalanches") available from http://www.itmedia.co.jp/news/articles/0611/21/news089.html, access on 26 January 2010
- ITS Leeds. (1998), "FATIMA Final Report" from http://www.its.leeds.ac.uk/projects/fatima/fatpart1.doc
- ITS Leeds. (2005), "SPECTRUM Final Report" from http://www.its.leeds.ac.uk/projects/spectrum/downloads/Final%20Publishable%20Re portv3.pdf
- Kato, H (2005), A Discussion on the Examination Process of Implementing Bus Route as an Alternative of an Abandoned Railway Line, Conference Proceeding for 31<sup>st</sup>

  Conference of Infrastructure Planning of JSCE, Hiroshima, Japan
- Okano, T. (2006), "Choushi-dentetsu mondai-e-no shi-no taio-ni tsuite" (Measures of the City to the problem of Choushi Dentetsu) available from http://www.city.choshi.chiba.jp/kurashi/sa\_shinkou/dentetsu.pdf, Access on 25.02.2010 [in Japanese]
- Pucher J. and Kurth S. (1996), "Verkehrsverbund: the success of regional public transport in Germany, Austria and Switzerland", Transport Policy Vol. 2. No. 4
- Shibayama, T. (2007) Globalization of Local Public Transport Service Providers, a project submitted to Department of Civil Engineering for bachelor degree, University of Tokyo
- Shibayama, T. and Ieda, H. (2007) Global Service Suppliers of Local Public Transportation, paper presented at the 36th Infrastructure Planning Committee conference of Japan Society of Civil Engineering, Hachinohe, Japan, 23-25 November 2007
- Shibayama, T. and Ieda, H. (2008a) Industrial Complex around MOLTS Local Public Transportation Operators, paper presented at the 38th Infrastracture Planning Committee conference of Japan Society of Civil Engineering, Wakayama, Japan, 1-3 November 2008 [in Japanese]
- Shibayama, T. and Ieda, H. (2008b) "Global Operator" of Regional Public Transport Services, Transportation and Economics, Vol. 68, No.10, pp58-66 [in Japanese]
- Shibayama, T. and Ieda, H. (2009a) "MOLTS Multinational Operators for Local Transport Services" Conference Proceedings, 8<sup>th</sup> Conference of Eastern Asian Society of Transport Studies, 11-19 November 2009, Surabaya, Indonesia
- Shibayama, T. and Ieda, H. (2009b) "Background of Multinational Businesses for Local Public Transport Operations", Infrastructure Planning Review, Vol 26.

 A Comparison between East Asia and Europe Through Multinational Operators -SHIBAYAMA, Takeru; IEDA Hitoshi

- Shimosaka, M. et. al. (2009) "A Study on Urban Transportation Evolution in Latin American Mega-Cities", Conference Proceedings of the Eastern Asian Society for Transportation Studies, Vol. 7, 2009, 11-19 November 2009, Surabaya, Indonesia
- TIS.PT, Consultores em Transportes, Inovação e Sistemas, S.A. (1997), "ISOTOPE Main Project Conclusions" from
  - http://www.tis.pt/proj/isotope/isotopemainprojectconclusions.htm
- TIS.PT, Consultores em Transportes, Inovação e Sistemas, S.A. (2001) "MARETOPE Handbook" from http://www.eltis.org/docs/handbook.pdf
- Tyson, W.J., (1990), "Effects of deregulation on service co-ordination in the metropolitan areas," Journal of Transport Economics and Policy Vol. 24, No. 3.
- Veolia Transport (2009a). Press Kit Seoul Metro Line 9, available from http://www.veolia-transport.com/ressources/files/1/890,DP-Seoul-US.pdf, access 26.01.2010
- Veolia Transport (2009b). Veolia Transport-RATP Asia starts operating Line 9 of Seoul metro, available from http://www.veolia-transport.com/en/medias/press-releases/ratp-asia-seoul.htm, access 26.01.2010
- Veolia Transport (2007) Veolia Transport to operate Line 9 of the Seoul subway system, starting July 2009, available at http://www.veolia-transport.com/en/company/press/20070703,seoul.aspx [September 2008]
- Veolia Transport (2008a) Veolia Transport pursues expansion in Asia with signature of first contract in China (Press Release), Available at http://www.veolia-transport.com/en/company/press/20081208,nanjing.aspx
- Veolia Transport (2008b) Veolia Transport signs operating contract for Line 1 of the Mumbai metro (Press Release), Available at http://www.veolia-transport.com/en/company/press/20081218,mumbai.aspx [December 2008]
- van de Velde, D.M. (1999) "Organizational forms and entrepreneurship in public transport Part 1: classifying organizational forms", Transport Policy 6 pp147-157
- Vuchic, V.R. (1999) "Transportation for Livable Cities", Center for Urban Policy Research, New Brunswick, New Jersey, ISBN 0882851617
- Vuchic, V.R. (2005) "Urban Transit: Operations, Planning and Economics", Wiley, Hoboken, New Jersey
- Won, S. (2006), Seoul's public administration reform. Presentation at 4<sup>th</sup> Quality Conference for Public Administration in the EU, 27-29 September 2006, Tampere, Finland, available from http://www.4qconference.org/liitetiedostot/plenary\_presentations/WonSeihoon.pdf, access 2010.01.26
- Yamanouchi, S. (1998), "Shinkansen ga nakatta ra" ("If there is no Shinkansen"), Tokyo-Shinbun Publishing Bureau [in Japanese]