

# Public Transport System in Local City and Rural Area: Comparative Study Between Malaysia and Japan

Sotaro Yukawa<sup>a,b\*</sup>, Mohd Azizul Ladin<sup>a,c</sup>, Amiruddin Ismail<sup>a</sup>, Riza Atiq Abdullah O.K. Rahmat<sup>a</sup>

<sup>a</sup>*Sustainable Urban Transport Research Centre, Universiti Kebangsaan Malaysia, Malaysia*

<sup>b</sup>*Center for Community Co-design, The University of Shiga Prefecture, Japan*

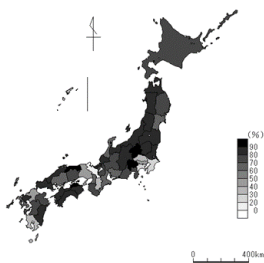
<sup>c</sup>*School of Engineering & Information Technology, Universiti Malaysia Sabah, Malaysia*

\*Corresponding author: s77yukawa@nifty.com

## Article history

Received :1 January 2014  
Received in revised form :  
15 February 2014  
Accepted :18 March 2014

## Graphical abstract



## Abstract

Recently, bus companies in Peninsular Malaysia are confronted with a crisis of maintaining its local bus services. Operating unprofitable public transport system in local cities and rural areas is an important issue in a developed country. However, such cases (operating unprofitable public transport) have emerged in developing country like Malaysia. Until recently, researchers focused on this kind of problems for only developed country and there are not enough international comparison about local bus service. To address this gap, we conducted a comparative analysis between Japan and Malaysia in this paper. We'll focus on the similarities and differences in terms of regulation, policy and some cases of bus substitution in both countries. We also examined the advantages and disadvantages about Japanese case and present some implication about future policy in Malaysia.

*Keywords:* Local bus; bus policy; local city; rural area; Malaysia, Japan

© 2014 Penerbit UTM Press. All rights reserved.

## 1.0 INTRODUCTION

Concerns of public transportation problems in developing country concentrated to shortage of supply is generally dismissed. Uncoordinated system in metropolitan areas and disruption of public transport services are also usually undermined. Harry T. Dimitriou and other researchers discussed the deterioration of urban public transport supply in India and Africa which is due to declining productivity of bus service [1-3]. However there are other modes of public transport such as minibus or share taxi still available for the residents in India or Africa.

Recently, another type of public transport problem has emerged in Malaysia. Since the 1980's, Malaysian public bus service outside the Kuala Lumpur metropolitan area went into a decline and for the past few years, there were sudden shut-downs of bus services reported in the newspapers. Unlike in the cases of Africa or India, there are no alternatives of public transport. Even a developed country like Japan suffers from the same problem. In Japan, public bus services in rural areas declined since the 1970s. In the rural areas, public transport services were nearly disrupted. To secure the mobility for the elderly or handicapped commuters, national and regional government authorities established new regulations and services for rural public transport. Although bus system in Japan still has many issues at hand, but it still provides useful information for comparisons with other countries.

Based on this motivation and rationale, in this paper we will evaluate the current situation in the Malaysian rural public transportation system by comparing it with the case of Japan. In section 2 we reviewed the current situation of local bus system in Peninsular Malaysia. In section 3, we examined the regulation system, policy and some cases of substitution of the Japanese local bus service and discussed about its advantages and weaknesses. Finally, in section 4, we will conclude with showing some positive implications in the future implementations of public transportation policy in Malaysia.

## 2.0 DECLINING IN LOCAL BUS IN PENINSULAR MALAYSIA

### 2.1 Problems in the Local Bus Industry

In the past several decades, Malaysia concentrated on promoting a motorised society by improving the road system and subsidising fuel. Today, the number of registered vehicles in Malaysia is about 9.6 million and there are about 300 automobiles per 1000 people in 2012. In addition, Malaysia has a high number of motorbike ownership where there are 300 motorbikes per 1000 people.

As a result, the local bus companies are on the decline. Figure 1 shows the revenue of public bus service (Stage and Express) in Peninsular Malaysia. This figure indicated the revenue of bus services which declined from the mid-1994 to 1999. It is no coincidence that during the same period several bus companies made huge losses and some companies have to cease their operation. For example, Park May, a local nationwide bus service operator by the name “Cityliner”, made a net loss of RM15.8 million in 2001. Intrakota, aimed at integrated public transport system, made a loss of RM340 million in the year 2000. Len Omnibus which served the northern part of Klang Valley, and Foh Hup Omnibus, which connected Kuala Lumpur to Seremban and the towns in between, stopped operation in 2002 [4].

In Klang Valley, the situation improved after Prasarana, a government owned infrastructure corporation, absorbed Intrakota and some part of Park May bus service in 2004. Rapid KL, which is the new brand name of the bus service, improved bus service by means of government subsidy. Consequentially, revenue from bus services in Klang Valley reached RM700 million in 2008. But for the other regions, they are still dogged with the hardships. the fuel price increase after 2008 aggravated the condition further.

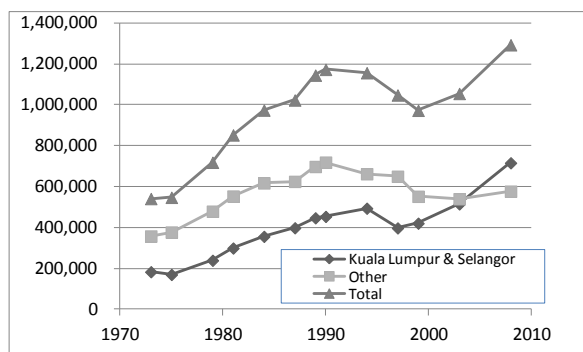


Figure 1 Total revenue (RM) of public bus in Peninsular Malaysia

2.2 Case of Recent Bus Discontinuation

Massive scale of bus discontinuation has appeared in the newspapers where, from November 2011 to January 2012, Konsortium Transnasional Bhd (KTB: It reorganised Park May and its Cityliner service) had stopped its local bus operation. Bus routes in Negeri Sembilan had stopped for about 10 days on November 2011, on December 2011 in Selangor and on January 2012 in Kelantan. There were some service discontinuation in Pahang and Kedah, too. KTB announced on December 1<sup>st</sup> that it would take 400 of its buses off the road because of high operational costs and competition from other bus companies.

The state government of Kelantan and Negeri Sembilan allocated some fund from the state budget but it was insufficient. This fracas ceased when the Federal government decided to approve RM400 million “Interim Stage Bus Support Fund (ISBSF)” to assist stage bus operations/operators nationwide. As discussed in section 2.1, ceasing bus operation by one bus operator was not unusual before then, but this case happened in a large scale and there are no alternatives for most of the routes in Kelantan and Negeri Sembilan except by taxi.

In 2013, another bus operator discontinued its service and commuters were left without any alternatives. Red Omnibus Bhd., which operated in Northern Perak, had ceased operation. Red Omnibus Co. and its fellow subsidiary Red and Yellow Omnibus Co., which also operated buses in the Northern Perak announced to cease operation on December 2012, claiming they started to

lose money since 2000. They initially announced to cease bus operation in 2011, but were asked to reconsider the decision by the state government. For the first 6 months in 2012 they were granted the state’s subsidy after they received the ISBSF. But it only subsidised RM 32,000 to 33,000 for their RM30,000.00 to RM40,000 losses. In the end, due to exhaustion of all the funds and the refusal of the state government to supply additional subsidy, it ceased operation completely in August 31<sup>st</sup>.

Fortunately, CKS Bumi Sdn. Bhd, which operates Perak Transit around Ipoh, already had stage bus license in this area. Perak Transit allocated 2 buses for ex-Red Omnibus routes but there are only 4 round trips per day (Red Omnibus operated buses every 1 hour) and it covered only Taiping to Parit Buntar, which are the main routes of Red Omnibus. These were two extreme cases, but they indicated several problems in public transport in local cities and rural areas in Malaysia. First, public transport there could not survive without subsidy. KTB (Cityliner) aimed at improving bus services by scale expansion and cross subsidy (subsidising local bus from express bus profit). Though it has some problems in management, but this case showed that the possibilities of these improvements are limited.

Secondly, even when the government decided to supply subsidies, we have to think of the appropriate method of supply. Thirdly, we have to plan the appropriate method of transition from one company to another. We would also like to point out that bus routes we have today are not suitable for the current public transport needs. Most routes have not changed for several decades and do not connect shopping centres to the suburbs. Bus routes also do not include hospitals, causing inconvenience to elderly citizens, who are the major users of public transport today. How can we revive bus service and in the same time solve these problems?

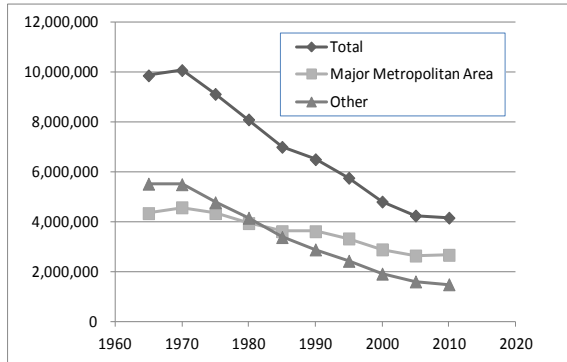


Figure 2 Total passengers of local bus in Japan

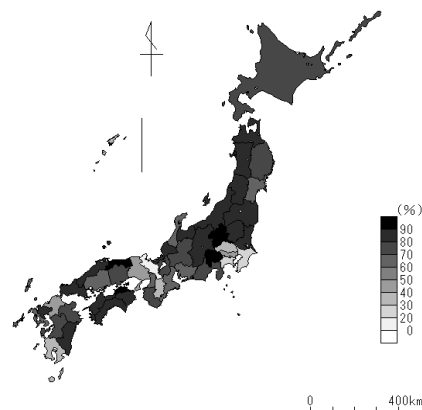


Figure 3 Degree of decreasing local bus in Japan

### 3.0 JAPANESE CASE OF LOCAL BUS REVITALIZATION

#### 3.1 Rise and Fall of The Japanese Local Bus Industry

There are about 27,000 km of railway system in Japan. Most cities are connected by railway and local train operate in relatively high frequency. However, there are many towns and villages which are not connected by railway. Thus, public bus system plays important role in Japan. But motorisation is also common in Japan after the 1970's. Railway service, especially in large metropolitan area, holds a competitive edge because of the relatively high speed of trains and shortage of road that limits personal automobile use. Bus services in large metropolitan areas also served, in some extent, as feeder services of urban railway system. Figure 2 shows the number of passengers of bus service in 3 major metropolitan areas (Tokyo, Nagoya and Osaka) in 2010 which is about 58% in 1970 and the number of passengers other than these areas in 2010 are only 27%. Figure 3 is the degree of decreasing local bus in Japan by region between 1970 and 2010. This figure shows bus passengers decreased in the area without large cities such like Tokyo and Osaka.

#### 3.2 Japanese Bus Regulation System and Securing Local Bus Services

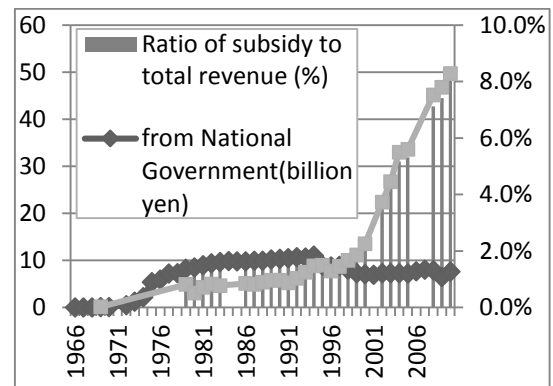
Like the local bus or express bus in Malaysia, the Japanese local bus system is regulated by license system which was introduced by Great Britain in the 1930s. Both governments require applications of license for bus operation and fixed route operation. Bus operators in both countries are still mainly private and they have the freedom of operation in some extent. For many developing countries, buses are operated under the transport plan monitored by the national or regional government authorities. Malaysia introduced this policy by establishing “Land Public Transport Act 2010” in 2010. Although Japan is a developed country, its transport plan is legally defined in the Basic Act on Transport Policy which was passed by the congress in 2013. Thus, both governments have some similarities of bus regulation policy (Table 1).

In providing local bus service, both are similar in that most local bus services are operated by private companies and they can suspend their bus operation if it is not profitable. However, procedure to suspension is very different. Operators in Malaysia have no restriction on bus route suspension, whereas operators in Japan need to submit details about their route suspension to the authorities 6 months earlier. Moreover, according to Japanese legislation “Road Transportation Act”, it is required by the council (consist of staff from regional and national government, bus association) to secure public transport service after the route was suspended. The council will collect the public opinion about alternate means of bus and how to support them financially.

There are three options for bus route in which the private companies gave up operation. The first one is to increase or giving new subsidy, the second option is regional government authorities operating the bus by subcontracting private companies and the third one is to abandon the bus route. Direct operation under regional government is divided into two types. The decision whether to subsidise directly or to subcontract depends on the circumstances but many regional governments choose to subcontract the operation because this option can easily remove burdens from regional government and if compared to direct operations, subcontracting can avoid inefficiency of public operation. Regional government can avoid to abandon the bus route, but sections of the route with low-demands are often pruned in the restructuring of the private to government operation.

**Table 1** Public bus and its regulation system in Malaysia and Japan

Aspects	Malaysia	Japan
Scale of industry (Revenue from public bus)	RM1,360 million in 2008(0.18% of total GDP)	992,414 million Yen in 2008(RM 32,013, 0.19% of total GDP)
Public/Private operation	Part of Metropolitan Kuala Lumpur and Penang operated by government owned Syarikat Prasarana Negara Berhad. Most routes in the state of Melaka are operated by the state government (Panorama Melaka). Others: Private operation.	27 municipality operates public bus directly (Its revenue corresponds to 17% of total revenue in the industry).427 local authorities operate bus as substitutes to abandoned private bus.
Registration related to bus operation.	(Before 1987) Commercial Vehicle Licensing Board Act 1987(After 2010) Land Public Transport Act 2010	Road Transportation Act (effective in 1946, and large modification in 2002)
Regulation for entering route bus service	Entering the route bus service is regulated to avoid excessive competition.	(Before 2002) Entering the route bus service is regulated to avoid excessive competition. (After 2002) Any operator can enter the route bus service if it satisfies the condition (But case of new entrant is limited).
Changes of route or timetable.	The operator needs to submit a detailed route and frequency when applying but the authority is not restricting changes of it after license is granted.	Operator must submit the changed contents to the authority in a period of 30days (Long distance route: in a period of 7 days).
Route suspension	Operator can suspend the bus operation without restriction of the law.	Operator must submit details of suspension to the authority in 6 month before the suspension.
Integration of public transport	Land Public Transport Act 2010 stated that SPAD shall propose the integrated transport policies and plans. It also proposed land transport master plan in 2011-2012[5].	Basic Act on Transport Policy (Passed in congress in 2013 is effective in 2014) provided government with the proposed integrated transport policies and plans.



**Figure 4** Subsidy for local bus services from national and regional government in Japan. *Source:* Annals of Japanese Bus Industry [6]

Subsidy for private operator and funds for regional government operation is prepared by national and regional government. In 2010, the national government subsidised 7.6 billion yen (RM 253 million) for the local bus services and the regional government subsidised 49.7 billion yen (RM1.57 billion). It did not include funds for direct operation so the regional government paid approximately 75 billion yen (RM2.4 billion) in total (Figure 4). Direct subsidy from national governments was allocated to unprofitable interregional bus route. National government also spent 80% of subsidy and funds of regional governments by tax allocation system. Tax allocation for bus subsidy and funds started in 1995 and the amounts increased after 10 years to deal with bus suspension because of the deregulation policy in 2002. This contributes in the increasing bus subsidy and direct operation in regional government.

### 3.3 Beginnings of Bus Subsidy for Rural Area in Japan

Establishing the implementation of regulation and policy that was explained in the last section is also important to understand the Japanese situation. In this section, we summarise its early history, including the case in Kochi. History of securing local bus services in Japan started in the 1970's. Though bus industry seemingly enjoyed prosperity in that era, only 38% of the bus routes made profit in the 1970 [7]. Because of the strict administration of bus license by the Ministry of Transport, the most unprofitable bus route maintained by cross-subsidy (profit from profitable route) but even so, 1,374 local bus route (there were 48,000 bus routes at that time) were suspended because of the decreasing demand between 1965 and 1970 [8]. In 1966, the Japanese government has started giving fund for buying new vehicles in isolated islands and they extended it for the rural areas in 1967 and supported operation cost in 1969 [7].

Regional governments (prefecture, town and village) also support bus operations in the rural areas. For example, in Kochi prefecture (Shikoku Island, with a population of 780 thousand in 1970), Kochi Prefectural Transport Co.(PTC), one of the major operator in Kochi prefecture, announced to stop its 79 routes, which is about half of its bus routes in 1969. After a long debate, PTC abolished 62 routes by the year 1973. 86% of these routes were taken over by small new companies, local taxi companies and municipal operation and prefectural governments prepared a supporting fund in addition to the national subsidy [8, 9].

### 3.4 Advantages and Weakness in the Japanese Case

There are many stories like the one we mentioned in section 3.3 in Japan and many regional governments established supported systems. Policy system shown in 3.2 established these experiences. Like some aspects of systems regulation, these stories are similar like those in Malaysia. Crisis of operation took lead and government policy followed it. But there are unimpeded substitutions in the Japanese substitution case because Japanese bus operators have to submit their route suspensions. Moreover, the regional government can choose how to operate the substitute bus from the multiple available options. It improved efficiency of substitute bus through competitions between the regional governments. On the other hand, it still remains a problem in terms of deficient subsidy and fund. Japanese local bus subsidy allocation is 6 times larger than that in Malaysia. As the choices are plenty, difficulty to handle all of the cases becomes a problem too. Staffs who handle substitute bus in regional government are often troubled by the staggering number of cases and alternatives.

To help government staffs and improve service quality by intelligence sharing, academic researchers and academic society organised cooperative system and this is another characteristic of

Japanese local bus substitution. For example, Japan Society of Civil Engineers had a section meeting about this theme and published its "Bus Service Handbook" in 2006 (JSPS, 2006, now revised edition) [10]. In addition to this, many academics advised bus substitution by supervision.

## 4.0 CONCLUSION

In this paper, we surveyed the policy of local bus service and its substitution from private operation to subsidised operation in both Japan and Malaysia. Both countries are very different in geographic and economic condition, but in terms of bus regulation system and the case of local bus substitution, both have some similarities. Operations were initiated by private sectors and subsidised operation took over after they were troubled by financial crisis. But unimpeded substitutions and variety of choice are advantages they have in Japan. Though bus substitution in Malaysia is just beginning and will make improvement based on their own experiences, Malaysia has some points in policy they can imitate from policies in Japan. Japan has more than 40 year's history of subsidising unprofitable local bus companies. In those 40 years, many experimental services were tried and they improved accessibility and reliability of Japanese bus service. This paper might only describe the regulations and policies in general, but the detailed case is worthy of further discussion. We will deal with them in our future study.

## Acknowledgement

This paper is the outcome of "Study of Public Transport System in Local Cities and Rural areas in Malaysia" is a research collaboration between the Institute for Environment and Development (LESTARI), Sustainable Urban Transport Research Centre (SUTRA), the National University of Malaysia and the Centre for Community Co-design (CCC), University of Shiga Prefecture, Japan.

## References

- [1] Dimitriou, H. T. and R. Gakenheimer. 2011. *Urban Transport in the Developing World: A Handbook of Policy and Practice*. Edward Elgar Publishing.
- [2] Pendakur, V. S. 2011. *Non-motorized Urban Transport as Neglected Modes*. Urban Transport in the Developing World: A Handbook of Policy and Practice. 203.
- [3] Pucher, J., N. Korattyswaroopam, and N. Ittyerah. 2004. The Crisis of Public Transport in India: Overwhelming Needs But Limited Resources. *Journal of Public Transportation*. 7: 95–113.
- [4] Nor, A. R. M. 2004. *Transport for the Under-Served Malaysia: The Roles of Minibuses in Malaysian Towns and Cities*. Bangi, Selangor: Universiti Kebangsaan Malaysia.
- [5] SPAD. 2011. *Greater Kuala Lumpur/ Klang Valley Land Public Transport Master Plan: Bus Transformation Plan*. Kuala Lumpur: Land Public Transport Commission.
- [6] *Annals of Japanese Bus Industry (Japanese Language)*. 2012. Japan: Nihon Bus Association.
- [7] *Annals of Japanese Bus Industry (Japanese Language)*. 1970. Japan: Nihon Bus Association.
- [8] Imoto, M. 2008. Bus Services in Sparsely Populated Areas in Japan and National Minimum Standards for Mobility. *Ritsumeikan Business Review*. 47(4): 33–51.
- [9] Imashiro, M. 1996. *Maintaining Public Transport in Japan's Countryside-Burden Sharing and Subsidies*. Japan Railway & Transport Review.
- [10] *Bus Service Handbook (Japanese Language)*. 2006. Japan: Japan Society of Civil Engineers.