Chapter 9

Road Passenger Services in Thailand

Sumet Ongkittikul and Nichamon Thongphat

October 2018

This chapter should be cited as

Ongkittikul, S and N. Thongphat (2018), 'Road Passenger Services in Thailand', in Gross, Jeremy and P.S. Intal, Jr. (eds.), *Reducing Unnecessary Regulatory Burdens in ASEAN: Country Studies*, Jakarta: ERIA, pp.239-264.

CHAPTER 9

Road Passenger Services in Thailand

Sumet Ongkittikul
Nichamon Thongphat
Thailand Development Research Institute

[1] Introduction

Road passenger services enhance people's connectivity by supporting domestic and international economic activities, particularly in the tourism sector. According to Thailand's Ministry of Transport[1] statistics in 2015, public transport for domestic conveyance mostly relied on bus services (around 65% of all passengers) in 2010-2014. The average growth of international bus services rose by around 16% for each year in the same period.

Passenger bus services in Thailand are regulated by the Department of Land Transport (DLT) under the Land Transport Act B.E. 2522, with three types of operations requiring different licencing and regulations. Unfortunately, poor enforcement of regulations has led to inefficient operation of the business and low-quality and unsafe services for passengers. The Ministry of Transport statistics shows a 4% drop each year in domestic passengers traveling by bus in 2010–2014, while bus accidents were slightly up in the same period.

Despite the good intention to certify safety and quality, previous regulations and enforcement failed in the past. The decreasing number of passenger buses is getting worse and is a burden for business. Thus, it is an important task for the government to improve service by strengthening the licencing procedures and improving compliance to regulations.

[1] http: ://www.mot.go.th/statmot.html?id=25

This chapter identifies the problems and impediments of operating passenger bus services in compliance with existing regulations, including aspects that should be added to the regulations. The chapter then attempts to give recommendations to reduce the unnecessary regulatory burdens (RURB).

This study was conducted through desktop research, a survey, and public consultation. The chapter focuses on all types of domestic passenger bus services in Bangkok, which cover most non-fixed-route service operators and fixed-route operators. Section 2 provides a brief industry profile of domestic road passengers. Section 3 analyses the relevant regulations along the service value chain. Section 4 describes the methodology and results of the relevant issues. Finally, Section 5 provides policy suggestions for RURB.

[2] Industry Profile: Domestic Road Passenger Services

2.1 | Types of Bus Services

According to the Land Transport Act B.E. 2522, the types of bus services in Thailand are fixed-route operations, non-fixed-route operations, and private operations. They require different licences to operate as follows:

2.1.1. Fixed-route operations

Fixed-route bus operations or scheduled services are also known as public bus services. To operate, this business must have a fixed-route licence to provide service in each category described in Table 1. The private sector can operate a business through the sublicencing scheme in category 1 in Bangkok and category 2, while private operators can apply for licences from the Department of Land Transport in category 1 outside Bangkok, category 3, and category 4.

According to Pomlaktong et al. (2012), DLT is the government agency authorised to implement the following public bus regulations.

Table 1: Routes of Public Bus Services

Bus Route Category	Government or Private Operators
Category 1: Routes within city or town areas	
In Bangkok, contiguous routes in perimeter areas. Buses run on main roads in community areas crowded with people, business centres, schools, government agencies, etc.	The Bangkok Mass Transit Authority (BMTA) is exclusively granted licences to operate. It sublicences private operators.
In provincial areas	Services are provided by private companies.
Category 2: Long-distance routes between Bangkok and regional provinces	
Routes that link Bangkok and the provinces.	The state enterprise Transport Co. Ltd. is exclusively granted the licence to operate buses. It delegates services to private operators under the joint service scheme.
Category 3: Interprovincial long-distance routes	
Interprovincial routes that link one province to another and may pass through other provinces.	Services are mostly provided by private operators.
Category 4: Intercity or town routes within a province	
In Bangkok, routes mainly on subordinate roads and feeder roads to main roads of Category 1.	Services are mostly provided by private operators. Routes have the highest number of licences granted, operators, and passengers.
Category 4 in provincial areas.	

Source: Pomlaktong et al., 2012; and authors.

a. Fixed-route operations

- Supervise and control fixed-route buses to run on fixed routes on the condition that passengers are picked up at specific locations according to a timetable, collect government-regulated bus fares, and stop at regulated bus terminals.
- Stipulate, improve, and revoke bus routes, and renew or withdraw bus operation licences.
- Stipulate and improve the condition of vehicle operations and the number and category of vehicles.
- Inform the Central Land Transport Control Board of fixing fare rates for approval.
- Stipulate bus standards; supervise the quality of transport operators' service to passengers; control bus safety (speed, parking duration, and age of bus); and control and examine the operation of transport operators, crew, and vehicles.
- Encourage and develop a system of mass transit by bus.

b. Non-fixed-route operations

Businesses operating non-fixed-route bus services must have a licence to operate commercially and contract approval from DLT. Non-fixed-route service is also known as 'for-hire bus service'.

The requirements for licencing fixed route and non-fixed route of the private sector are shown in Table 2.

Table 2: Differences Between Fixed-Route and Non-fixed-Route Licencing

Type of Licencing	Necessary Conditions	Category	Sufficient Conditions
Fixed route	- registered vehicle - vehicle ownership - adequate parking place - compulsory motor insurance	1	Sublicencing from BMTA
		2	Sublicencing from Transport Co. Ltd.
		3	Selection protocol through the Provincial Land Transport Control Board
		4 (Bangkok)	Sublicencing from BMTA
		4 (provinces)	Selection protocol through the Provincial Land Transport Control Board
Non-fixed route		-	Having hired contract of non-fixed route bus service

BMTA = Bangkok Mass Transit Authority.
Source: Authors, 2016.

c. Private operations
Private bus operations are services that any government or private organisation provides. Thus, an owner has to operate with a private bus licence. Private bus operations, however, are not within the scope of this chapter.

2.2 | Market Status of Scheduled Services

According to the Land Transport Act B.E. 2522, a scheduled-service operator needs a licence to operate on every route, a system called '1 licence, 1 route'. Table 3 shows the monopoly power in category 1, Bangkok and vicinity, and category 2.

For category 1, more than 55% of licences are in Bangkok and vicinity and those belonging to only a few licence holders (2% of all holders in the country). The Bangkok Mass Transit Authority (BMTA) was exclusively granted licences by a Cabinet resolution in 1983 to operate in category 1 in Bangkok and vicinity , and has sublicenced private operators. Similarly in category 2, the Transport Co., Ltd. has such exclusive power and jointly operates services with the private sector. However, the numbers of both operating licences and licence holders in category 1 gradually declined between 2011 and 2015.

Furthermore, the non-fluctuating numbers of operating licences and licence holders in category 4 are contradicted by the urbanisation along those routes. Therefore, they should be developed as routes under category 1, particularly in Bangkok and vicinity.

Table 3: Number of Operating Licences and Licence Holders for Scheduled Bus Services, 2011–2015

Category	Number of Operating Licences					Number of Licence Holders				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Whole Country	**2,994**	**3,034**	**3,042**	**2,961**	**2,932**	**1,458**	**1,472**	**1,489**	**1,461**	**1,473**
1	646	653	621	602	595	194	197	195	189	187
2	202	206	206	204	200	1	1	1	1	1
3	514	524	528	526	511	297	307	310	314	318
4	1,624	1,641	1,674	1,615	1,612	965	966	982	956	966
Bangkok and Vicinity	**1,229**	**1,259**	**1,242**	**1,221**	**1,185**	**335**	**347**	**350**	**351**	**353**
1	360	369	344	329	323	4	5	5	3	2
2	202	206	206	204	200	1	1	1	1	1
3	514	524	528	526	511	297	307	310	314	318
4	145	150	151	148	137	32	33	33	32	31

Source: Department of Land Transport, 2016.

2.2.1. Types of Firms in the Scheduled Service Industry

Licence holders and joint operators are the two types of scheduled bus service operators in Thailand. According to DLT data in 2014, for category 1 in Bangkok and vicinity, around 80% of all scheduled buses are jointly operated by 108 private sector companies, with 13% being small enterprises owning fewer than 10 buses. Similarly in category 2, more than 80% of all operated buses belong to private joint operators, while the majority of operators in categories 3 and 4 are from the private sector.

According to the National Statistical Office's survey of bus operations in 2014, the numbers of these two types of operators differ as follows:

(1) Number of licence-holding operators
There are 776 licence-holding operators in Thailand. Figures 1 and 2 show that most operators are small firms, of which almost one quarter own only one to five buses. More than half of them do not own any buses but delegate the operation of their authorised routes to other joint operators.

Figure 1: Number of Licence Holders, Categorised by Size of Firms, 2014

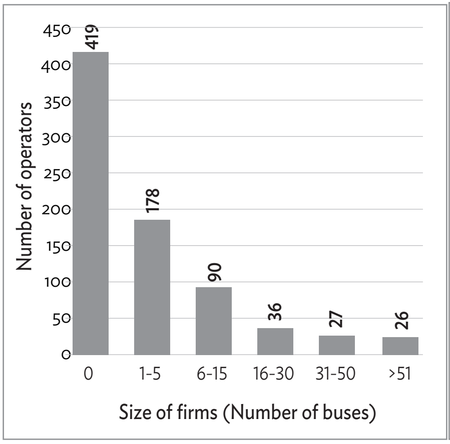
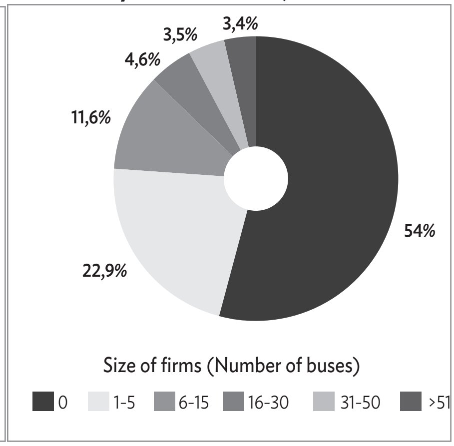


Figure 2: Proportion of Licence Holders, Categorised by Size of Firms, 2014



Source: National Statistical Office of Thailand, 2015.

(2) Number of joint operators

Most joint operators in scheduled bus services are small firms. According to the National Statistical Office's survey, 9% or 30,339 joint operators own only one bus, and only 1.3% of all joint operators own more than five buses (Figures 3 and Figure 4).

Figure 3: Number of Joint Operators, Categorised by Size of Firms, 2014

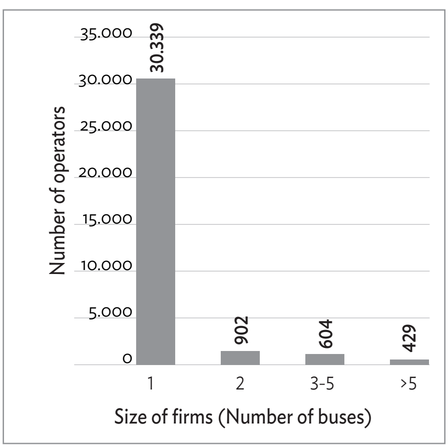
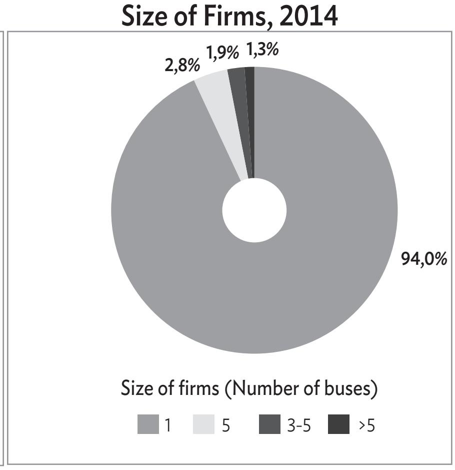


Figure 4: Proportion of Joint Operators, Categorised by Size of Firms, 2014

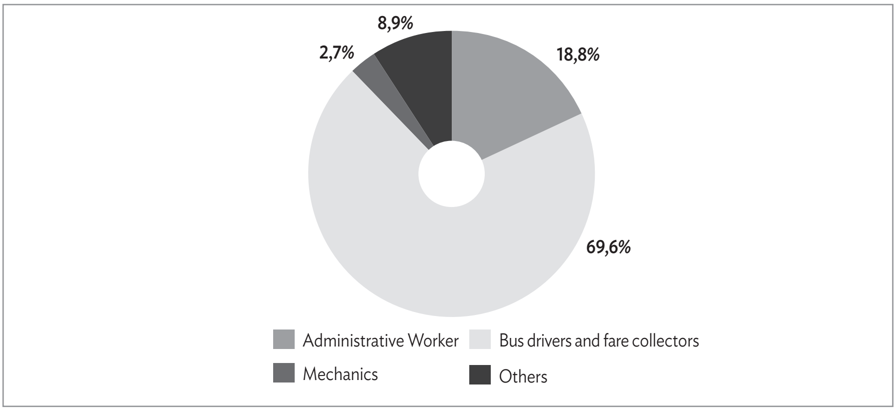


Source: National Statistical Office of Thailand, 2015.

2.2.2. Number of Employees

Of the 29,111 persons employed in all licence-holding bus operating firms, 69.6% are bus drivers and fare collectors. Administrative workers constitute 18.8% of total employees, while mechanics and other employees account for 2.7% and 8.9%, respectively. On the whole, the average number of employees in a firm is 37.5 (Figure 5).

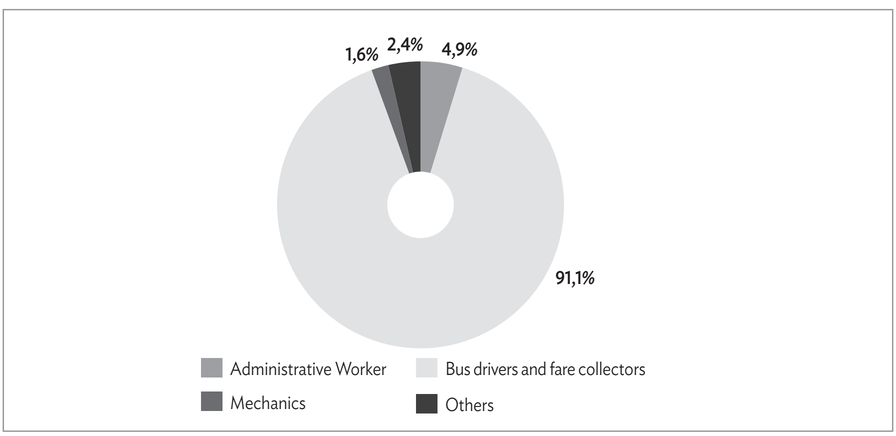
Figure 5: Employees in Licence-Holding Bus Operating Firms, 2014



Source: National Statistical Office of Thailand, 2015.

Out of the total 58,463 employees in Thailand's joint bus operating firms, 91% are bus drivers and fare collectors. Other employees are administrative workers (4.9%), mechanics (1.6%), and others (2.4%). On the average, there are 1.8 employees per operator (Figure 6).

Figure 6: Employees in Joint Bus Operating Firms, 2014



Source: National Statistical Office of Thailand, 2015.

2.2.3. Costs of Bus Operations

As shown in Table 4, the costs for each licence-holding bus operating firm and joint bus operating firm are B45.9 million and B1.5 million, respectively. Office expenses form the largest part (27.3%) of a licence-holding bus operating firm's total costs. Depreciation accounts for the second largest part of the total costs (24.4%). Other major costs are wages (19.6%) and fuel (15.5%).

For a joint bus operating firm, half of the total costs are depreciation. Fuel costs and wages make up 19.8% and 12.4%, respectively. In contrast to a licence-holding bus operating firm's costs, office expenses only represent 6.9% of the total costs.

Table 4: Costs for Bus Operating Firms, 2014

Type of Costs	Licence-holding Bus Operating Firm		Joint Bus Operating Firm	
	Amount (B1,000)	%	Amount (B1,000)	%
Wages	8,999.5	19.6	181.9	12.4
Tyres	233.0	0.5	25.5	1.7
Battery	38.0	0.1	5.6	0.4
Fuel	7,117.6	15.5	290.6	19.8
Lubricants	131.7	0.3	11.4	0.8
Bus repairs	3,326.9	7.3	72.2	4.9
Replacement parts	1,985.1	4.3	8.0	0.5
Office expenses	12,514.4	27.3	101.4	6.9
Taxes and fees	363.1	0.8	24.4	1.7
Depreciations	11,178.8	24.4	745.7	50.8
Total	**45,888.2**	**100**	**1,466.7**	**100**

Source: Calculated from National Statistical Office of Thailand, 2015.

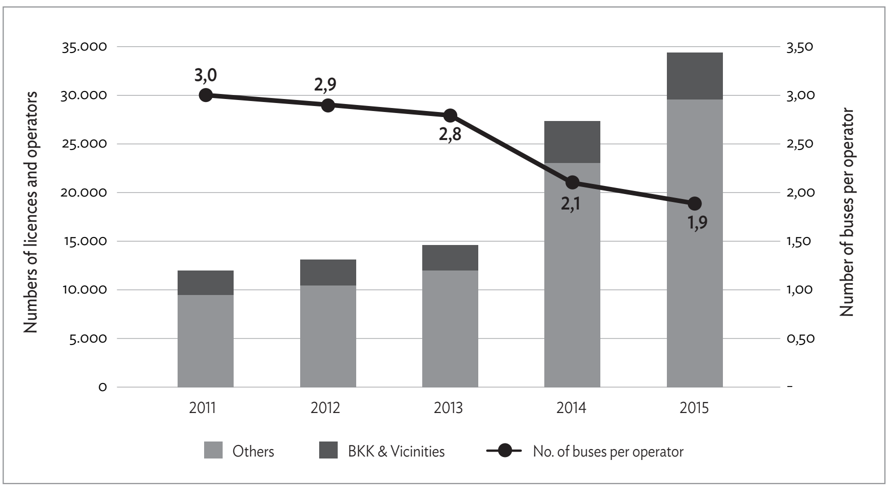
2.2.4. Problems of the Scheduled Bus Service Industry

Scheduled bus services are losing popularity to other modes of transport like the underground or sky train in Bangkok and airlines offering low-cost domestic air transport. One reason behind this is the rigid regulations that do not conform with the current economic and traffic circumstances. Operators cannot gain normal profits from operations since they have been burdened by government policies, controlled pricing, route licencing without proper planning, and poor regulations of non-licenced vehicles on licenced routes. Another problem occurs from the sublicencing scheme in category 1, Bangkok and vicinity, and category 2 since BMTA and Transport Co., Ltd. cannot control the service quality of their private joint operators.

2.3 | Market Status of for-hire Service

Influenced by growth in the tourism sector, for-hire bus service operators increased by 154% in 2011– 2015 (Figure 7). The number of operators in Bangkok and vicinity increased by 24% each year during the same period. However, the additional operators were small firms since the number of buses per operator shrank from three to one in 2011–2015. One reason behind this is that many licenced operators are providing other services, i.e. scheduled bus operations, private-purpose operations, or for-hire services. This results in the higher number of licenced operators than the actual demand for these services and eventual price war on these services.

Figure 7: Number of Licences and Operators of For-Hire Services, 2011–2015



Source: Department of Land Transport.

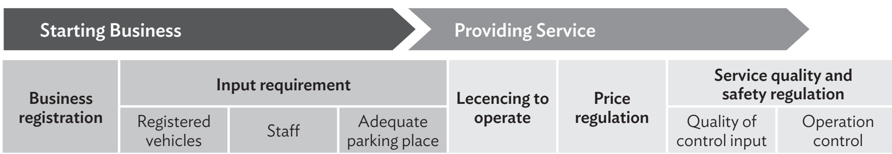
The serious consequence of greater supply in the market is uncontrolled quality. Since no criteria regulate the optimal number of operators in each area and no minimum standards set service quality and safety, a higher number of small firms could operate inefficiently and ruin the market by creating price wars.

[3] Regulations on Value Chain

This section describes the activities in complying with regulations along the value chain of road passenger transport services in Thailand. The last section discusses the key aspects of the regulations on value chain analysis.

Starting business and providing services are two major processes in the value chain of scheduled and hired bus services (Figure 8). All activities in starting a business are necessary requirements for both scheduled and hired bus services while the activities in providing services are different for the two types of bus service.

Figure 8: Value Chain of Road Passenger Transport Services



Source: Authors.

3.1 | Relevant Regulations for Starting a Business

This process in starting business consists of registering a business and preparing inputs for operations. All operators have to undertake the activities summarised in Table 5. Businesses need to be registered to comply with the Business Registration Act B.E. 2499 or the Foreign Business Act B.E. 2542 for both natural and juristic person owners. Registered vehicles and appropriate depots are inputs that need to be declared before a licence to operate is granted. However, this protocol does not apply to staffing. Most activities are regulated by DLT under the Land Transport Act B.E. 2522.

Table 5: Value Chain of Starting a Business Process

	1. Business Registration	2. Input Requirements		
		Registered Vehicles	Staff	Appropriate Depot
Activities	Register business via online platform	• Buying/renting vehicles • Vehicle registration - Vehicle inspection - Applied compulsory motor insurance	Hiring qualified staff	Buying/renting adequate parking place or appropriate depot
Regulations	• Business Registration Act • Foreign Business Act	• Civil and Commercial Code • Land Transport Act - DLT's vehicle standard for the public bus - Protection of Car Accident Victim Act	• Land Transport Act • Vehicle Act • International agreement	• Land Allocation Act • Land Transport Act
Regulators	Bureau of Foreign Business Administration, Department of Business Development, Ministry of Commerce	• Excise Department • Department of Land Transport - Office of Insurance Commission	Department of Land Transport	• Department of Land, Ministry of Interior • Department of Land Transport

Source: Authors.

Regulations related to each activity in starting a business process are summarised below:

a. Business registration

All business registration activities can be done online through a set of guidelines and a standard form. After title approval, a business needs to submit its documents and application form to the Department of Business Development (online or at a branch office), which would be responded to in one day. Registration for a foreign juristic person, however, is more complicated since eight and ten documents, including six supplementary ones, are needed under Thai law and foreign law, respectively.

b. Input requirements

Required inputs to operate a bus service are vehicle ownership, staff, adequate parking places, and compulsory motor insurance.

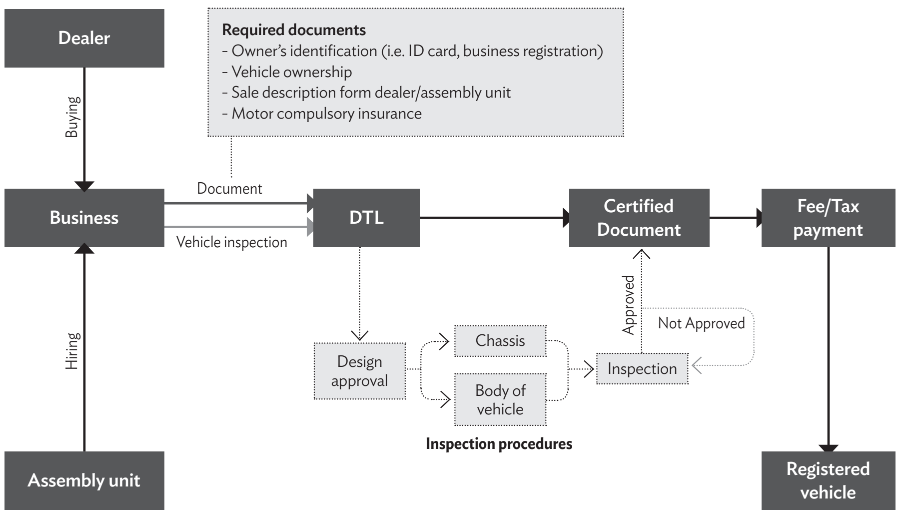
Registered vehicles ownership

Under the Land Transport Act B.E. 2522, vehicles used in bus services have to be registered. A business has to submit to DLT four documents showing owner's identification, vehicle ownership, sale description, and compulsory insurance for each vehicle. After the payment of fees and vehicle tax, all vehicles need to pass inspection. Figure 9 shows the process of vehicle registration, which usually takes less than 5.2 hours.

Vehicle inspection involves two procedures: design approval and inspection. Per regulations, the Department of Land Transport (DLT) is responsible for all activities. The vehicle's chassis and body are major parts that require design approval. The standards for inspection, however, are not comprehensive compared to international vehicle standards.

All inspection activities can be done at a DLT branch or a private vehicle inspection unit certified by the Bureau of Vehicle Engineering under DLT. Vehicles that failed to pass inspection need to be modified to comply with the regulations, although the national standards are vague. The inspection, particularly by private units, usually relies on personal discretion instead of a standard engineering protocol.

Figure 9: Vehicle Registration Procedures



DLT = Department of Land Transport.
Source: Authors.

Hiring qualified staff

A business does not have to declare details of employment to obtain a licence to operate. Under the Land Transport Act B.E. 2522, drivers have to be Thai nationals, except in the case of drivers from countries who are under international agreements to work in Thailand. Unfortunately, shortage of drivers and absence of quality training programmes from DLT are key concerns of the passenger bus service market.

A business hires only licenced drivers as prescribed in the requirements. Also, a business is responsible for violations committed by drivers, for which a mechanism for rewards and punishment is created for staff management. Unfortunately, low-cost operators are often burdened with shortage of drivers that they fail to build this mechanism. Other personnel, i.e. ticket takers and bus hostesses, are usually relatives of drivers and are also required to obtain licences.

Preparing appropriate depot
Passenger buses can only park in allowed areas. Thus, a business must have adequate parking spaces or an appropriate depot. Similar to the property ownership process, a business has to comply with the Land Allocation Act and must show evidence of property possession before it can operate.

3.2 | Relevant Regulations for Providing Services

To provide service, activities along the value chain have to comply with the Land Transport Act B.E. 2522. Scheduled bus services need to have route licencing whereas for-hire services have to submit for-hire contracts to get permit from DLT. The process of licencing to operate, including regulations after licencing for each type of operators, is shown in Table 6.

Regulations related to each activity in providing a service are summarised as follows.

a. Licencing to operate
Several schemes for licencing passenger vehicles to operate depend on the type of service and operators. Licence holders and private joint operators of scheduled services experience different measures from different authorities. Private operators in hired services spend less time on the processes for licencing. Guidelines on the procedures are available on the DLT website and at the DLT office.

Private joint operators comprise the majority of the scheduled services market. To gain rights to operate on existing routes, they are subcontracted by BMTA and Transport Co., Ltd. These two state-owned enterprises have to complete the licencing process with DLT and can sublicence should there be a shortage of provision along the licenced routes.

Table 6: Activities on the Value Chain's Service Provision Process

Operators	1. Licencing to Operate	2. Price Regulations	3. Service Quality and Safety Regulations			
			Input Quality Control			Operation Control
			Vehicles	Staff	Depot	
Scheduled Services						
Licence holders - SOE	• Pass necessary condition - Submit documents - Examine depot • Approved by DLT	Price controlled by DLT	Vehicle inspection	• Working hour limitation • Behaviour control (speeding)	Bus parking ban	Regulated by the service specification in the licence to operate: • Number of vehicles requirement • Type of vehicle • Route • Bus stops
- Private sector	• Pass necessary condition - Submit documents - Examine depot • Submit operation and management plan • Approved by DLT					
Joint operators	• Pass necessary condition through approvals of BMTA or Transport Co., Ltd. • Make contract with the SOEs					Regulated by the contract between SOEs and private operators: • Number of vehicles requirement • Type of vehicle • Route • Bus stops
For-Hire Services						
	• Pass necessary condition • Licenced operators - Submit documents - Examine depot • Submit hired contract to DLT	-				• Service limitation - Only for-hire service - Banned route (risky route for traveling by bus) • Relevant regulations of DLT - Seatbelt for passengers - Overloading prohibition

BMTA = Bangkok Mass Transit Authority, DLT = Department of Land Transport, SOE = state-owned enterprise.
Source: Authors, 2016.

All activities take a maximum 20 days to complete, 17 days of which are spent on examining the depot and approval processes. To obtain a licence for scheduled services, a business must submit an operations plan and a management plan to show its potential. Due to the 135 days required for depot examination and approval, it takes a maximum 196 days to complete all activities.

Further, by law, the operators may request to operate on a new demanded route. DLT will consider the request, design a suitable service for the new one, and accept the application. The process can take a year to complete. In truth, however, the private sector has never participated in the route designation process since DLT always initiates new routes and rigidly manages the network. To obtain a licence to operate a for-hire service, a business must submit the request form and documents to DLT. The waiting time for data verification is around five minutes, after which a DLT agent will examine the parking place or depot to assure it has sufficient capacity. The problem, however, is that many buses are parked along roadsides, thus showing failure of enforcement. All activities take 14–35 days to be completed because not all can be done on the paperless platform.

b. Fare regulations

Fare regulations are implemented only for scheduled services. According to Pomlaktong et al. (2012), public bus fares are regulated by the Land Transport Committee, the Land Transport Policy Committee, the Central Land Transport Control Board, and the Provincial Land Transport Control Board. Prices are based on a cost-plus formula, including a target rate of return and an allowance for expected load factor. The fare rate (baht per kilometre) is adjusted according to changes in the price of diesel with 25 steps ranging between ฿10.07 and ฿40.57. For example, if the price of diesel increases from ฿28 per litre to ฿30 per litre, the 17th fare rate (฿0.5/km) is used to multiply the actual kilometres to provide a new fare for travelling on that section. However, any increase in bus fares is a sensitive political issue, in which the final decision is made by the Cabinet.

[4] Methodology and Results

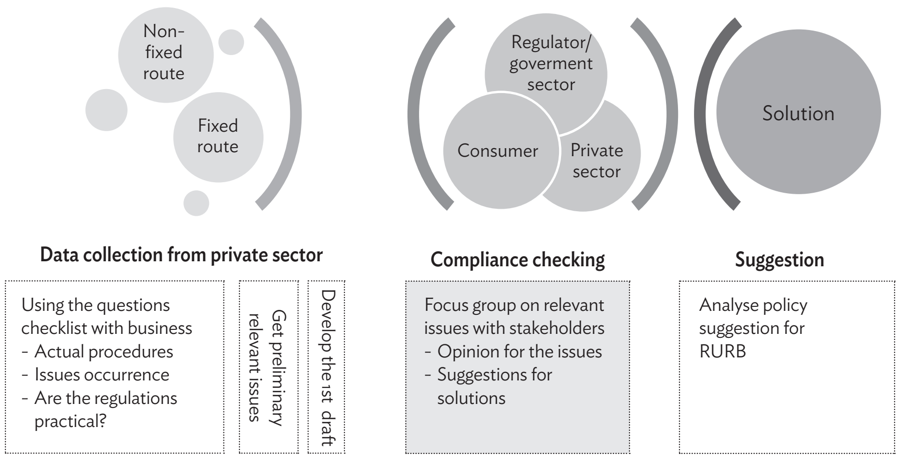
This section describes how the study was conducted and summarises the issues from a stakeholder's perspective. It analyses the policy suggestions to reduce the unnecessary regulatory burdens for business.

4.1 Conceptual Framework

The actual process of bus operations was investigated from the private sector's perspective through desktop research and interviews with bus service providers and their association with both scheduled and for-hire service operations.

The purpose of the interviews was to analyse crucial issues caused by existing regulations or absence of measures, and to prepare a report on issues.
This chapter then checks compliance amongst the government sector, the private sector, and the consumers. Therefore, we formed a focus group representatives from the government, the private sector, and a consumer organisation before we analysed the policy suggestions. Figure 10 shows the overview of this framework.

Figure 10: Conceptual Framework



RURB = reducing unnecessary regulatory burdens.
Source: Authors.

4.2 ❙ Methodology

According to the conceptual framework, the working process has three parts: getting preliminary issues, validating the issues with relevant stakeholders, and analysing solutions (Table 7).

Table 7: Data Collection and Analysis Process

Activities	Sub-activities	Output
1. Getting preliminary issues		
(1) Desktop study	Literature review and secondary data collection	Regulation mapping on value chain of the service sector
(2) First-wave interview with the private sector	Preliminary interview with a business association • Fixed-route service • Non-fixed-route service	Getting preliminary issues
1. Getting preliminary issues		
Interview with the private sector	• Interview with operators by size of firms* • Interview with drivers**	• Issues from the scheduled service: both operators and drivers • Issues from the operators of the for-hire service
(1) Interview with non-private sector	• Interview with regulators - DLT (regulating) - Bangkok Metropolitan Administration (bus stop) • Interview with operators and sublicencing regulators - BMTA - Transport Co., Ltd.	• Factors behind impractical regulations/inefficient policy • Way forward for impediments development
(2) Interview with a representative of consumers	Interview with Foundation for Consumers	• Impact of the issues • Consumer's benefits from the improvement
3. Analysing solutions	• Gathering information and analysing • Discussion about recommended solutions with stakeholders	Accepted solutions

BMTA = Bangkok Mass Transit Authority; DLT = Department of Land Transport.
Note: * Small size of for-hire service is not included.
** Only fixed route service in route category 1 in Bangkok and vicinity.
Source: Authors, 2016.

4.3 | Results

This section focuses on identifying problems from the perspectives of both businesses and regulators. Most impediments along the value chain are involved with (i) vehicles; (ii) licencing to operate; (iii) pricing regulations; (iv) drivers; and (v) operation control. The section summarises the issues occurring along the value chain of passenger bus services.

a. Issues related to vehicles
The main purpose of vehicle-related regulations is to certify safety standards and reduce risks of road accidents. Vehicle inspections and registrations are the usual key protocols that are queried about inefficiencies.

Vehicle ownership registration shows that the lack of design standards burdens businesses, particularly low-cost operators. Vehicles used in bus services are mostly assembled in factories that are not regulated by DLT or the Ministry of

Industry. Due to the lack of regulations, a vehicle owner has to bear the costs of modifications and delays if his vehicle cannot pass inspection, whereas the factory that made it is not accountable for mistakes.

Moreover, evidence from the school bus business raises the inconsistency of regulations on vehicle inspection. For-hire businesses that provide school bus services must comply with the ministerial regulation of the Ministry of Education that requires all school buses to have yellow lights, while they have to be removed before inspection by DLT. According to the Land Transport Act B.E. 2522, all vehicles in for-hire services must comply with the standard prescribed in the ministerial regulation of the Ministry of Transport in which yellow lights are not allowed. Without the protocol for inspection of school bus services operated by a for-hire operator, the business has to bear this compliance cost.

The inefficiency in registration creates unnecessary waiting time. Excessive documentary requirements for vehicle registration are not sound for businesses that own many vehicles and that have to submit six to eight copies of documents per vehicle to be able to register at DLT instead of using a paperless platform or having a new protocol for a juristic person. Furthermore, vehicle inspections of some issued parts – body and chassis – rely on personal assessment instead of engineering standards. No quality standard is followed in the inspection processes between DLT and a certified private unit, or amongst the different offices of DLT.

Finally, regulations about safety standards of vehicles are usually not implemented at the beginning. Many are enforced without an action plan for the transition period or an incentive scheme. As a result, these regulations often encumber the businesses and waste resources when they are sometimes cancelled or poorly enforced due to inadequate resourcing of regulators. Furthermore, the government sometimes implements vehicle standard policies for economic objectives, such as changing engine type from one that uses diesel to one that uses compressed natural gas, and specifing the same vehicle size for scheduled services routes. These often poor policies create compliance costs to private operators. Changing an engine type, for example, costs around ฿400,000–฿500,000 (US$12,000–US$15,000), the minimum cost for engine modification, and which could buy a new vehicle.

b. Issues related to licencing to operate scheduled services
The impediments from licensing scheduled service lead to complexity in quality control. The process takes too much time in considering operators' qualifications and examining depots, thus the service cannot meet the demand on time, creating a demand gap that leads to informal and illegal service. A key concern about this is the lack of a database of operators that the regulators could reward with the rights to operate based on operators' performance and previous experience. Such database would also be beneficial for route designation.

Generally, the licence for scheduled service costs ฿7,000 or US$217 with seven year validity. Because of the 'one licence per route' policy, each route is open to monopoly since an operator can renew the licence as long as he complies with DLT even if the licence is terminated after operating a route for seven years. However, the operator, particularly an Standard Operating Environment (SOE), can apply for a licence to provide services for a fixed term.The firm that receives a fixed-term licence will not operate the whole fleet but might sub-contract any of its operations to other operators. Without competitive tendering, private joint operators can create problems on quality of service.

Furthermore, an operator can apply for a licence to operate in more than one route. As a consequence, monopolistic licencing as a result of the 'one licence per one route' policy leads to indirect competition in alternative routes, i.e. many ways of travelling along the Bangkok–Chiang Mai route, resulting in route competitions amongst sublicensors and making the route designation process more complicated. This reduces incentives for dynamic efficiency, introduction of new technology, or improvement of services to increase profit.

c. Issues related to controlled pricing of scheduled services
The existing regulation for controlling prices is not practical and impedes competitiveness. The present bus fare calculation is based on the assumptions of a maximum seven year use of vehicle and a 70–90 load factor depending on the bus standard. In fact, this cost-plus pricing does not take into account the addition to capacity and changes in load factor due to the issuance of new licences and the entry of passenger vans. Regulated bus operations generally have a lower load factor and thus a lower margin of profit than what DLT assumes. Bus operators, therefore, have less incentive to invest in their services. At the same time, fare regulation contributes to falling quality in services. Not

only does quality suffer but maintenance and replacement as well. Prices cannot respond to demand shifts in the market: as the population increases, the gap between quantity supplied and that demanded at the regulated price widens. This provides an incentive for growth of illegal operations.

d. Issues related to drivers

Labour shortages, particularly of drivers, exist in road passenger services. Working environment, income, and working hours influence the supply of labour in the market. With road passenger service systems declining, business suffering from wrong policies, policies being poorly enforced, and negative externalities existing such as price regulation or excise tax deduction of national cars, uncontrolled illegal vehicles[2] affecting demand, and traffic jams occurring, revenues from bus operations could not cover business costs. Thus, revenue incentives in hiring drivers and improving quality control systems should be introduced.

Drivers in scheduled services have a high turnover rate. For-hire services are a favourable alternative in terms of income and compensation, working hours, and work pressure. Based on an interview with drivers (Table 8), drivers of scheduled services run by private joint operators spend the highest average time of work at around 13 hours per day, while Bangkok Mass Transit Authority (BMTA)'s drivers work only nine hours per day but earn double the average income. The average working hours of for-hire service drivers are eight hours per day, a better option to move from scheduled services. Under the poor road passenger service system, drivers have bargaining power and can move to other better-paying employers even if they have poor driving behaviour. Since no official driver database exists to record their work experience, it is difficult to develop quality control systems.

[2] Illegal vehicles include vehicles excluded from the Land Transport Act and vehicles abused in each type of service.

Table 8: Comparative Working Experience of Passenger Bus Operators

Type of Operators	Working Hours (hrs/day)	Working Days (days/month)	Workers' Income (baht/month)
Scheduled service			
BMTA	9	25	26,356
Private joint operators	13	23	14,909
For-hire service	8	N/A	N/A

BMTA = Bangkok Mass Transit Authority, N/A = not available.
Source: Interview by authors.

Potential drivers in the for-hire service market are limited since most businesses prefer those with expertise and are service oriented, and also because of the Thai nationality restriction under the Land Transport Act B.E. 2522. Training and quality control are more substantial since driving skills are important for long and complex routes. Essential skills training for bus services is often provided by business owners as the lessons and programmes provided by regulators for licencing drivers are too general.

Although driving behaviour and working hours are regulated to assure safety through checkpoints and global positioning systems, the inadequate resourcing of the regulators and inconsistency of the regulations are questionable from a business perspective.

e. Issues related to operation control

Poor enforcement is the main impediment to an operation's control process. Operating different licenced services is prohibited by law and the inability to enforce this law could be considered a burden for business, which, as a result, debilitates the passenger bus service system. Licencing to operate for-hire services has failed to create an efficient market. For example, licenced operators provide scheduled services, which then place a burden on incumbent operators by intervening in their market share. Another example is the distorted for-hire market itself since some licenced operators provide other business-purpose services, cutting their price to compete with existing firms when they return to provide for-hire services. Therefore, uncontrolled operation not only burdens business but also results in difficulty in quality control. Businesses are not willing to invest to comply with the quality control system unless there is a fair chance of succeeding.

The high supply of for-hire services is a significant problem in the industry since there is no quota restriction. Anyone who owns a bus and meets the requirements of the Land Transport Act B.E. 2522 can have a licence to provide bus service if it is hired with a clear contract. This results in price wars since small businesses rarely take the quality of service or safety standards into account but concentrate on cost reduction. Without efficient enforcement from the regulators, a bus service's strength is undermined.

Parking place limitation is another case that shows poor enforcement of operation control since small firms (the target group) are not monitored by the regulators. Bus stops are often not reserved for scheduled buses, allowing other vehicles to park, and their locations are sometimes inappropriate.

A neglected policy might cause an indirect burden to business. The example of inaccessible bus stations would not indirectly encourage demand for passenger buses, thus affecting a company's revenue. The locations of passenger bus stations for scheduled services are criticised for their poor accessibility, which hinders connectivity of public transport. Taxis, the most popular means for accessing passenger bus stations in Bangkok and vicinity, are costly. Meanwhile, passengers in other provinces have to use personal vehicles or regional taxis that do not follow standard fares. Some passenger bus stations in some provinces like Kon Kaen are located too far from the city that accessibility is almost impossible.
Impact of the landmark laws' enactment to RURB in public transport sector

This section analyses the impact that the Licensing Facilitation Act and the Royal Decree on Revision of Law – two landmark laws for RURB – would bring to the public transport sector even at this early period.

a. Overview of the laws for RURB
According to Nilprapunt (2014), the Licensing Facilitation Act aims to enhance the ease of doing business in Thailand and transparency in Thai administrative procedures. This act narrows the discretionary power of government officials and makes known to the public the licencing process, workflow, and duration of the process, which can establish transparency and accountability environment in the licensing process. One of the substantial parts of the act is the requirement for a licencing manual and standard procedures for licencing applications, which

shall apply to all government agencies empowered by law to grant licences and permits or create regulations.[3]

The Royal Decree on Revision of Law or the Sunset Law is an initiative to ensure ex post evaluation in legislation (Nilprapunt, 2013). Under the Sunset Law, reviews of laws shall be conducted every five years or or more frequently in close consultation with stakeholders, and reports of such reviews shall be disclosed to the public and tabled in the Council of Ministers and both Houses of Parliament for consideration in accordance with public participation and open government doctrine.[4] The Sunset Law also requires all government agencies to publish an English translation of all laws and regulations under their responsibility.

b. Impact of RURB to public transport sector
The enactment of these two laws is aimed at removing burdens to improve national competitiveness, enhance transparency, and make all laws and regulations dynamic. Still, its level of implementation will depend on the policy agenda and characteristics provided by the different government authorities.

Compliance with the Licensing Facilitation Act is a good start for DLT as its services deal with the daily life of people and businesses. The manuals for licencing and permit applications are published through the Government Service Information website. The publicised turnaround time could make DLT commit to reduce unnecessary processes or improve performance to meet its key performance indicators. The impact of the Sunset Law will take time since it involves big changes in policy such as drafting new laws and reforming the public bus services system.

Currently, the DLT policy agenda is concentrating on the enactment of the Land Transport Act (the new Land Transport Act) to replace the Land Transport

[3] Section 7 of the Licensing Facilitation Act requires any government agency or authority that has been entrusted by law to grant any licence to prepare a manual for licencing applications. The manual must contain rules, procedures, and conditions (if any) for the application for a licence together with workflow, period of time for processing, as well as a list of documents or evidence needed to be submitted with the application.

[4] Failure to comply with the duties under the Sunset Law shall be regarded as a minister's wilful omission of the performance of his or her official duty and shall be grounds for recall from office under the Counter Corruption Commission law, and shall also be grounds for criminal liability under section 157 of the Penal Code

Act and the Vehicle Act. Major revisions of all the rules and regulations will be required under these two laws. Reforming the public bus service system in Bangkok and vicinity is another driving factor to revise the Land Transport Act. Thus, the new procedure of licencing and monitoring requires transparency and consistency, which should burden business as little as possible particularly during the transition period or in the next five years.

[5] Policy Recommendations

The enactment of the Licensing Facilitation Act and the Sunset Law is a good initiative for RURB in Thailand. However, the government must show leadership in this initiative. Due to the complicated passenger bus system, prioritising the solution is called for through public consultation. The two aspects that the stakeholders should deem necessary and advocate for are the following:

a. Standardise processes in licencing

The processes of licencing are associated with vehicle inspection and registration, including licencing to operate. Three prioritised steps need to be followed.

• Step 1: Reduce unnecessary procedures, particularly waiting time

Having guidelines available officially on the Government Information Centre website is a good starting point. However, DLT as regulator should commit itself to what is written in the ministerial regulations or department notification. It must have a plan to reduce the waiting time and unnecessary procedures by setting annual reduction targets.

• Step 2: Review and standardise regulations or measures

Unnecessary regulations should be revised and standardised for consistency. All DLT branches must provide standard protocols. A clear plan must be in place to solve the inconsistency of regulations and measures of different ministries. Fortunately, establishing vehicle specification standards is now in progress. Having these standards will benefit the whole service industry, since vehicle suppliers could have a marketing strategy by claiming their products as the certified ones. Convincing operators and vehicle suppliers to have a promotion plan is the next step in creating this incentive mechanism for vehicle suppliers.

Since a demand-driven mechanism is another alternative for the quality control system, DLT should implement standard measures. A standard contract for hired services is a good example. Consumers and businesses must commit to a contract that contains quality and safety concerns. The merits a standard contract can bring to the market are transparency, consistency, and cost reduction.

• Step 3: Replace traditional platform with technology
The DLT must implement a paperless platform to support licence and permit procedures. As this step would take time to set up, managing the database must be a priority. The database should contain relevant data, operational information, operators' qualifications and experience, and drivers' information. Internal users should have access to the database. The database could help regulators save time, resulting in efficiency.

b. Develop quality control system efficiently

• A quality control system can be constructed with a demand-driven mechanism, an incentive policy for operators, and a stronger system with relevant enforcement.

With adequate information, consumers can choose the best service for them. The consumer's bargaining power will prevent a 'lemon' market, with the qualified ones shaping strategy to compete through quality. The DLT should take part in initiating the information centre, starting with the database system and data flow management.

Stakeholders have agreed to start setting up the database with operators then with drivers, according to the Official Information Act B.E. 2540, and make use of the accessed data that are under DLT's responsibility. The relevant data on operators that should be publicised are type of route being operated on, licence holder's name, licence expiration date, including vehicle registration number and its expiration.

• Implement incentive policy for operators
A quality control policy in terms of convincing operators might be more effective. Excise tax reductions for certified passenger buses should be considered as

an incentive tool to specify certified vehicle standards. This aspect is favoured amongst operators since they have been burdened with vehicle-related costs.

• Strengthening quality control system by enforcement
This is considered to be the most important aspect for quality control, although the hardest to implement. Limiting illegal vehicles and controlling driver behaviour would be most affected.

A ban on illegal vehicles and illegal services would help licenced operators increase their market share and invest in quality service. Its implementation would also complement other regulations and should begin after the core network of transportation is strengthened through reforms in the licencing scheme. Thus, the effectiveness of implementation depends on the action plan. Global positioning systems must be installed in passenger buses to help manage driver's behaviour. Relevant data must be used to enforce and strengthen sustainable quality control system. Hence, DLT must prepare appropriate platforms, qualified human resources, and needed regulations.

REFERENCES

Nilprapunt, P. (2013), Thailand's Facilitation Act: An Overview. http://lawdrafter.blogspot.com /2015/07/ thailands-facilitation-act-overview-by.html

Nilprapunt, P. (2014), Thailand's Licensing Facilitation Act. http://lawdrafter.blogspot.com/2015/06/thailands-licensing-facilitation-act-by.html

Ongkittikul, S. and N. Thongphat (2016), 'Regulatory Coherence: The Case of Thailand', in Gill, D. and P. Intal, Jr. (eds.), *The Development of Regulatory Management Systems in East Asia: Country Studies*. ERIA Research Project Report 2015-4, Jakarta: ERIA, pp. 295–258.

Pomlaktong, N. et al. (2012), 'Public Transport Vehicle Standard: Issue of Standard Setting and Compliance Checking' (in Thai), Final report of Thailand Development Research Institute (TDRI), Bangkok, January 2012, pp. 11–135.