4.0 Thailand and BMR Diesel Vehicle Fleet

Thailand's in-use[5] national motor vehicle fleet was about 11.5M in 2001 as shown in Table 4.1 below. Bangkok accounts for about 24% of the nation's registered motor vehicles including 61% of the private car fleet, but only 13% of national motorcycles and 38% of the combined truck and bus registrations. Pick-ups, almost all diesel engine powered, are widely used as a personal vehicles particularly in urban areas. Approximately 28% of all in-use vehicles registered in Bangkok are diesel vehicles. Definitions of some key vehicle types is given in Table 4.2.

Over 1991 to 2001, the national vehicle fleet grew at a rate of 6.2% per annum – that is, the national motor vehicle fleet almost doubled. A high proportion of this growth was due to motorcycles. Private car registrations increased at a rate of 10% per annum in the same period.

Designed to boost domestic production, expand regional vehicle exports and cut foreign trade deficits (vehicles accounted for almost 20% of the dollar value of Thailand's imports in 1992), Thailand had an exhaustive range of vehicle import tariffs and duties that prevailed until the late 1990s.These have been substantially cut.

The one-ton pick-up, Thailand's "national vehicle," represents 21% of the total vehicle market. These vehicles are lightly taxed, are rugged and offer flexibility in passenger and goods transport.

Attractive government incentives, introduced in the early 1990s, have led to the establishment of more than a dozen vehicle assemblers by 1996, with a domestic output in excess of one million vehicles. The Japanese dominate both imports and domestic production joint ventures, accounting for nearly 100% of the commercial vehicle market – although this dominance is now being challenged through new ventures by GM and Ford and other firms.

[5] Through existing manually developed records held by DLT's Statistics section and DLT's records of vehicle taxation payments it is possible to make reasonable estimates of total in-use vehicles by vehicle type. These estimates differ significantly from reported vehicle registrations which do not deduct vehicles no longer in-use, but not officially de-registered. Estimates of in-use vehicles are about half of the cumulative vehicle registration figures.

Table 4.1 – Number of in-use Vehicles by Type, Thailand, 1991 and 2001

Type	1991	2001	% of overall fleet	% growth rate pa	% in Bangkok
Private Cars	669,920	1,767,704	15.4%	10.0	61%
Micro Bus & Passenger Van	409,694	316,053	2.7%	NC	52%
Pick-up & Van	731,619	2,439,413	21.2%	12.8	21%
Taxi	14,338	53,022	0.5%	14.0	100%
Tuk-Tuk	15,171	15,627	0.1%	NS	46%
M/C	3,947,017	6,257,156	54.4%	4.7	13%
Bus	89,193	95,750	0.8%	1.0	21%
Truck	334,724	465,639	4.1%	3.3	17%
Other*	94,968	86,830	0.8%	NC	14%
Total	**6,306,644**	**11,497,194**	**100.0%**	**6.2**	**24%**

Source: DLT * Other includes vehicles such as tractors. Non motorised vehicles excluded. NC means not calculated. Bus and truck fleets further divided into other classifications according to Land Transport Act (1979).

Table 4.2 – Some Definitions of DLT Vehicle Types

Type	Definition
Micro Bus & Passenger Van	Vehicles with width < 2.5M and length < 12M with length of body between rear axle and rear of vehicle not > 2/3 of length between front and rear axles eg cars with 3 passenger compartments/ rows of seats, passenger Song Taew (2 row passenger benches facing each other in rear of vehicle), Rot Too / passenger van with 3 passenger compartments or seats.
Pick-up & Van	Vehicles not for commercial truck transport which is under LTA (1979) with width < 2.5M and length < 12M with length of body between rear axle and rear of vehicle not > 3/5 of length between front and rear axles eg pickup truck, Rot Too for carrying goods.
Non fixed route truck	Vehicles for transporting goods of others
Private truck	Vehicles for transporting own goods (ie own account) with GVW > 1.6 tonnes

Source: DLT's "Number of Vehicles Registered 2002".

Even though in-use vehicles are known to be fewer than registered vehicles, we have only made estimates for in-use vehicles for Thailand in 2001 and for Bangkok in 1999, 2000, 2001 and 2002. Hence, to gain a picture of the relevant sizes of fleets in neighboring provinces in the BMR we need to use DLT's information on registered vehicles as shown in Table 4.3.

This table shows the dominance of Bangkok in the BMR where it accounts for around 80% and up of all key diesel vehicle types. The exception is for private trucks (those with 80 or 90 white plates) where Bangkok only accounts for 58%of all private trucks reflecting Bangkok's lower role as the location for

Bangkok's large, small and medium size enterprises such as factories and other companies requiring their own truck transport.

Table 4.3 – Key Types of Diesel Vehicles Registered in Bangkok & Other Provinces in the BMR, 2002

Type	Bangkok	Pathum Thani	Nonthaburi	Samut Prakan	Nakon Pathom	Samut Sakon	Total BMR
Micro Bus & Passenger Van	387,959	5,713	12,671	7,278	8,237	2,058	423,916
	91.5%	1.3%	3.0%	1.7%	1.9%	0.5%	100.0%
Pick-up & Van	785,892	24,308	24,151	21,673	80,243	13,687	949,954
	82.7%	2.6%	2.5%	2.3%	8.4%	1.4%	100.0%
Total Bus	*32,866*	*1297*	*1151*	*3,464*	*1,392*	*1205*	*41,375*
	79.4%	3.1%	2.8%	8.4%	3.4%	2.9%	100.0%
Fixed Route Bus	20,056	655	567	2,484	1,003	880	25,645
	78.2%	2.6%	2.2%	9.7%	3.9%	3.4%	100.0%
NFR Bus	8,549	499	380	623	102	139	10,292
	83.1%	4.8%	3.7%	6.1%	1.0%	1.4%	100.0%
Private Bus	4,261	143	204	357	287	186	5,438
	78.4%	2.6%	3.8%	6.6%	5.3%	3.4%	100.0%
Small Rural Bus	0	27	187	114	161	246	735
	0.0%	3.7%	25.4%	15.5%	21.9%	33.5%	100.0%
Total Truck	*124,474*	*10,881*	*9,775*	*14,955*	*25,955*	*7,422*	*193,462*
	64.3%	5.6%	5.1%	7.7%	13.4%	3.8%	100.0%
Non fixed route truck	40,985	1,442	785	2,994	1,604	1,235	49,045
	83.6%	2.9%	1.6%	6.1%	3.3%	2.5%	100.0%
Private truck	83,489	9,439	8,990	11,961	24,351	6,187	144,417
	57.8%	6.5%	6.2%	8.3%	16.9%	4.3%	100.0%

Source: DLT's "Number of Vehicles Registered 2002".

The in-use truck fleet consisted of 465,000 vehicles nationally in 2001 having grown by 4.1% pa since 1991. Bangkok accounted for 17% of the national truck fleet. Overall the national truck fleet is old and largely makes use of rebuilt 10 wheel trucks that are not fuel efficient nor environmentally friendly.

At present, less than 10% of the total fleet makes use of articulated or other modern technology vehicles. Although there are economies in operating larger, modern vehicles there are numerous barriers to the introduction of these vehicles including: high capital costs; fragmented ownership (average fleet size per owner is two vehicles); high duties on vehicles and parts; the pattern of road development and congestion in Bangkok; and the truck ban which restricts large truck movement during peak periods. Thailand's truck

fleet is quite inefficient and if there were no barriers to the use of modern, high payload vehicles then the total vehicle fleet might be reduced by considerably and still perform the same transport task.