

Chapter 3

Rail Passenger Services In Peninsular Malaysia

3.1 Introduction

This chapter gives an insight of the rail passenger services in Peninsular Malaysia. It will start with an overview of the development of the rail passenger services that will be discussed in section 3.2. While in section 3.3, the passenger traffic for the past 30 years will be evaluated followed by a comparative analysis of the intermodal competition between modes of passenger transportation in section 3.4.

3.2 The Development of Rail Passenger Services in Peninsular Malaysia

The first railway track that was built in Peninsular Malaysia dated back in 1885 from Taiping to Port Weld (13 kilometres). In the late 19th century, short railway tracks were then introduced to connect mining areas to ports, which were mostly stationed at the West Coast of Peninsular Malaysia. The short railway tracks were used to transport to export tin and importing machinery, supplies for mining, food and labour. In the early 20th century, the northern and southern region of the Peninsular were connected by railway tracks to encourage more lands to plant “export crops”.

The railway track was later extended from Prai to Padang Besar at the West Coast and from Gemas to Rantau Panjang/Sungai Golok in Kelantan.¹¹

The Malayan Railway began to provide 2 types of passenger services (the economy and luxury class) following the replacement of railway's coaches with air-conditioned luxury class coaches and non-air-conditioned economy class coaches under the Third Malaysia Plan. In order to improve its share in the transport market, the Malayan Railway (later known as Keretapi Tanah Melayu Berhad) introduced a new tariff structure which became effective in January 1976. This was followed by long term programmes of replacement, rehabilitation and modernization of passenger coaches, railway tracks and passenger terminal facilities.¹²

In the 1980s, the Malaysian Government continued its effort to improve the overall performance of the rail passenger services. These included the upgrade of operational safety, followed by the increase of maximum train speeds and reducing delays in train schedules. After the Railway Master Plan study that was carried out in 1983, a study on the New East-West and West Coast railway projects was also completed in 1985 to determine the feasibility of the development of a standard gauge and electrified railway system. Under the rolling stock replenishment programme, new main line diesel locomotives, diesel shunting locomotives,

¹¹ Amarjit Kaur, Seabad Keretapi di Malaysia (Kuala Lumpur: Persatuan Muzium Malaysia, 1985) 24-30.

¹² Malaysia Government, Third Malaysia Plan 1976-1980 (Kuala Lumpur: The Government Press, 1976) 347-359.

passenger coaches and wagons were acquired to upgrade the existing rail passenger services.¹³

After the passing of two Railway Bills, Keretapi Tanah Melayu Berhad (KTMB) was finally corporatised on the 1st August 1992. KTMB introduced a new fare structure following the completion of the North-South Highway in 1994 in order to remain competitive in the passenger transportation market. The level of comfort and safety of passengers were upgraded with the installation of the Automatic Train Protection (ATP) system at every 1.5 kilometre of track and on passenger trains to ensure the safety of the train movements. A modern signalling and communication system was installed so that train movements can be controlled and supervised from a Centralised Control Room located at Kuala Lumpur Railway Station.¹⁴

Later in August 1997, the Malaysian Government entered into a Management Agreement (a transition stage between corporatisation and privatization) with a private consortium for the Management takeover of KTMB. And by December 2000, the construction of the KL Sentral was completed. It integrated KTMB intercity and commuter services with the ERL, LRT PUTRA, monorail, buses, taxis and pedestrian facilities. KL Sentral also provides links to Kuala Lumpur International

¹³ Malaysia Government, Fifth Malaysia Plan 1986-1990 (Kuala Lumpur: National Printing Department, 1986) 434.

¹⁴ Keretapi Tanah Melayu Berhad, Jajaran Suara Rasmi KTM July 1994(Kuala Lumpur: Pentadbiran KTM, 1994) 2 and Keretapi Tanah Melayu Berhad, Jajaran Suara Rasmi KTM Sept 1994(Kuala Lumpur: Pentadbiran KTM, 1994) 5

Airport (KLIA), Putrajaya and Cyberjaya.¹⁵ Figure 3.1 is a map showing the railroad system of Peninsular Malaysia. While Table 3.1 shows the intercity rail passenger services offered by KTMB in the year 2001.

3.3 Passenger Traffic

Keretapi Tanah Melayu Berhad or better known as KTMB plays a vital part in Malaysia's transportation scene for many years. Now in the new millennium, it is considered as one of the most important mode of passenger transportation around Peninsular Malaysia.

The passenger kilometres¹⁶ generated by the rail passenger services from 1970 to 2000 can be found in Figure 3.2. The number of passenger kilometres showed an upward trend from 620,026,511 in 1970 to 1,640,110,774 in 1981. It had increased by 164.5%. The average annual growth of passenger kilometres was around 9.4%.¹⁷ The increase was due to implementation of long-term programmes of replacement, rehabilitation and modernization of the railway system since 1970's, which had attracted more people to travel by train.¹⁸

¹⁵ Malaysia Government, Eight Malaysia Plan 2001-2005 (Kuala Lumpur: Percetakan Nasional Malaysia Berhad, 2001) 271-274.

¹⁶ Passenger kilometres are the sum for all of the services of the number of passengers carried multiplied by the distance traveled and this scale is used as a standard measure of output of passenger transportation.

¹⁷ Refer to Table 3.2 in Appendix B which shows the passenger kilometres from 1970 to 2000

¹⁸ Malaysia Government, Fourth Malaysia Plan 1981-1985 (Kuala Lumpur: National Printing Department, 1981) 319.

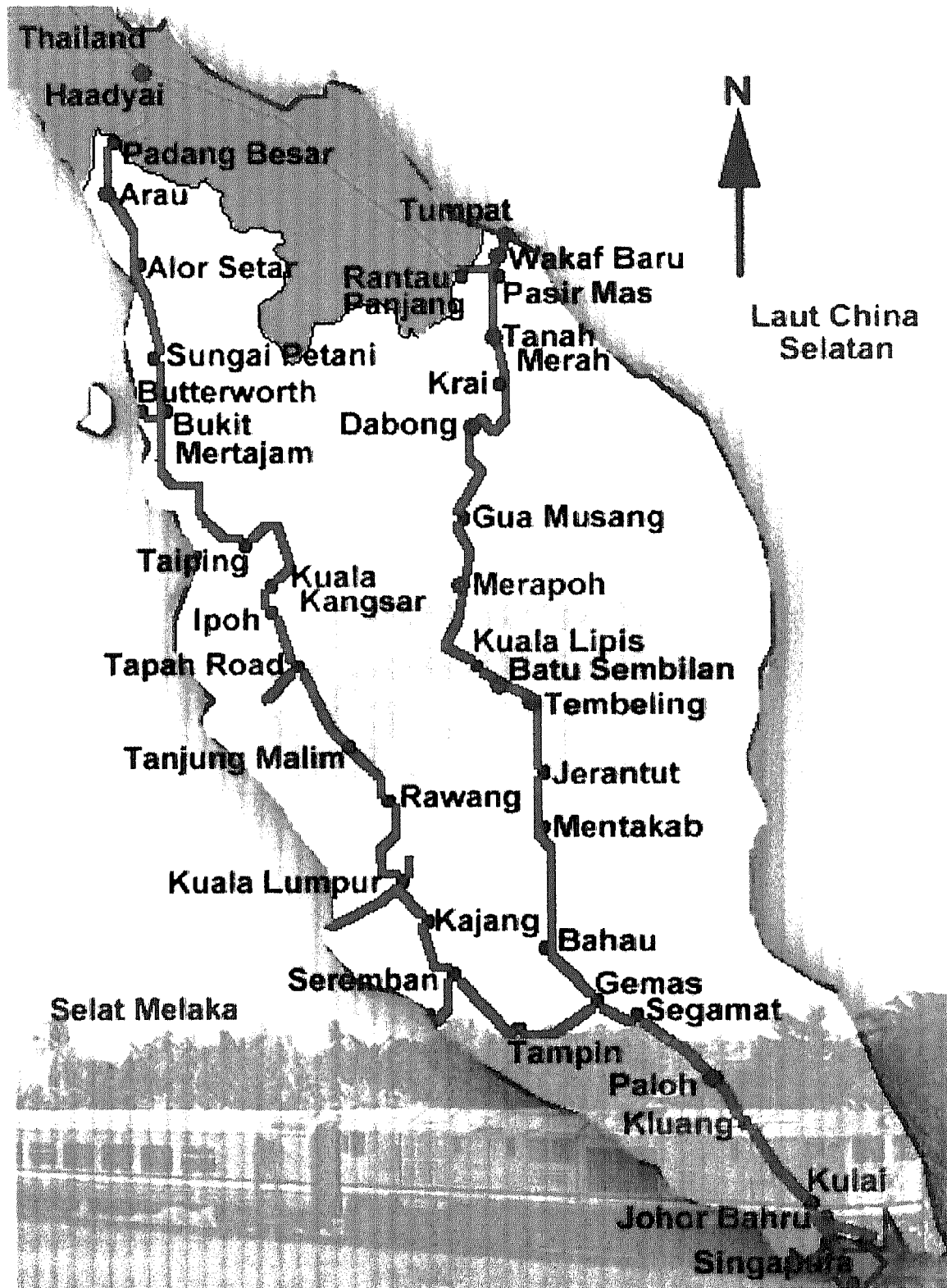
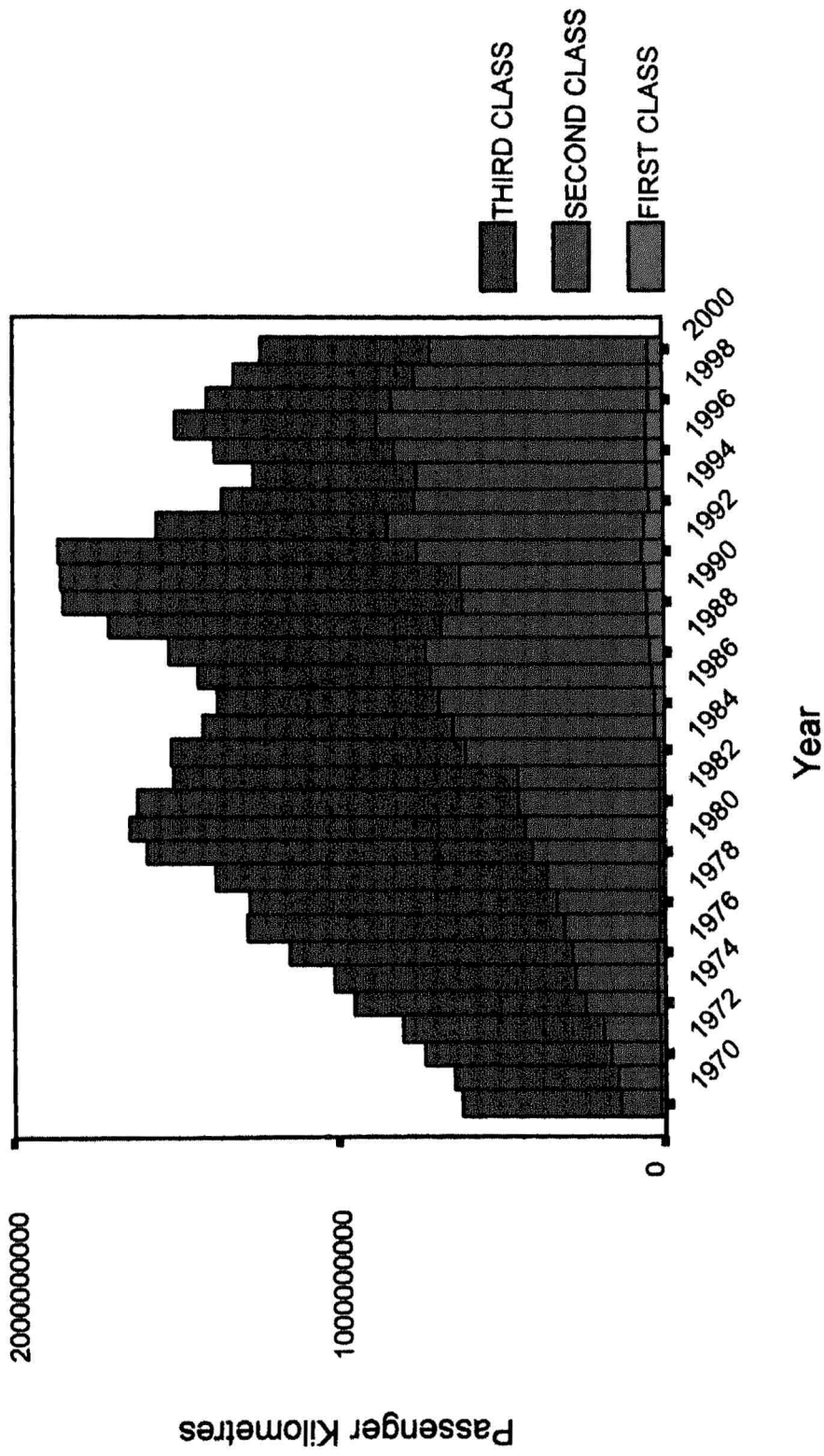


Figure 3.1: The railroad system of Peninsular Malaysia (Source: KTMB)

Table 3.1: Intercity Rail Passenger Services provided by KTMB in the year 2001

Intercity Rail Passenger Services	
Type of train	Description
Ekspres Timuran	A daily service where the train journeys to the East Coast of the Peninsular, making trips from Tumpat to Singapore from Singapore to Tumpat
Ekspres Rakyat	A daily service where the train makes its journey from Singapore to Butterworth and from Butterworth to Singapore
Ekspres Tebrau	Offering services between Singapore-Kuala Lumpur-Singapore. However, this service is only available on Friday, Saturday and Sunday only
Ekspres Sinaran	A daily service departing from Kuala Lumpur to Singapore and from Singapore to Kuala Lumpur
Ekonomi Siang	A daily sectional service departing from Gemas to Singapore and from Singapore to Gemas
Senandung Malam	A daily service departing from Singapore to Kuala Lumpur and from Kuala Lumpur to Singapore. This service caters for passengers who wishes to travel by night
Senandung Langkawi	A daily service departing from Kuala Lumpur to Hatyai and from Hatyai to Kuala Lumpur
Ekspres Kenali	A daily service departing from Kuala Lumpur to Tumpat and from Tumpat to Kuala Lumpur
Ekpres Wau	A daily service departing from Kuala Lumpur to Tumpat and from Tumpat to Kuala Lumpur
Ekpres Antarabangsa	A daily service departing from Butterworth to Bangkok and from Bangkok to Butterworth

Source: Keretapi Tanah Melayu Berhad (KTMB)



Source: Keretapi Tanah Melayu Berhad (KTMB)

Figure 3.2: Passenger kilometres from 1970 to 2000

However the number dropped to 1,368,531,245 passenger kilometres in 1986. A drop of 16.9% compared with passenger kilometres in 1981. The decrease in passenger kilometres might be due to competition from road transport after the completion of the East-West Highway, Kuantan-Segamat Highway and the Kuala Krai-Gua Musang Highway.¹⁹ An other supporting evidence included the increase number of private motorcars and buses registered in Peninsular Malaysia .The number of private motorcars registered in Peninsular Malaysia increased from 797,143 vehicles in 1981 to 1,206,000 vehicles in 1986. It increased by 51%. While the number of buses registered increased by 34% from 13,989 buses in 1981 to 18,703 buses in 1986.

The passenger kilometres increased by 35.8% to 1,858,687,736 in 1992 compared with passenger kilometres in 1986. However, it fell drastically by 32.6% to 1,253,087,521 in 1995 following the completion of the 847 kilometres North-South Expressway (linking Bukit Kayu Hitam in Kedah to Johor Bahru) in the year 1994 which had reduced travel time by half compared with the existing road network.²⁰ In 1997, passenger kilometres increased to 1,492,450,265. However, it fell continuously just after the economic crisis in 1997 to 1,230,521,382 in the year 2000.

Turning to Figure 3.2 again, the passenger kilometres from 1970 to 2000 was composed of three types of rail passenger services offered by KTMB- first class,

¹⁹ Malaysia Government, Fifth Malaysia Plan 1986-1990 (Kuala Lumpur: National Printing Department, 1986) 429-431..

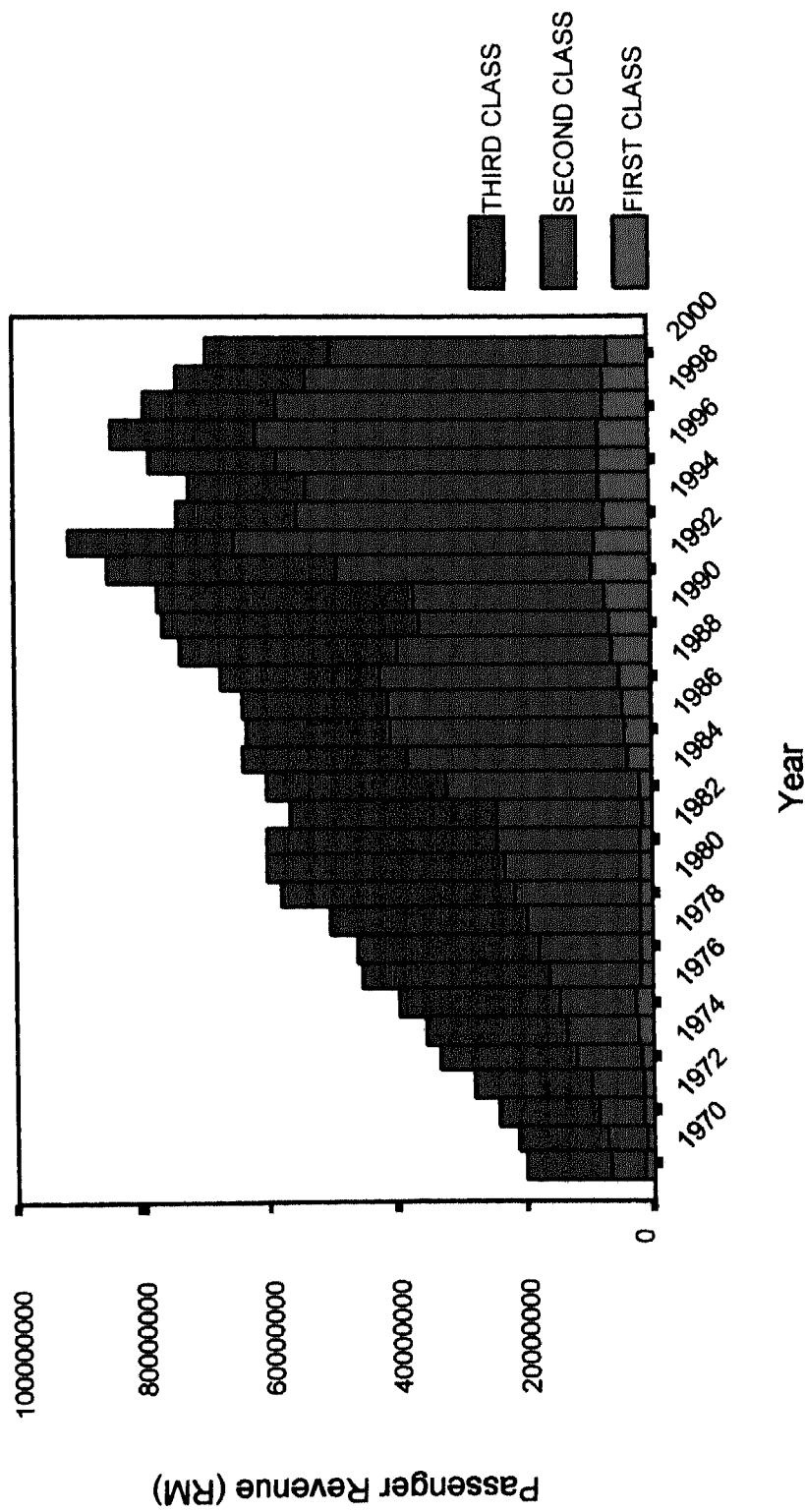
²⁰ Malaysia Government, Seventh Malaysia Plan 1996-2000 (Kuala Lumpur: Percetakan Nasional Malaysia Berhad, 1996) 344.

second class and third class. The percentage of passenger kilometres generated by first class passengers from 1970 to 2000 was around 3% out of the total passenger kilometres generated. However, the percentage of passenger kilometres generated by second class passengers increased from 19% in 1970 to 55% in 2000. There was a drop in the percentage of passenger kilometres generated by third class passengers from 78% in 1970 to 42% in the year 2000. There seemed to be a transition whereby second class rail passenger services were gaining more popularity than third class rail passenger services among intercity train commuters between 1970 to 2000.

The passenger revenue (RM) of KTMB from 1970 to 2000 is shown in Figure 3.3. Passenger revenue tripled from RM20,047,342 in 1970 to RM60,099,728 in 1981. However it dropped by 6.3% to RM56,299,631 in 1983. The drop in passenger revenue could be traced to the recession in the early 1980s. Ten years later, passenger revenue increased to RM90,861,086 in 1993 but dropped by 20.8% to RM72,003,995 in 1995 due to the effects of the completion of the North-South Highway in 1994. KTMB reviewed its fare structure after the completion of the North-South Highway²¹, which caused the passenger revenue to recover a level of RM84,334,535 in 1997, but dropped to RM68,997,239 in the year 2000 just after the economic slowdown in mid-1997.

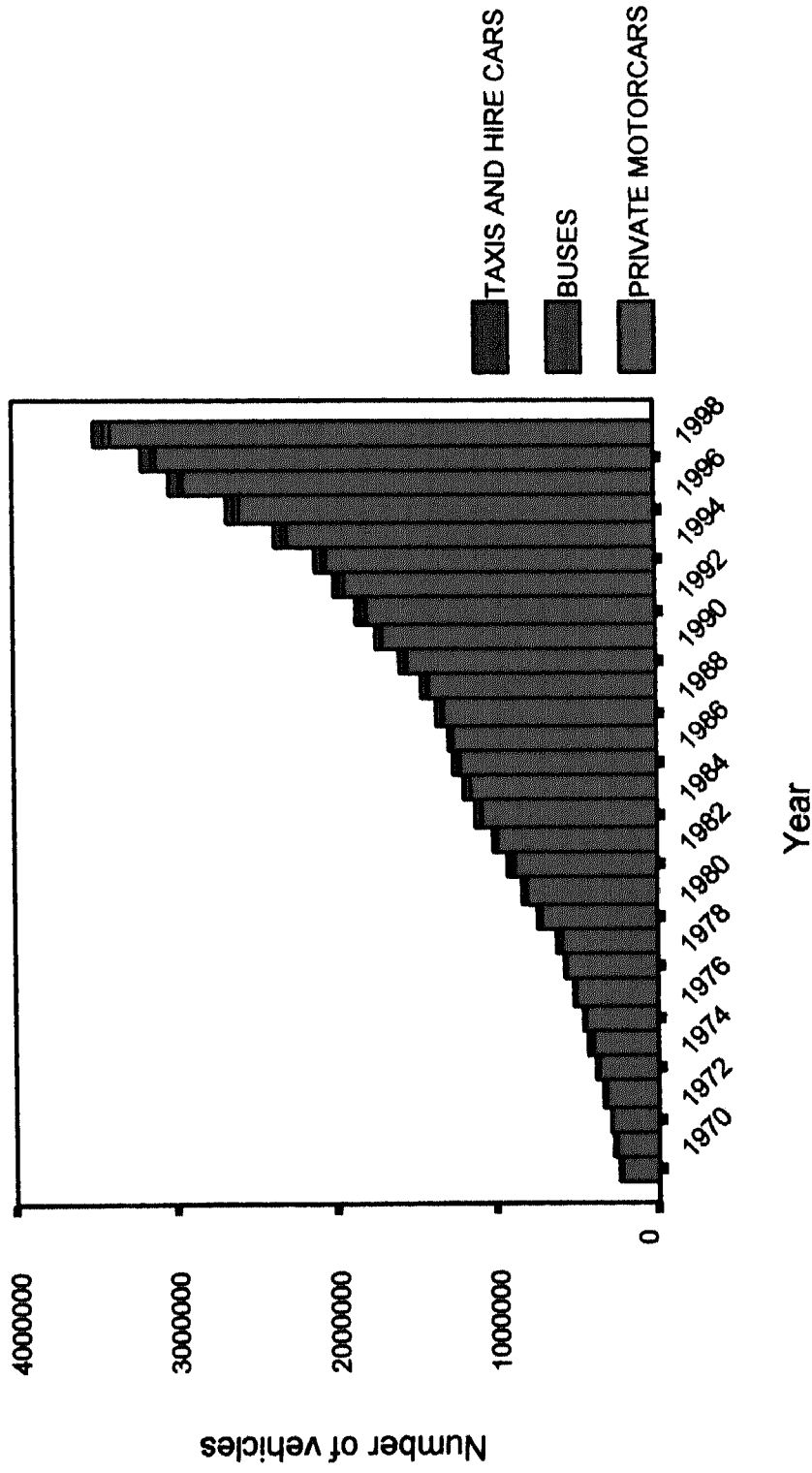
Back to Figure 3.3, the percentage of passenger revenue generated by first class passengers increased from 7% in the year 1970 to 9% in the year 2000. While the

²¹ Keretapi Tanah Melayu Berhad, Jajaran Suara Rasmi KTM July 1994(Kuala Lumpur: Pentadbiran KTM, 1994) 2



Source: Keretapi Tanah Melayu Berhad (KTMB)

Figure 3.3: Passenger revenue (RM) of KTMB from 1970 to 2000



Source: Road Transport Department, Malaysia

Figure 3.4: Number of vehicles registered in Peninsular Malaysia from 1970 to 1999

Ten years later, the amount of registered private motorcars rose to 1,539,538 vehicles in 1990. By the year 1999, the amount reached a level of 3,382,500 private motorcars. One of the factors that caused the increased number of private motorcars on the road was the increase in personal income. Between the period of 1970 to 1980 Gross Domestic Product per Capita increased by 70.1% from RM1,070 (1970=100) in 1970 to RM1,820 (1970=100) in 1980.²²

In Peninsular Malaysia, taxis and hire cars are no longer competitive as the demand for intercity travel by taxis and hire cars had become less due to the lack of demand. This notion was gathered from interviews conducted at major taxi stands across Peninsular Malaysia. Presently, taxis and hire cars conduct their operation in urban area or being used for short distance travel only. As a result, a number of taxi companies can be seen operating in major cities such as in Kuala Lumpur. The number of taxis and hire cars registered in Peninsular Malaysia had increased by 99.9% from 6,827 vehicles in 1970 to 13,644 vehicles in 1980. Ten years later, the amount of taxis and hire cars registered was equivalent to 28,337 vehicles in 1990. It rose by 107.7% compared to the value in 1980. By 1999, 58,385 taxis and hire cars were registered in Peninsular Malaysia.

Intercity buses services are gaining popularity with the increase of road networks and the completion of major highways. These buses operate according to schedules, routes and fare determined by the Road Transport Licensing Board. Figure 3.5 shows

²² Malaysia Government, Malaysia Economic Statistics-Time Series 1999 (Kuala Lumpur: Department of Statistics, Dec 1999) 5

the main roads and highways in Peninsular Malaysia. The number of buses registered in Peninsular Malaysia had increased by 120.5% from 5,932 vehicles in 1970 to 13,079 vehicles in 1980. From this figure, the number of buses registered rose to 21,534 vehicles in 1990 where it increased by 64.6% compared to the value in 1980. By the year 1999, the amount of buses registered in Peninsular Malaysia went up to 39,517 vehicles.

MAS or better known as Malaysia Airline System is Malaysia's national carrier. Figure 3.6 shows the domestic routes by Malaysia Airlines. Please refer to Figure 3.7 to see the number of passengers handled by airports in Peninsular Malaysia from 1970 to 2000. The number of passengers handled increased by 87% from 818,000 passengers in 1970 to 6,304,000 passengers in 1985. But the following year it dropped to 6,164,000 passengers. From 6,164,000 passengers in 1986, the number of passenger increased by 268.4% to 22,705,282 passengers in 1997. Due to the after effects of the economic crisis in mid-1997, the number of passengers handled by airports in Peninsular Malaysia fell to 20,487,498 passengers in 1998. In the year 2000, the value went up to 23,388,860 passengers.

The competitiveness of public transports in Peninsular Malaysia can be evaluated by considering several conditions or criteria that are usually used in the decision-making process by consumers to determine the choice of public transport for intercity travel- the fare of transport, total cost of travel, journey time and frequency of service. Assume the journey from Johor Bahru to Kuala Lumpur.

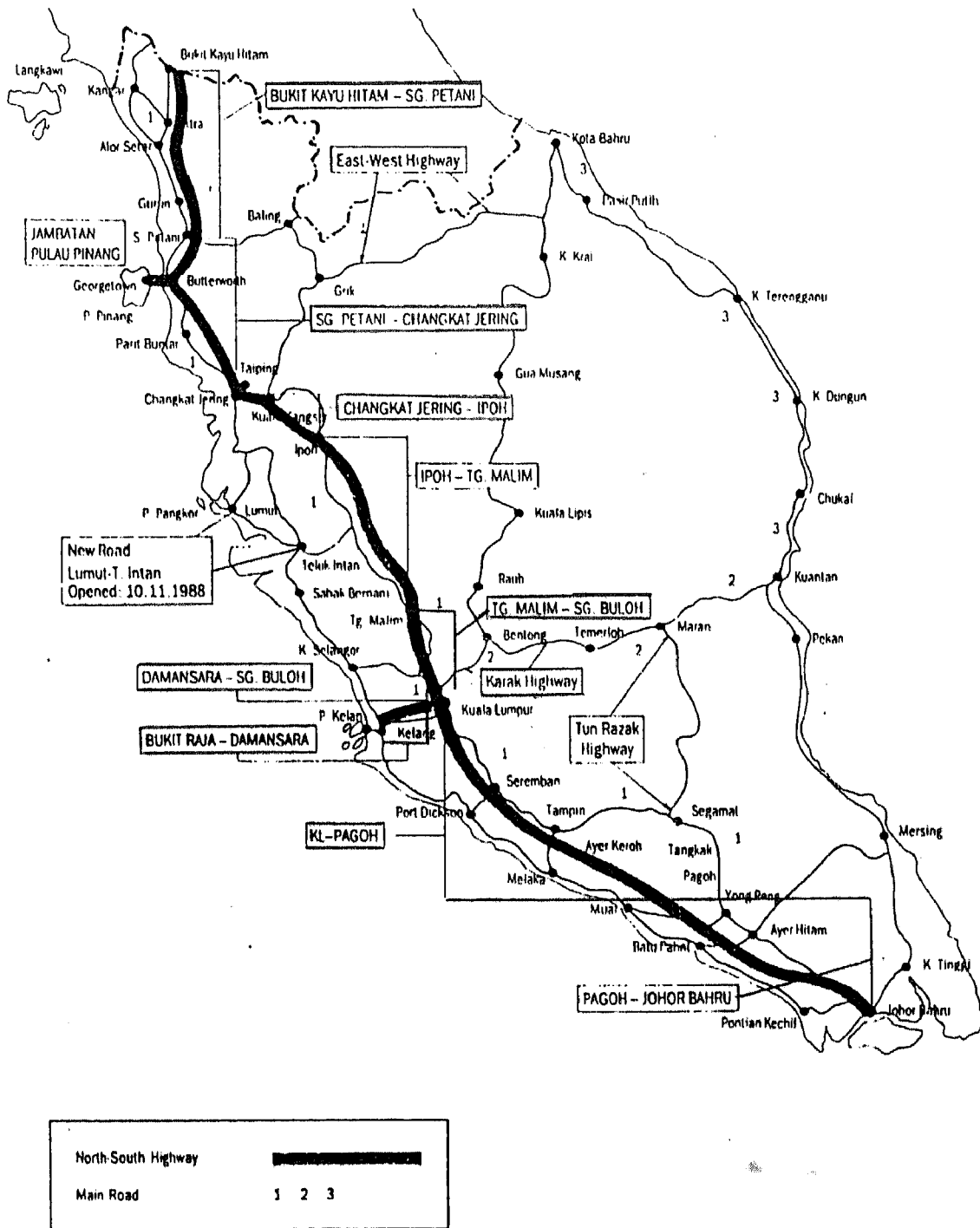
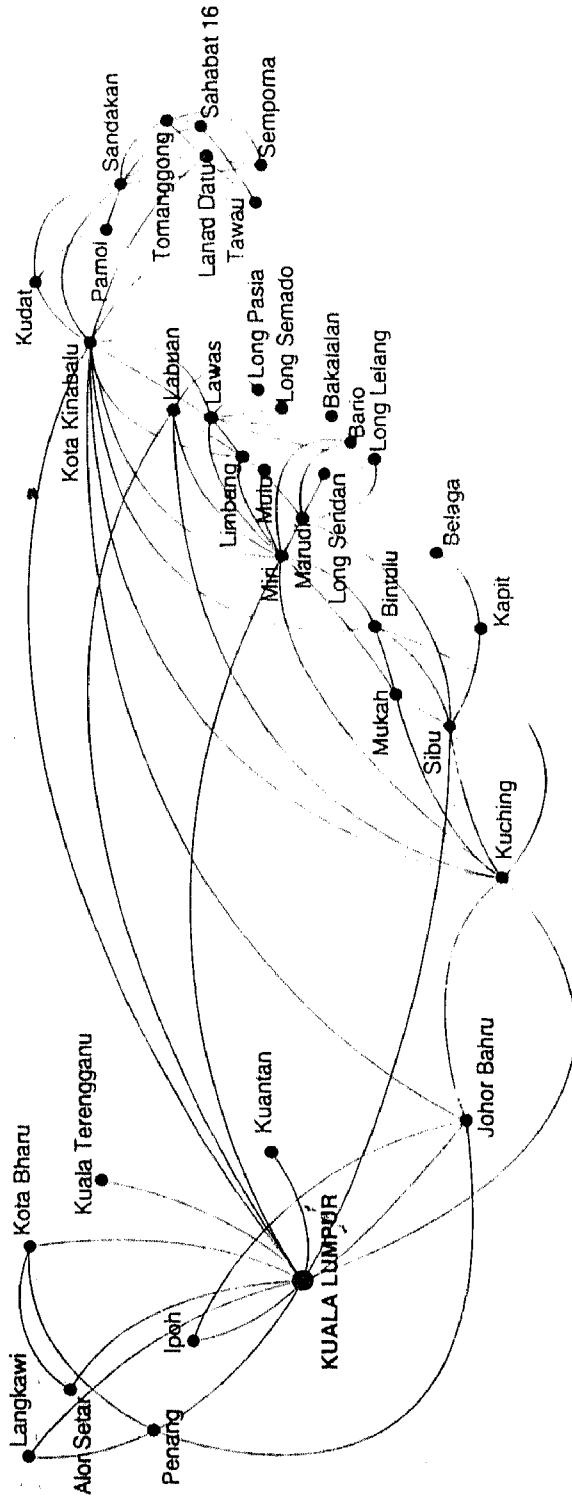
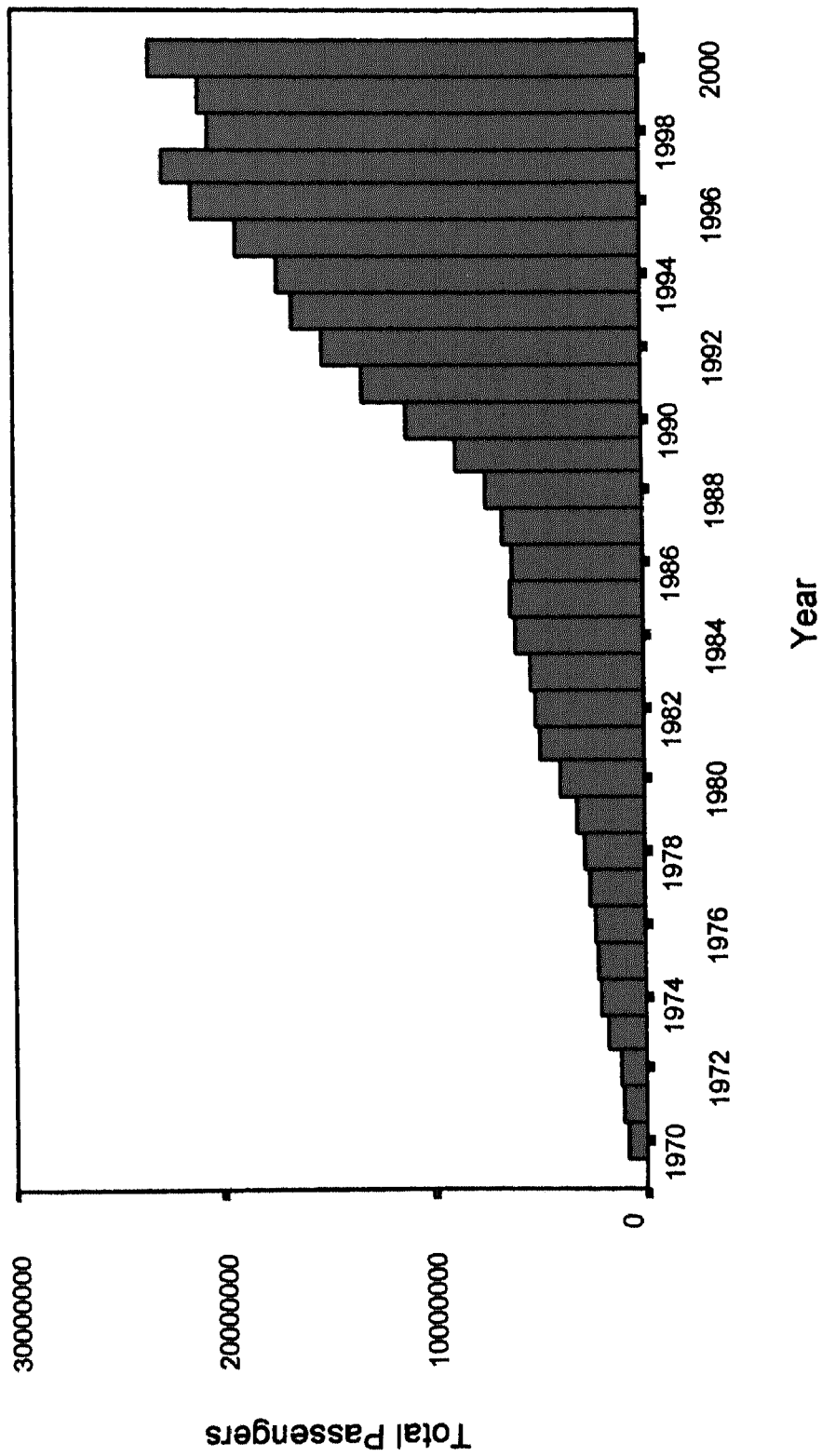


Figure 3.5: Main roads and highways in Peninsular Malaysia (Source: Information Malaysia 1998, p 270)



Not to scale.
 Accurate at point of printing.

Figure 3.6: Domestic routes by Malaysia Airline (Source: Information Malaysia 1998, p 236)



Source: Malaysia Airports Berhad

Figure 3.7: The total number of passengers handled by airports in Peninsular Malaysia from 1970 to 2000

In terms of the travel fare, it is found that the intercity bus services are the cheapest means of public transport when compared to the rail passenger services and domestic air services. The bus fare costs about RM20.20 (standard class) that is slightly lower by 19.2% than the fare charged by the train and 78.3% lower than the fare charged by air services for the same journey. Train fare costs about RM25 (economy class). And the air fare is the most expensive which cost about RM93 (economy class).²³

Turning to the total cost of travel, travelling by air is relatively the most expensive mode of public transport when compared to the intercity bus services and rail passenger services. The total cost of travelling by air from Johor Bahru to Kuala Lumpur is estimated to cost RM175.70, 290.4% higher than the total cost of travel by train that costs RM45 and 337.1% higher than the total cost of travelling by express bus that costs RM40.20.²⁴

In terms of journey time²⁵ estimated, domestic air transport is relatively the fastest. If an individual chooses to travel by air, it will take him/her about 165 minutes to reach Kuala Lumpur. However, travelling by bus will take about 350 minutes that is 185 minutes or 112.1% longer than travelling by air. Travelling by train takes the longest time which amounts to 442 minutes or 167.9% longer than travelling by air.²⁶

²³ Refer to Table 3.3, Table 3.4 and Table 3.5

²⁴ Refer to Table 3.6, Table 3.7 and Table 3.8

²⁵ Journey time for air services was estimated by adding the travel time to and from the airport, check in time before departure with travel time between terminals. Journey time for bus services was estimated by adding travel time to and from bus terminals, waiting time at bus terminal with travel time between bus terminals. While journey time for rail passenger services was estimated by adding travel time to and from railway station, waiting time at origin station with travel time between railway stations.

²⁶ Refer to Table 3.9, Table 3.10 and Table 3.11

Table 3.3
Train Fares (one-way): Selected Origin and Destination Matrix
(RM)

To	Langkawi	Alor Setar	Butterworth	Pulau Pinang	Ipoh	Kuala Lumpur	Seremban	Melaka	Segamat	Kluang	Johor Bharu	Singapore	Mentakab	Kota Bharu
From Langkawi	-	-	-	-	-	41	-	-	-	-	-	-	-	-
Alor Setar	-	-	3	3.6	-	76	-	-	-	-	-	-	-	-
Butterworth	-	3	-	-	13	26	31	36.1	39	45	50	52	-	-
Pulau Pinang	-	6*	-	-	28*	59*	71*	79.1	89*	102*	114*	119*	-	-
Ipoh	-	3.6	-	-	13.6	26.6	31.6	36.7	39.6	45.6	50.6	52.6	-	-
Kuala Lumpur	-	7.6*	-	-	28.6*	59.6*	71.6*	79.7*	89.6*	102.6*	114.6*	119.6*	-	-
Seremban	-	-	13	13.6	14	14	19	24.1	27	32	38	40	-	-
Melaka	-	-	28*	28.6*	32*	32*	42*	52.1*	62*	74*	87*	92*	-	-
Segamat	-	-	26	26.6	14	14	5	-	13	19	25	26	18	34
Kluang	-	-	59*	59.6*	32*	32*	11*	-	30*	44*	56*	60*	41*	78*
Johor Bharu	-	-	31	31.6	19	5	-	-	9	15	20	22	14	31
Singapore	-	-	36.1	36.7	24.1	11*	-	-	20*	33*	45*	50*	32*	70*
Mentakab	-	-	79.1*	79.7*	52.1*	-	-	-	-	-	-	-	13.1	30.1
Kota Bharu	-	-	39	39.6	27	13	9	-	-	6	12	13	9	27
			89*	89.6*	62*	30*	20*	-	-	13*	26*	30*	23*	81*
			45	45.6	32	19	15	-	6	13*	6	8	15	31
			102*	102.6*	74*	44*	33*	-	13*	13*	14*	18*	36*	95*
Johor Bharu	-	-	50	50.6	38	25	20	-	12	6	14*	3	19	35
Singapore	-	-	114*	114.6	87*	56*	45*	-	26*	14*	2	5*	48*	107*
Mentakab	-	-	52	52.6	40	26	22	-	13	8	19	21	21	37
Kota Bharu	-	-	119*	119.6	92*	60*	50*	-	30*	18*	5*	53*	53*	111*
			-	-	18	18	14	13.1	9	15	19	21	20	20
			-	-	41*	41*	32*	26.1*	23*	36*	48*	53*	60*	60*
			-	-	34	34	31	30.1	27	31	35	37	20	20
			-	-	78*	78*	70*	67.1	81*	95*	107*	111*	60*	60*

Source:

Train fares KTMB (April 2001)

Notes:

- (1) Fares without superscripts denote economy class.
- (2) Fares with * denote first class.
- (3) KTMB provides a number of train services. For this reason there is some variation in the economy class train fares for any given origin and destination. Where there is such variation an average of the fares is derived and shown in the Table above.
- (4) All train journeys that are not entirely on rail are shown in italics.
- (5) There are no direct rail services between some D&D in the Table. However, where the distances are long enough and origin and arrival times are convenient for users to connect to other train reach their final destination, the total fare for the entire journey is computed in the Table. In many instances, the connection would be at Kuala Lumpur.
- (6) Where a road journey is involved at the commencement or completion of a journey (specifically for journey to and from Langkawi or Melaka, Alor Setar) the applicable bus fares for commencement for commencement or completion of the journey are included in the train fares shown in the Table. For Pulau Pinang, train journeys to the island include the ferry tariff of RM0.60. Likewise, train to and from Langkawi include the bus fare between Arau or Kuala Perlis (RM2.00) and the ferry tariff (RM12.00) between Kuala Perlis and Langkawi.

Table 3.4
Bus Fares: Selected Origin and Destination Matrix (April 2001)

To	Langkawi	Alor Setar	Butterworth	Pulau Pinang	Ipoh	Kuala Lumpur	Seremban	Melaka	Segamat	Kluang	Johor Bahru	Singapore	Mentakab	Kota Bahru
From														
Langkawi		15.60	20.70	21.80	29.70	41.00	44.50	49.90	51.00	57.30	61.25	62.35	45.15	38.05
Alor Setar	15.60		6.30	6.20	14.50	25.40	28.95	33.35	36.25	41.70	45.65	47.05	29.60	22.50
Butterworth	20.70	6.30		1.10	9.00	20.30	23.80	28.55	31.75	36.50	40.55	41.85	24.50	21.25
Pulau Pinang	21.80	6.20	1.10		11.40	22.70-50.00	24.90	29.30	32.25	37.70	42.85	45.20	25.60	23.65
Ipoh	29.70	14.50	9.00	11.40		11.30-15.20	14.80	30.65	22.10	27.55	31.50	33.15	15.45	21.50
Kuala Lumpur	41.00	25.40-34.00	20.30	22.70-50.00	11.30-15.20		3.50	7.90	10.85	16.30	20.20-25.00	28.00-60.00	6.20	26.00
Seremban	44.50	28.95	23.80	24.90	14.80	3.50		4.40	7.30	13.80	16.70	17.80	7.10	29.60
Melaka	49.90	33.35	28.20	30.65	30.85	7.90	4.40		6.80	8.35	12.30	13.75	9.15	34.00
Segamat	51.00	36.25	31.15	32.25	22.15	10.85	7.30	6.60		6.25	10.25	11.35	7.50	32.10
Kluang	57.30	41.70	36.60	37.70	27.55	16.30	13.60	8.35	6.25		8.40	7.50	13.75	16.30
Johor Bahru	61.25	45.65	40.55	42.85	31.50	20.20-25.00	16.70	12.30	10.25	6.40		1.10	17.70	41.50
Singapore	62.35	103.50	91.60	81.90	71.75	81.40	39.20	29.50	11.35	16.45	2.40		18.80	39.00
Mentakab	45.15	29.60	24.50	25.60	15.45	6.20	7.10	9.15	7.50	13.75	17.70	18.80		27.55
Kota Bahru	33.05	22.50	21.25	22.35	21.50	26.10	29.60	33.40	32.10	36.20	41.50	40.25	27.55	

Sources:

Lembaga Perlesenan Kenderaan Perdagangan
Bus Companies
AGN Research Associates

Notes:

- (1) Bus fares for the main sectors are those of Plusliner, Nice and Transnational Express.
- (2) For sectors where fares were not readily available, they were derived on the basis of 5.5 cents per km which is the current applicable per km bus rate. These imputed fares are in italics.
- (3) Where there is service differentiation, the range of fares between economy and executive fares are indicated.
- (4) Fares quoted in Singapore dollars have been converted to MYR at an exchange rate of S\$1 = MYR \$2.2.
- (5) RM12.00 were added to bus fares as ferry fares from Kuala Perlis to Langkawi.

Table 3.5
Air Fares: Selected Origin and Destination Matrix
(RM)

To	Langkawi	Alor Setar	Butterworth	Pulau Pinang	Ipoh	Kuala Lumpur	Seremban	Metaka	Segamat	Kluang	Johor Bahru	Singapore	Mentakab	Kota Bahru
From	Langkawi	-	-	51 73*	-	135 192*	-	-	-	-	184 276*	357 506*	-	-
	Alor Setar	-	-	-	-	113 161*	-	-	-	-	206 293*	335 475**	-	217 309*
	Butterworth	-	-	-	-	-	-	-	-	-	-	-	-	-
	Pulau Pinang	51 73*	-	-	-	104 148*	-	-	-	-	178 253*	326 462*	-	-
	Ipoh	-	-	-	-	66 94*	-	-	-	-	159 226*	-	-	170 242*
	Kuala Lumpur	135 192*	113 161*	104 148*	66 94*	-	-	-	-	-	93 132*	222 314**	-	104 148*
	Seremban	-	-	-	-	-	-	-	-	-	-	-	-	-
	Melaka	-	-	-	-	-	-	-	-	-	-	-	-	-
	Segamat	-	-	-	-	-	-	-	-	-	-	-	-	-
	Kluang	-	-	-	-	-	-	-	-	-	-	-	-	-
	Johor Bahru	194 276*	206 293*	178 253*	159 226*	93 132*	-	-	-	-	-	-	-	194 276*
	Singapore	464 656*	447 625**	464 548**	400 582**	334 464**	-	-	-	-	-	-	-	438 612**
	Mentakab	-	-	-	-	-	-	-	-	-	-	-	-	-
	Kota Bahru	-	217 309*	-	170 242*	104 148*	-	-	-	-	194 276*	328 462*	-	-

Source:
Malaysia Airlines Timetable (25 Mar - 27 Oct 2001)

Notes:

- (1) Fares without superscripts denote economy class.
- (2) Fares with * denote business class.
- (3) Fares with ** denote first class.
- (4) For some sectors in the Table there are no direct flights. But because of the long distances between two cities there is a potential for air travel via transiting at KLJA. These possibilities are also indicated in the Table in italics.
- (5) Fares quoted in Singapore dollars have been converted into MYR at the rate of S\$1=MYR2.2

Table 3.6
Total Cost of Train Travel: Selected Origin and Destination Matrix
(RM)

To	Langkawi	Alor Seitar	Butterworth	Pulau Pinang	Ipoh	Kuala Lumpur	Seremban	Melaka	Segamat	Kluang	Johor Bharu	Singapore	Mentakab	Kota Bharu
From Langkawi	-	-	-	-	-	61	-	-	-	-	-	-	-	-
Alor Seitar	-	-	23	23.6	-	96	-	-	-	-	-	-	-	-
Butterworth	-	23	-	27.6*	33	-	-	-	-	-	-	-	-	-
Pulau Pinang	-	26*	-	-	48*	46	51	56.1	59	65	70	72	-	-
Ipoh	-	23.6	-	-	33.6	79*	91*	99.1	109*	122*	134*	139*	-	-
Kuala Lumpur	61	27.6*	-	-	48.6*	46.6	51.6	56.7	59.6	65.6	70.6	72.6	-	-
Seremban	-	-	-	-	33.6	79.6*	91.6*	99.7*	109.6*	122.6*	134.6*	139.6*	-	-
Melaka	-	-	33	33.6	-	34	39	44.1	47	52	58	60	-	-
Segamat	-	-	48*	48.6*	-	52*	62*	72.1*	82*	94*	107*	112*	-	-
Kluang	-	-	46	46.6	34	-	25	-	33	39	45	46	38	54
Johor Bharu	-	-	79*	79.6*	52*	-	31*	-	50*	64*	76*	80*	61*	98*
Singapore	-	-	51	51.6	39	-	-	-	29	35	40	42	34	51
Mentakab	-	-	91*	91.6*	62*	-	-	-	40*	53*	65*	70*	52*	90*
Kota Bharu	-	-	56.1	56.7	44.1	-	-	-	-	-	-	-	33.1	50.1
	-	-	99.1*	99.7*	72.1*	-	-	-	-	-	-	-	46.1	87.1
	-	-	59	59.6	47	33	29	-	-	26	32	33	29	47
	-	-	109*	109.6*	82*	50*	40*	-	-	33*	46*	50*	43*	101*
	-	-	65	65.6	52	39	35	-	-	-	26	28	35	51
	-	-	122*	122.6*	94*	64*	53*	-	-	-	33*	38*	56*	115*
	-	-	70	70.6	58	45	40	-	-	-	32	23	39	55
	-	-	134*	134.6	107*	76*	65*	-	-	-	46*	25*	68*	127*
	-	-	72	72.6	60	46	42	-	-	-	33	41	41	57
	-	-	139*	139.6	112*	80*	70*	-	-	-	50*	73*	73*	131*
	-	-	-	-	-	38	34	33.1	29	35	39	41	-	40
	-	-	-	-	-	61*	52*	46.1*	43*	56*	68*	73*	-	80*
	-	-	-	-	-	54	51	50.1	47	51	55	57	40	-
	-	-	-	-	-	98*	90*	87.1	101*	115*	127*	131*	80*	-

Source:

Train fares KTMB (April 2001)

Notes:

(1) Fares without superscripts denote economy class.

(2) Fares with * denote first class.

(3) RM20.00 is added to train fares as taxi fare from home to train station and from train station to final destination.

Table 3.7
Total Cost of Bus Travel: Selected Origin and Destination Matrix

To From	Langkawi	Alor Setar	Butterworth	Pulau Pinang	Ipoh	Kuala Lumpur	Seremban	Malaka	Segamat	Kluang	Johor Bahru	Singapore	Mentakab	Kota Bharu
Langkawi		35.60	40.70	41.80	49.70	61.00	64.50	69.90	71.00	77.30	81.25	82.35	65.15	58.05
Alor Setar	35.60		26.30	26.20	34.50	45.40	48.95	53.35	58.25	67.05	66.95	67.05	49.60	42.50
Butterworth	40.70	26.30		21.70	29.00	40.30	43.80	48.55	51.15	56.50	60.55	61.65	44.50	41.25
Pulau Pinang	41.80	26.20	21.70		31.40	42.70-70.00	44.90	49.30	52.25	57.70	62.95	66.20	45.60	43.65
Ipoh	49.70	34.50	29.00	31.40		31.30-35.20	34.80	50.65	42.10	47.55	51.50	53.15	35.45	41.50
Kuala Lumpur	61.00	45.40-54.00	40.30	42.70-70.00	31.30-35.20		23.50	27.90	30.85	36.30	40.20-45.00	48.00-80.00	26.20	46.00
Seremban	64.50	48.95	43.80	44.90	34.80	23.50		24.40	27.30	33.60	36.70	37.80	27.10	49.60
Malaka	69.90	53.35	48.20	50.65	50.85	27.90	24.40		26.60	28.35	32.30	33.75	29.15	54.00
Segamat	71.00	58.25	51.15	52.25	42.15	30.85	27.30	26.60		26.25	30.25	31.35	27.50	52.10
Kluang	77.30	61.70	56.60	57.70	47.55	36.30	33.60	28.35	26.25		26.40	27.50	33.75	36.30
Johor Bahru	81.25	65.65	60.55	62.95	51.50	40.20-45.00	36.70	32.30	30.25	26.40		21.10	37.70	61.50
Singapore	82.35	135.50	123.60	113.90	103.75	113.40	71.20	61.50	43.35	48.45	34.40		50.80	71.00
Mentakab	65.15	49.60	44.50	45.60	35.45	26.20	27.10	29.15	27.50	33.75	37.70	38.80		47.55
Kota Bharu	53.05	42.50	41.25	42.35	41.50	46.10	49.60	54.00	52.10	56.20	61.50	60.25	47.55	

Source:

AGN Research Associates

Notes:

- (1) A total sum of RM20.00 is imputed as taxi fare from home to bus station and from bus station to final destination.
- (2) For passengers from Singapore, a sum of RM22.00 (S\$10) is imputed as taxi fare from home to bus station and a sum of RM10.00 from bus station to final destination. Similar amounts are added to the basic bus fares for journeys to Singapore. These imputed figures are in italics.

Table 3.8
Total Cost of Air Travel (one way): Selected Origin and Destination Matrix
(RM)

To	Langkawi	Alor Setar	Butterworth	Pulau Pinang	Ipoh	Kuala Lumpur	Seremban	Melaka	Segamat	Kluang	Johor Bahru	Singapore	Mentakab	Kota Bahru
From Langkawi	-	-	-	101.00	-	217.70	-	-	-	-	244.00	437.00	-	-
Alor Setar	-	-	-	123.00*	-	274.70*	-	-	-	-	326.00*	596.00*	-	-
Butterworth	-	-	-	-	-	195.70	-	-	-	-	256.00	415.00	-	267.00
Pulau Pinang	101.00	-	-	-	-	243.70*	-	-	-	-	343.00*	555.00*	-	359.00*
Ipoh	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kuala Lumpur	217.70	195.70	-	186.70	148.70	-	-	-	-	-	175.70	334.70	-	154.00
Seremban	274.70*	243.70*	-	230.70*	176.70*	-	-	-	-	-	214.70*	426.70**	-	198.00*
Melaka	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Segamat	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kluang	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Johor Bahru	244.00	256.00	-	228.00	209.00	175.70	-	-	-	-	-	-	-	244.00
Singapore	326.00*	343.00*	-	303.00*	276.00*	214.70*	-	-	-	-	-	-	-	326.00*
Mentakab	544.20	527.40	-	544.20	480.40	447.10	-	-	-	-	-	-	-	518.40
Kota Bahru	735.60*	705.20**	-	627.80**	662.20*	576.90**	-	-	-	-	-	-	-	692.20*
	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	267.00	-	220.00	220.00	154.00	-	-	-	-	244.00	-	-	-
	-	359.00*	-	292.00*	292.00*	198.00*	-	-	-	-	326.00*	-	-	-

Source:

AGN Research Associates

Notes:

- (1) Fares without superscripts denote economy class.
- (2) Fares with * denote business class.
- (3) Fares with ** denote first class.
- (4) Some sectors there are no direct flights between the two towns. But because of the long distances there is a potential for air travel via transiting at KLIA. These possibilities are also indicated in the Table in italics.
- (5) Fares quoted in Singapore dollars have been converted into MYR at the rate of S\$1=MYR2.2.
- (6) For KL, fares include RM57.70 for airport limousine charges (one way including toll charges) from and to KL city.
- (7) For other towns, fares include RM25.00 for taxi charges (one way) to and from airport.
- (8) For Singapore, fares include RM55.00 (one way) for taxi charges to and from Changi International Airport.

Table 3.9
Train Journey Time: Selected Origin and Destination Matrix
(Minutes)

From	To	Langkawi	Alor Setar	Butterworth	Pulau Pinang	Ipoh	Kuala Lumpur	Seremban	Melaka	Segamat	Kluang	Johor Bharu	Singapore	Mentakab	Kota Bharu
Langkawi			216	309	324	678	947	-	-	-	-	-	-	-	-
Alor Setar		219		206	221	560	819	-	-	-	-	-	-	-	-
Butterworth		341	197		-	346	593	610	767	720	791	904	970	-	-
Pulau Pinang		324	221	-		332	608	644	782	530	836	905	985	-	-
Ipoh		653	510	317	332		322	389	496	499	570	683	774	-	-
Kuala Lumpur		948	805	593	608	342		153	249	289	367	460	549	386	774
Seremban		-	-	629	644	395	156		-	203	273	381	470	311	699
Melaka		-	-	767	782	496	249	-	-	-	-	357	430	312	743
Segamat		-	749	515	530	515	288	208	-	-	153	246	335	314	647
Kluang		-	-	821	836	587	367	287	-	154	-	168	257	354	730
Johor Bharu		-	-	890	905	656	442	361	357	229	155	171	171	449	824
Singapore		-	-	970	985	736	536	456	430	328	248	166	510	534	911
Mentakab		-	-	-	-	-	405	313	312	278	327	420	873	455	548
Kota Bharu		-	-	-	-	-	811	669	743	628	698	790	873	455	548

Source:

Transit times computed from rail time-tables in *Train fares KTMB (April 2001)*
AGN Research Associates

Notes:

(1) Train journey time is total travel time from home to final destination and includes travel from home/ travel to final destination, waiting time at stations and time taken for customs and immigration clearance.

Train journey times are derived from transit times on the basis of the following adjustments:

(1) An addition of 30 minutes for travel from home to railway station and another 30 minutes for travel from railway station to final destination.

(2) An addition of 15 minutes as waiting time at origin station.

(3) For passengers to and from Langkawi 15 minutes is added for waiting time to board bus from Arau to Kuala Perlis or from Arau to Kuala Perlis and 15 minutes is added for waiting time to board to and from Langkawi.

(4) For passengers to and from Pulau Pinang, 15 minutes is added for waiting time for ferry from Butterworth to Pulau Pinang and from Pulau Pinang to Butterworth.

Table 3.10
Bus Journey Time: Selected Origin and Destination Matrix

(Minutes)		Langkawi	Alor Setar	Butterworth	Pulau Pinang	Ipoh	Kuala Lumpur	Seremban	Melaka	Segamat	Kluang	Johor Bahru	Singapore	Mentakab	Kota Bahru
From	To														
Langkawi	Langkawi	133	133	195	209	305	441	484	537	573	639	687	701	492	406
Alor Setar	Langkawi	133	133	167	180	276	413	456	508	544	610	658	702	566	456
Butterworth	Alor Setar	167	167	118	118	214	351	394	447	482	548	596	640	486	436
Pulau Pinang	Butterworth	209	180	118	118	228	364	407	460	496	562	610	653	504	453
Ipoh	Pulau Pinang	305	276	214	228	242	242	284	338	373	439	487	530	346	440
Kuala Lumpur	Ipoh	441	413	351	364	284	148	148	201	236	302	350	394	202	511
Seremban	Kuala Lumpur	484	456	384	407	284	148	148	158	184	270	308	351	250	566
Melaka	Seremban	537	509	447	460	338	201	158	185	206	206	254	298	282	625
Segamat	Melaka	573	544	482	496	373	236	194	185	181	181	226	272	256	606
Kluang	Segamat	639	610	548	562	439	302	270	206	181	181	182	228	354	669
Johor Bahru	Kluang	687	658	596	610	487	350	308	254	228	182	148	148	415	696
Singapore	Johor Bahru	700	702	640	653	530	394	351	298	272	226	148	462	462	743
Mentakab	Singapore	492	566	486	504	346	202	250	282	256	354	415	462	534	534
Kota Bahru	Mentakab	406	456	436	453	440	511	566	625	606	669	696	743	534	534

Source:

AGN Research Associates

Notes:

Journey time is total travel time from home to final destination. They are derived from transit times on the basis of the following adjustments:

- (1) An addition of 15 minutes for waiting time at bus terminal.
- (2) An addition of 30 minutes for travel from home to bus terminal and 30 minutes for travel from bus terminal to final destination.
- (3) For passengers to and from Langkawi, 15 minutes is added for waiting time to board ferry to and from Langkawi.

Table 3.11
Air Journey Time: Selected Origin and Destination Matrix
(Minutes)

To From	Langkawi	Alor Setar	Butterworth	Pulau Pinang	Ipoh	Kuala Lumpur (SZB)	Kuala Lumpur (KUL)	Seremban	Melaka	Segamat	Kluang	Johor Bahru	Singapore	Mentakab
Langkawi	-	-	-	120	-	145	180	-	-	-	-	255	175	-
Alor Setar	-	-	-	-	-	140	175	-	-	-	-	265*	265*	-
Butterworth	-	-	-	-	-	-	-	-	-	-	-	-	100	-
Pulau Pinang	120	-	-	-	-	135	170	-	-	-	-	155	205*	-
Ipoh	-	-	-	-	-	-	160	-	-	-	-	250*	265*	-
Kuala Lumpur (SZB)	145	140	-	135	-	-	-	-	-	-	-	270*	310*	-
Kuala Lumpur (KUL)	180	175	-	170	160	-	-	-	-	-	-	135	-	-
Seremban	-	-	-	-	-	-	-	-	-	-	-	165	-	-
Melaka	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Segamat	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kluang	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Johor Bahru	255	295*	-	155	-	135	165	-	-	-	-	-	-	-
Singapore	175	260	-	390*	510*	-	-	-	-	-	-	-	-	-
Mentakab	265*	-	-	160	-	-	175	-	-	-	-	-	-	-
Kota Bharu	-	-	-	345*	255*	-	-	-	-	-	-	-	-	-
	-	255	-	-	-	170	175	-	-	-	-	250	255	-
	-	-	-	375*	605*	-	-	-	-	-	-	-	-	-

Source:

AGN Research Associates

Notes:

- (1) Journey time is total travel time in minutes from home to final destination.
- (2) Flights without superscripts denote nonstop flights.
- (3) Flights with * superscript denote transit flights.

Air journey times were derived from the respective air transit times on the following assumptions:

- (1) For Kuala Lumpur (KUL) as origin or destination, 60 minutes is added for trip to KL airport from home and from KL airport to home.
- (2) For other cities (including Singapore) the travel time to and from airport is assumed to be 30 minutes in each direction.
- (3) For all airports 30 minutes is added for check in time before departure.

As for the frequency of services, data are available only for train and domestic air services. When we compare these two, the weekly frequency of services by air is equivalent to 32 services, that is 14.2% more than the weekly train services that amount to 28 services. Which means that the consumers have several more options of time of departure to choose from air services compared to rail passenger services.²⁷

In some cases, travel fare, total cost of travel, journey time and frequency of services might not be relevant in the process of decision making for intercity travel. For instance, the factor of preference. Some people prefer to travel by train so that they can enjoy the beautiful scenery along the way. Besides the beautiful scenery, the passengers on board the train are allowed to move about from one coach to the other. This can be quite impossible on board an express bus or on board a plane. While some individual will prefer to travel slowly, especially the elderly and sick. There are some who are scared of heights so they may choose to avoid taking a flight.

As a conclusion from the comparisons among public transports, intercity bus services are found to be the cheapest in terms of travel fare and the total cost of travel compared to intercity rail passenger services and air services. When time is concerned, air services are relatively the fastest in comparison with intercity rail passenger services and bus services. But however when it comes to the consideration of frequency of services, air services are the most efficient in comparison with intercity rail passenger services.

²⁷ Refer to Table 3.12 and Table 3.13

Table 3.12
Weekly Frequency of Train Services (Direct)

From	To	Langkawi	Alor Setar	Butterworth	Pulau Pinang	Ipoh	Kuala Lumpur	Seremban	Melaka	Segamat	Kluang	Johor Bharu	Singapore	Mentakab	Kota Bharu
Langkawi	Langkawi	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alor Setar	Alor Setar	-	-	14	-	7	7	-	-	-	-	-	-	-	-
Butterworth	Butterworth	-	14	-	-	14	14	7	-	7	7	7	7	-	-
Pulau Pinang	Pulau Pinang	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ipoh	Ipoh	-	7	14	-	-	14	7	-	7	7	7	7	-	-
Kuala Lumpur	Kuala Lumpur	-	7	14	-	14	-	42	-	28	28	28	28	-	14
Seremban	Seremban	-	-	7	-	7	42	-	-	28	28	28	28	14	14
Melaka	Melaka	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Segamat	Segamat	-	-	7	-	7	28	28	-	-	42	42	42	7	7
Kluang	Kluang	-	-	7	-	7	28	28	-	42	-	42	42	7	7
Johor Bharu	Johor Bharu	-	-	7	-	7	28	28	-	42	42	42	42	7	7
Singapore	Singapore	-	-	7	-	7	28	28	-	42	42	42	42	7	7
Mentakab	Mentakab	-	-	-	-	-	14	14	-	7	7	7	7	-	-
Kota Bharu	Kota Bharu	-	-	-	-	-	14	14	-	7	7	7	7	21	21

Source:

Information on daily train frequencies obtained from *Train Fares KTMB (April 2001)*.

Table 3.13
Weekly Frequency of Air Services
(Number)

From	To	Langkawi	Alor Setar	Butterworth	Pulau Pinang	Ipoh	Kuala Lumpur (SZB)	Kuala Lumpur (KUL)	Seremban	Melaka	Segamat	Kluang	Johor Bahru	Singapore	Mentakab
Langkawi	Langkawi	-	-	-	16	-	14	37	-	-	-	-	-	12	-
Alor Setar	Alor Setar	-	-	-	-	-	14	15	-	-	-	-	32	35	-
Butterworth	Butterworth	-	-	-	-	-	-	-	-	-	-	-	18	15	-
Pulau Pinang	Pulau Pinang	16	-	-	-	-	14	89	-	-	-	-	7	21	-
Ipoh	Ipoh	-	-	-	-	-	-	14	-	-	-	-	24	39	-
Kuala Lumpur (SZB)	Kuala Lumpur (SZB)	14	14	-	14	-	-	-	-	-	-	-	17	21	-
Kuala Lumpur (KUL)	Kuala Lumpur (KUL)	34	15	-	84	14	-	-	-	-	-	-	32	83	-
Seremban	Seremban	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Melaka	Melaka	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Segamat	Segamat	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kluang	Kluang	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Johor Bahru	Johor Bahru	32	16	-	7	-	14	32	-	-	-	-	-	-	-
Singapore	Singapore	12	-	-	26	20	-	-	-	-	-	-	-	-	-
Mentakab	Mentakab	41	15	-	21	14	-	83	-	-	-	-	-	-	-
Koba Bahru	Koba Bahru	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	15	-	38	14	14	30	-	-	-	-	30	30	-

Source:

Malaysia Airlines Timetable (25 Mar - 27 Oct 2001)

Notes:

(1) Where there are a large number of direct flights between two towns or cities, transit at KL is not regarded as an option.

(2) Where there are no direct flights but distances are long (and thus offers substantial time savings) transit at KLIA is a possibility. Such transit opportunities are indicated in the Table in italics.