



GOVERNMENT OF KERALA

**WORKING PAPER ON
INTER-DISTRICT VARIATIONS IN THE
GROWTH OF MOTOR VEHICLES
IN KERALA**

DEPARTMENT OF ECONOMICS AND STATISTICS
THIRUVANANTHAPURAM

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Government of Kerala

*Working paper on
inter-district variations in the
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in Kerala*

Department of Economics & Statistics

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PREFACE

Among the different modes of transport, road transport is comparatively more important in Kerala as almost all villages in the State are connected by motorable roads. Consequent on rapid development in the automobile industry, different types of motor vehicles are being developed to suit the convenience of the people. Kerala witnessed a motor vehicle boom during the last two decades but there has been considerable variations in the growth of motor vehicles among different districts. An attempt is made in this paper to highlight the inter-district variations in the growth of motor vehicles and also the trends in the motor vehicles tax collection.

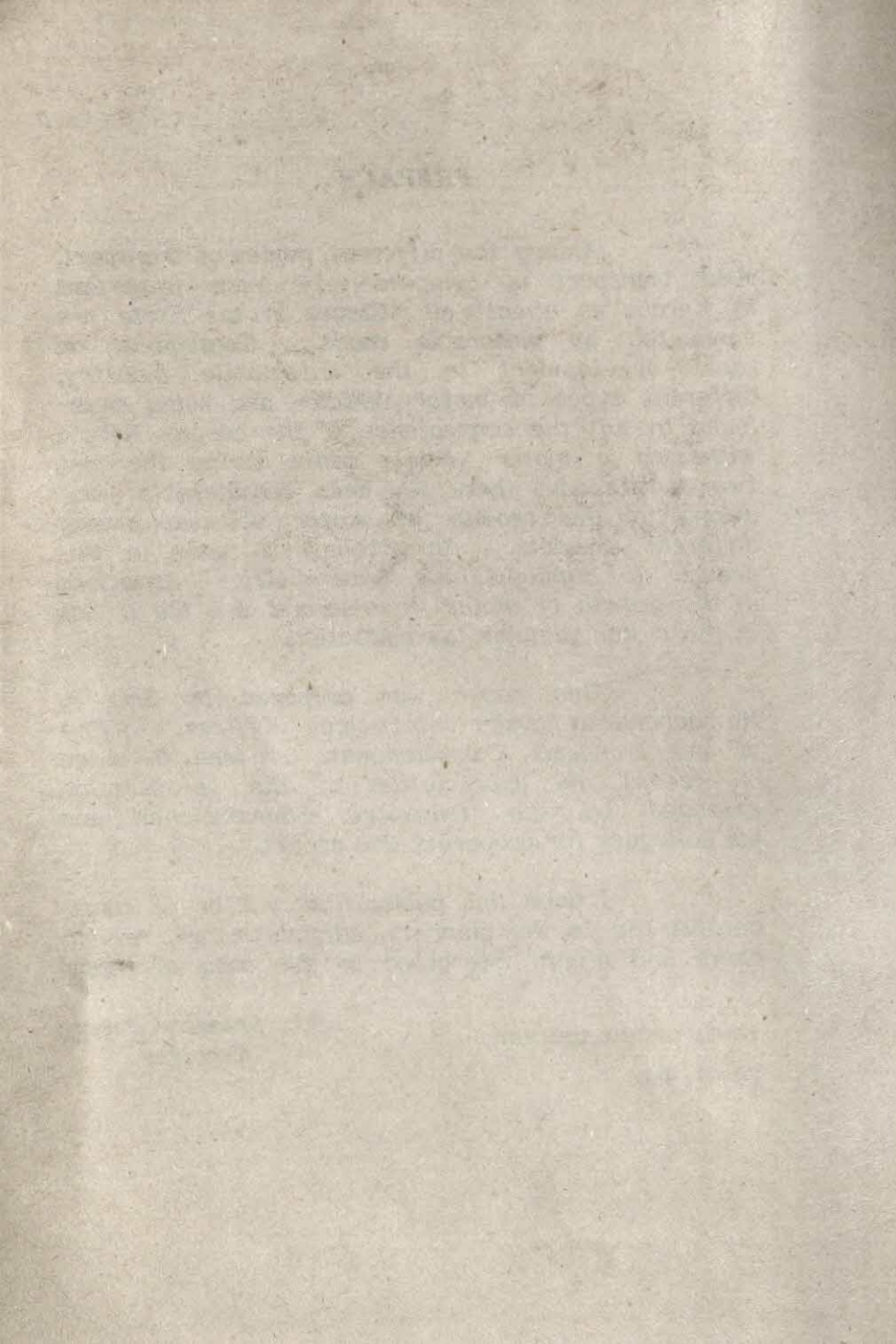
This paper was prepared by Sri. P. Ramachandran Nair, Statistical Officer, Office of the Transport Commissioner. I wish to place on record my appreciation of the co-operation extended by the Transport Commissioner and his colleagues for preparing this report.

I hope this publication will be of considerable use to the planners, administrators, researchers and others interested in this area of study.

Thiruvananthapuram,

29-6-1990.

P.L. Sreedevi Amma
Director



INTER DISTRICT VARIATIONS IN THE GROWTH OF MOTOR VEHICLES IN KERALA

Introduction

Road transport is the most important mode of transport and therefore it has a pivotal role in the all-round development of an economy. This is so particularly in Kerala, which has a fairly well developed road network. Almost all the villages in the State are linked with motorable roads. The total road length in Kerala is over one lakh kilometres which constitute about 10 percent of the total road length of India. Consequently the road length per lakh of population in Kerala is about 400 km. as against 250 km. in India. The importance of road transport in Kerala is enhanced by the inadequacy of railway lines in the State. The railway route length per lakh of population in Kerala in 1986 was only 3.8 km. as against the all India average of 8.2 km.

Motor vehicle industry in India has undergone tremendous progress since independence due to the technological developments in the design, construction and use of motor vehicles.

These technological developments generated more demand for motor vehicles and thereby accelerated the development of road transport.

The growth in the number of motor vehicles in Kerala during the last two decades was considerably higher than the all India average. Consequently the density of motor vehicles in Kerala per lakh of population during 1987-88 was 1644 as against the all India average of about 1500.

Eventhough, the growth of motor vehicles in Kerala is much higher than the all India average, there is considerable variation in the growth among the various districts of Kerala. An attempt is made in this paper to study the inter-district variations in the growth of motor vehicles during the decade 1978-79 to 1987-88.

Total number of motor vehicles

The total number of motor vehicles having valid license in the State as on 31st March 1979 was 154595 and the same has increased to 473970 as on 31st March 1988. The decadal increase in the number of vehicles was 206.5 percent. The annual increase in the total number of vehicles is as follows.

1. Annual increase in the total number of vehicles

Year	Total No. of vehicles	Annual increase(%)
1978-79	154595	-
1979-80	174704	13.00
80-81	194597	11.38
81-82	220741	13.43
82-83	246923	11.86
83-84	276930	12.17
84-85	319259	15.26
85-86	361617	13.26
86-87	414310	14.57
87-88	473970	14.39

It could be seen from the table that there is a steady increase in the number of motor vehicles and the annual percentage increase varied from 11.38 to 15.26. Category-wise distribution of the total number of motor vehicles given in table 2 shows that two wheelers occupy the first place (39%) followed by cars (29%)

2. Category-wise distribution of motor vehicles 1987-88

	No.	%
I. Goods vehicles		
1. 4 wheelers and above	49784	10.50
2. 3 wheelers including tempo	7609	1.61
II. Buses		
1. Stage carriages		
a) Private	10288	2.17
b) KSRTC	3453	0.73
2. Contract carriages & omni buses	4380	0.92
III. 4 wheelers		
1. Cars	101908	21.50
2. Taxi cars	33855	7.14
3. Jeeps	19893	4.20
IV. 3 Wheelers		
Autorickshaw	44116	9.31
V. Two wheelers	185349	39.11
VI. Others	13335	2.81
State	473970	100.00

Among the various types of motor vehicles, three wheeler goods vehicles including tempo registered maximum increase of 1127% followed by auto- rickshaw (679%) and contract carriage and omni buses (523%). In terms of number, scooters and motor cycles are the most important and their number increased by 325% during the decade under reference. The largest percentage of increase in three wheeler goods vehicles can be attributed mainly to the large scale construction activities in the state and import of large quantity of consumer items from other States, consequent on the inflow of foreign remittance from Gulf countries.

The autorickshaws became popular only during the early seventies. The provision of subsidy and credit facilities to unemployed youth for the purchase of autorickshaws, the increase in the income of the people due to foreign remittance a relatively cheap mode of transport, etc. are the important reasons for the rapid increase in the number of autorickshaws in the State.

3. Category-wise percentage increase in the no. of motor vehicles in the State

Type of motor vehicles	No. of vehicles as on		% increase
	31-3-79	31-3-88	
1	2	3	4
1. Goods vehicles			
a) Four wheelers & above	17907	49784	178
b) Three wheelers including tempo	620	7609	1127
2. Buses			
a) Stage carriages	8120	13741	69
b) Contract carriages and omni buses	703	4380	523
3. Car			
Private	49882	101908	104
Taxi car	15195	33855	123
Jeep	6919	19893	188
Autorickshaw	5666	44116	679
Scooters & motor cycles	43633	185349	325
Tractors and tillers	3845	5838	52
All other motor vehicles	2105	7497	256
Total	154595	473970	207

District-wise and category-wise distribution of total number of vehicles during 1978-79, 1983-84

and 1987-88 are given in tables 4 to 6. The district-wise percentage increases in the different categories of motor vehicles during 1987-88 over 1978-79 presented in table 7 reveals that the region consisted of the erstwhile Quilon and Alleppey districts [the present Quilon and Alleppey districts and the newly formed Pathanamthitta district] registered the maximum increase of 290 per cent followed by Malappuram (247.8%) and Thrissur districts (233.7%). An important reason attributed to the large increase in these districts is the large number of gulf migrants from these districts. According to the survey on the Housing and Employment conducted by the Department of Economics & Statistics in 1980, out of 1.87 lakh Gulf migrants from Kerala the maximum number of Gulf migrants are from Thrissur (37,818) and Malappuram (34845) districts. The lowest number of Gulf migrants are from Wayanad (248), Idukki (287) and Eranakulam (3822). Therefore percentage increases in the number of motor vehicles in these districts are less than the State average.

The number of motor vehicles per a unit of population is now considered as an important indicator of economic development. The district wise number of motor vehicles per one lakh population at three points ie. during 1978-79, 1983-84 and 1987-88 given in table 8 shows that it is the highest in Eranakulam district followed by Thiruvananthapuram for all the three points of time. Naturally Eranakulam is the most developed among all the districts of Kerala with large number

of industrial units and industrial workers and highest per capita income. The higher number of vehicles in Thiruvananthapuram is not due to the economic development of the district but it is due to its location as the capital of the State.

Most of the department vehicles and the vehicles of Kerala State Road Transport Corporation are registered from Trivandrum district. Thrissur district occupies the third place in motor vehicle density and this can also be attributed to the comparatively better level of economic development of the district.

Despite the highest increase in the number of motor vehicles registered in Malappuram district during the decade under reference, the number of vehicles per one lakh population is the lowest in this district (786) and is only less than half of the State average of 1644. Naturally Malappuram is one of the less developed district in the State and the per capita income of the district is the lowest.

It could be seen from the table 8 that the per capita income at current prices of Idukki is much ahead of the State average, but the number of vehicles per one lakh population is much below the state average. This paradox can be attributed to the predominance of high value yielding cash crops like cardamom, pepper, rubber etc. in the cropping pattern of the district and also to the less degree of urbanisation and low proportion of non-agricultural workers.

4. District-wise number of motor vehicles having valid registration in Kerala - 1978-79

District	Goods vehicles		Buses		Cars	4 wheelers		Auto rick-shaws	Scooter and motor cycles	Others	Total
	4 wheelers & above	3wheelers including tempo	stage carriages	contract carriages omni		Taxi cars	Jeeps				
1	2	3	4	5	6	7	8	9	10	11	12
1. Thiruvananthapuram	1912	170	189	146	10638	2180	1625	465	9938	620	27883
2. Kollam	2133	3	345	33	5419	1802	560	117	3362	204	13978
3. Pathanamthitta *	-	-	-	-	-	-	-	-	-	-	-
4. Alappuzha	900	35	308	34	4085	1400	210	246	3422	202	10842
5. Kottayam	1674	55	431	41	2962	1227	191	375	2012	94	9062
6. Idukki	597	2	106	30	964	554	563	4	605	385	3810
7. Ernakulam	3063	262	723	174	9791	1784	603	1372	9684	815	28271
8. Thrissur	1734	24	909	66	3826	2144	296	502	4916	705	15122
9. Palakkad	792	3	391	39	2713	853	264	391	3272	1437	10155
10. Malappuram	836	1	416	21	2061	1427	123	142	723	403	6153
11. Kozhikode	2651	24	733	22	4521	745	1884	750	3859	712	15901
12. Wayanad *	-	-	-	-	-	-	-	-	-	-	-
13. Kannoor	1609	41	694	96	2894	1079	567	1302	1836	333	10451
14. Kasaragod *	-	-	-	-	-	-	-	-	-	-	-
15. KSRTC	6	-	2875	1	8	-	33	-	4	40	2967
State	17907	620	8120	703	49882	15195	6919	5666	43633	5950	154595

* newly formed districts

5. District-wise number of motor vehicles having valid registration in Kerala - 1983-84

District	Goods vehicles		Buses		4 wheelers			Auto. rick- shaws	Scooters and Others		Total
	4 whee- lers & above	3whee- lers in- cluding tempo	stage. carr- ages	contract carr- ages & omni buses	Cars	Taxi cars	Jeeps		motor cycles		
1	2	3	4	5	6	7	8	9	10	11	12
1. Thiruvananthapuram	2731	731	191	503	14342	2414	2158	2522	19095	995	45682
2. Kollam	4293	106	648	143	8358	3076	879	543	7792	459	26297
3. Pathanamthitta	578	-	125	7	1229	1315	231	312	1445	24	5266
4. Alappuzha	1526	525	424	151	6158	2440	302	827	8110	305	20768
5. Kottayam	2915	323	636	181	3845	2086	973	1276	5199	660	18094
6. Idukki	1592	5	228	50	1206	1144	856	46	1153	276	6556
7. Eranakulam	5027	915	1141	220	12285	2342	983	2980	19929	1456	47278
8. Thrissur	3287	37	1182	229	4793	3802	349	1623	11578	916	27796
9. Palakkad	1745	8	556	121	3527	910	366	896	6563	1935	16627
10. Malappuram	1453	27	660	21	3247	2228	1149	868	2234	442	12329
11. Kozhikode	2759	238	856	140	5147	1573	2024	1551	7924	672	22884
12. Wayanad	538	6	17	10	171	407	633	214	575	327	2898
13. Kannoor	2466	371	1117	135	4195	1860	903	4066	4877	457	20447
14. Kasaragod *	-	-	-	-	-	-	-	-	-	-	-
15. KSRTC	6	-	3954	1	8	-	33	-	4	2	4008
State	30966	3292	11735	1912	68511	25597	11839	17724	96478	8926	276930

*Kasaragod district was formed only in 1983-84

**6. District-wise number of motor vehicles having valid registration
in Kerala - 1987-88**

District	Goods vehicles		Buses		4 wheelers			Auto. rick- shaws	Scooters and motor cycles	Others	Total
	4 whee- lers & above	3whee- lers in- cluding tempo	stage. carr- ages	contract carr- ages & omni buses	Cars	Taxi cars	Jeeps				
1	2	3	4	5	6	7	8	9	10	11	12
1. Thiruvananthapuram	3787	1300	204	1258	18538	2515	2841	5993	36028	1454	73918
2. Kollam	5911	131	712	332	11507	4781	1157	2013	18260	681	45485
3. Pathanamthitta	3932	193	389	80	5601	1837	636	1359	6474	150	20651
4. Alappuzha	1948	915	540	366	6809	3067	373	2074	14058	448	30598
5. Kottayam	3718	592	842	263	5190	2206	1620	3338	10260	841	28870
6. Idukki	1889	120	259	87	2125	1713	1262	241	1802	464	9962
7. Ernakulam	8117	2304	1473	349	16315	3223	1652	4618	34627	2282	74960
8. Thrissur	5422	540	1569	613	7576	5185	586	5739	21682	1548	50460
9. Palakkad	2286	52	773	269	4534	1476	689	2099	11687	2454	26319
10. Malappuram	2882	220	835	86	4085	3016	2389	3213	4140	533	21399
11. Kozhikode	4796	468	1109	345	12701	1750	3464	4140	12645	1180	42598
12. Wayanad	878	120	98	19	336	686	1003	559	1683	536	5918
13. Kannoor	3306	510	1156	253	5064	1897	1525	5381	9048	681	28821
14. Kasaragod	906	144	329	59	1519	503	663	3349	2951	81	10504
15. KSRTC	6	-	3453	1	8	-	33	-	4	2	3507
State	49784	7609	13741	4380	101908	33855	19893	44116	185349	13335	473970

**7. District-wise percentage increase in the number of motor vehicles
from 1978-79 to 1987-88**

District	Goods vehicles		Buses		4 wheelers			Auto. rick- shaws	Scooters and motor cycles	Others	Total
	4 whee- lers & above	3whee- lers in- cluding tempo	stage. carr- ages	contract carr- ages & omni buses	Cars	Taxi cars	Jeeps				
1	2	3	4	5	6	7	8	9	10	11	12
1. Thiruvananthapuram	98.1	664.7	39.7	74.3 761.6	15.4 74.3	74.8 15.4	88.8 74.8	262.5 1188.8	134.5 262.5	165.0 134.5	165.0
2. Kollam											
3. Pathanamthitta	288.8	3160.5	151.3	1061.2	151.7	202.5	181.3	1400.3	471.8	251.0	289.7
4. Alappuzha											
5. Kottayam	122.1	976.4	95.4	541.5	75.2	79.8	748.2	790.1	409.9	794.7	218.6
6. Idukki	216.4	5900.0	144.3	190.0	120.4	209.2	124.2	5925.0	197.8	20.5	161.5
7. Eranakulam	165.0	779.4	103.7	100.6	66.6	80.7	174.0	236.6	257.6	180.0	165.1
8. Thrissur	212.7	2150.0	72.6	828.8	98.0	141.8	98.0	1043.2	341.1	119.6	233.7
9. Palakkad	188.6	1633.3	97.7	589.7	67.1	73.0	161.0	436.8	257.2	70.8	159.2
10. Malappuram	244.7	1900.0	100.7	309.5	98.2	111.4	1842.3	2162.7	472.6	32.2	247.8
11. Kozhikode											
12. Wayanad	132.1	1810.8	88.6	472.9	164.6	165.1	171.5	554.4	362.3	137.1	233.3
13. Kannoor											
14. Kasaragod											18.2
15. KSRTC											
State	178.0	1127.3	69.2	523.0	104.3	122.8	187.5	678.6	324.8	124.1	206.6

**8. District-wise number of vehicles per lakh population for the years
1978-79, 1983-84 & 1987-88**

District	1978-79		1983-84			1987-88		
	Mid year population 1979 (lakhs)	No. of vehicles per lakh population	Projected population on 31-3-84 (lakhs)	No. of vehicles per lakh population	Percapita income current prices(Rs)	Projected population on 31-3-1988	No. of vehicles per lakh population	Percapita income at current prices(Rs) in 1986-87
1	2	3	4	5	6	7	8	9
1. Thiruvananthapuram	19.54	1427	27.39	1668	1999	29.41	2513	2519
2. Kollam					1936			2467
3. Pathanamthitta*	44.94	552	54.50	960	1841	58.54	1652	2665
4. Alappuzha					1877			2385
5. Kottayam	15.11	600	17.91	1010	2128	19.23	1501	2601
6. Idukki	9.00	423	10.22	642	2836	10.98	907	3038
7. Ernakulam	17.64	1603	26.74	1768	2688	28.72	2610	3447
8. Thrissur	21.42	706	25.74	1080	1975	27.64	1826	2401
9. Palakkad	18.02	564	21.57	771	1741	23.17	1136	2269
10. Malappuram	21.28	289	25.35	486	1266	27.22	786	1688
11. Kozhikode					2265			2418
12. Wayanad	42.02	627	59.11	782	1962	63.48	1384	3134
13. Kannoor					1937			2469
14. Kasaragod					-			2507
State	208.96	740	268.53	1031	2010	288.39	1644	2519

*Pathanamthitta district was formed in 1983 by merging portions of erstwhile Kollam & Alappuzha districts.

Trends in the revenue collection on motor vehicles

Motor vehicles are used mostly on public roads constructed and maintained by Central and State governments and local bodies. Construction of roads and bridges involves considerable capital expenditure. For their proper maintenance considerable recurring expenditure has also to be incurred.

In the earlier stages of development of road system in the country 'tolls' were levied on vehicles crossing toll gates located at strategic points. The levy of tolls was not however rational, since the owner of vehicles not crossing toll gates were not required to pay the tolls. The revenue earned from toll was nominal and non-commensurate with the increasing expenditure for the construction and maintenance of roads and bridges. It was therefore deemed necessary to levy a tax on all motor vehicles.

The quantum of vehicle tax is fixed considering the earning potential of the vehicles, being higher in respect of commercial vehicles, such as stage carriages and goods vehicles, and lower in respect of non-commercial vehicles such as motor cars and motor cycles.

A well maintained net-work of roads reduces the cost of operation of motor vehicles, apart from making journey more comfortable. With the development of trade and commerce and increase in the volume of commercial traffic the

earning potential of commercial vehicles has been steadily increasing. Considering these facts, the tax levied on motor vehicles is enhanced from time to time.

Taxes on motor vehicles and fees for the issue of licences to drivers and conductors, permits to taxies and other vehicles are important sources of revenue to the State Government. Motor vehicle taxes and fees are collected in Kerala as per the Kerala Motor Vehicles Taxation Act 1976.

The trends in the collection of fees and taxes from motor vehicles during the decade 1979-88 and their indices of growth are presented in table 9. The table shows that the index of total revenue collection from motor vehicles increased from 100 to 279 during the decade under reference whereas the index of motor vehicles increased to 307. This can be attributed to the fact that the percentage increases in the number of two and three wheelers (for which tax rates are comparatively less) are much higher than 4 wheelers for which the increase in the number of vehicles is less.

District-wise collection of taxes and fees by the Motor Vehicles Department during the year 1988-89 given in table 10 shows that Ernakulam and Thrissur districts together account for 25 per cent of the total collection.

9. Revenue collection of motor vehicles department

Year	Revenue collected			Index of growth			% distribution	
	Tax	Fees	Total	Tax	Fees	Total	Tax	Fees
1	2	3	4	5	6	7	8	9
1978-79	1796.15	179.02	1975.17	100	100	100	90.9	9.1
1979-80	1755.21	170.26	1925.47	98	95	97	91.2	8.8
1980-81	1849.64	156.06	2005.70	103	87	102	92.3	7.7
1981-82	1975.10	151.66	2126.76	110	85	108	92.9	7.1
1982-83	2404.67	196.38	2601.05	134	110	132	92.5	7.5
1983-84	2890.02	250.44	3140.46	161	140	159	92.1	7.9
1984-85	3384.70	677.27	4061.97	188	378	206	83.4	16.6
1985-86	4306.02	371.37	4677.39	240	207	237	92.1	7.9
1986-87	4675.64	660.72	5336.36	260	369	270	87.7	12.3
1987-88	4536.05	983.23	5519.28	253	549	279	82.2	17.8

10. District-wise Revenue collection during the year 1988-89 (Rs. in lakhs)

District	Revenue collection			% distribution of collection		
	Tax	Fees	Total	Tax	Fee	Total
1	2	3	4	5	6	7
1. Thiruvananthapuram	444.93	66.44	511.37	8.2	7.6	8.1
2. Kollam	342.96	38.82	381.78	6.3	4.5	6.1
3. Pathanamthitta	226.74	24.52	251.26	4.2	2.7	4.0
4. Alappuzha	233.71	26.79	260.50	4.3	3.1	4.1
5. Kottayam	455.85	52.14	507.99	8.4	6.7	8.1
6. Idukki	154.31	21.10	175.41	2.7	2.4	2.8
7. Ernakulam	852.91	88.61	941.52	15.6	10.3	15.0
8. Thrissoor	568.48	72.64	641.12	10.4	8.3	10.2
9. Palakkad	364.83	37.09	401.92	6.6	4.3	6.4
10. Malappuram	367.33	54.35	421.68	6.7	6.2	6.7
11. Kozhikode	525.39	51.61	577.00	9.6	5.9	9.2
12. Wayanad	65.62	12.95	78.57	1.2	1.4	1.3
13. Kannoor	432.99	43.91	476.90	7.9	5.1	7.6
14. Kasaragod	156.14	21.12	177.26	2.8	2.3	2.8
15. State Transport authority	-	253.47	253.47	-	29.2	4.0
16. K.S.R.T.C.	227.66	-	227.66	5.1	-	3.6
Total	5419.85	865.56	6285.41	100.0	100.0	100.0

294

