BUREAU OF ECONOMICS & STATISTICS

KERALA STATE

Population Studies 109

POPULATION OF KOTTAYAM DISTRICT

POPULATION DIVISION
DEMOGRAPHIC RESEARCH CENTRE

APRIL, 1971

C O N T E N T S

PREFACE

This report gives a detailed account of the different characteristics of the population of the Kottayam District utilising mainly the data from the 1961 population census and the different publications issued by this Bureau. The report was prepared by Shri G.Somasekharan Nair, Senior Research Assistant, Kottayam District.

The report was reviewed and edited by the Population Division of the Bureau in which work Shri N.V.George, Research Officer, Shri P.S. Gopinathan Nair, Assistant Director and Shri S.B. Iyer, Deputy Director were associated.

Bureau of Economics
and Statistics,
Trivandrum, 12-4-71

N.GOPALAKRISHNAN NAIR
Additional Director

1. Introduction:

1.1 The object of this report is to discuss the various characteristics of the population in Kottayam District and the problems and implications based upon the same.

1.2 The present Kottayam District was formed as a result of many territorial re-adjustments in the past few years. Till the integration of the princely States of Travancore and Cochin, Kottayam was the northern most District of Travancore. In 1951, the then existing area of the District was divided into eight taluks. On 1st October 1956, two new taluks, Udumbanchola and Kanjirappally were formed. After one month a portion of the District was taken away to form the new Kuttanad taluk which was under the jurisdiction of the District till the formation of Alleppey District on 17th August 1957. With the formation of the new Ernakulam District on 1st April, 1958, Thodupuzha and Muvattupuzha taluks of the former Kottayam District became part of Ernakulam District. The boundaries of the District as at present were thus fixed on 1st April 1958.

1.3 This District, lying between north latitudes 9° 15' and 10° 21' and east longitudes 76° 22' and 77° 25' is bounded by Ernakulam, Trichur Districts of Kerala and Districts of Tamil Nadu on the north, the western ghats on the east, Quilon and Alleppey Districts on the south and by Alleppey District on the west.

1.4 With an area of 6360 Sq.Km. (2455.54 Sq.miles) and a population of 17,32,880 persons (1961 census), the Kottayam District occupies the first rank in respect of area and the sixth rank in respect of population among the ten Districts in Kerala. The District is divided into eight taluks viz. Devicolam, Udumbanchola, Meenachil, Vaikom, Kottayam, Changanacherry, Kanjirappally and Peermade each under the charge of a Tahsildar, for administrative purpose.

1.5 Among the eight taluks in the District, Devicolam has the largest area (1774.15 Km) followed by Peermade (1307.82 Km) while Changanacherry, with an area of 261.98 Km has the smallest area. Topographically the District can be divided into three natural regions viz. highland, midland and lowland. The highland region covers an area of 4[illegible] Sq. Km.(72%), the midland region occupies an area of 1298 Sq.Km. (21%) and the remaining area of 399 Sq.Km.(6%) is occupied by the lowland region.

1.6 The Head of the District administration is the District Collector, who is assisted for revenue administration by two Revenue Divisional Officers, one at Kottayam and the other at Devicolam. All the major Departments have their District Offices in the District. There are 13 Development Blocks in this District. The smallest unit for revenue administration is the revenue village and that for local bodies administration is the Panchayat. At present there are 101 revenue villages in this District and the entire area is divided into 98 Panchayats and four Municipalities.

1.7 The mountainous amphitheatre of the western ghats which bounds the District on its eastern side, dominates the topography of the District and shapes its climate. Rice, Coconut, Tapioca and vegetables are predominantly grown in the western region of the District while plantation crops like Tea, Rubber and Cardamom are grown in plenty in the eastern hilly regions. In fact Kottayam District is famous for its Tea plantation and a major part of the economy of this District is based on the cultivation of cash crops. This District is also famous for Anamudi, the highest peak of the mountains south of the Himalayas, the Game Sanctuary near the Periyar lake which is believed to be among the best of its kind, hydro-electric schemes at Pallivasal, Sengulam etc. and a quite large number of ancient religious and educational institutions.

II. Size and growth of the population

2.1 According to the 1961 census, the total population of the District is 17,32,880. The following table gives the area and population in the various Districts of Kerala.

Table II(a): Area and population in Kerala - District-wise - 1961 Census

District	Area in Sq.miles	Area in Sq.Km.	Rank	Population In Lakhs	Rank
1	2	3	4	5	6
Trivandrum	843.98	2185.00	9	17.45	5
Quilon	1827.22	4732.50	3	19.41	1
Alleppey	708.03	1834.00	10	18.11	3
Kottayam	2455.54	6360.00	1	17.33	6
Ernakulam	1289.46	3339.50	7	18.60	2
Trichur	1159.93	2994.00	8	16.89	7
Palghat	1581.06	4113.00	4	13.41	10
Malappuram	1512.64	3911.00	5	14.16	9
Kozhikode	1432.82	3711.00	6	15.88	8
Cannanore	2191.25	5675.00	2	17.80	4
Kerala	15002.03	38855.00	169.04	169.04	-

Among the taluks, Changanacherry has the highest density (2218/Sq.mile) followed by Kottayam (2025/Sq.mile) and the lowest density is for Devicolam taluk (130/Sq.mile). It is also to be mentioned that the density has shown an increasing trend in all the taluks in this District.

2.2 The growth of population is ordinarily measured by its size, yearly percentage variation and the geometric rate of growth. All these details for the District as well as for the

State are given below:

Table II( ) Variation of population since 1901

Year	Kerala State				Kottayam District			
	Population	Decade variation	%age decade variation	Geometrical rate of growth	Population	Decade variation	%age decade variation	Geometrical rate of growth
1	2	3	4	5	6	7	8	9
1901	6396262	..	..	..	475427	..	..	..
1911	7147673	751411	11.75	1.1	559989	84562	17.79	1.6
1921	7802127	654454	9.16	0.9	649768	89779	16.03	1.4
1931	9507050	1704923	21.85	2.0	889664	239896	36.92	3.1
1941	11031541	1524491	16.04	1.5	1083329	193665	21.77	1.9
1951	13549118	2517577	22.82	2.1	1327668	244339	22.55	2.0
1961	16903715	3354597	24.76	2.2	1732880	405212	30.52	2.6

(Source: 1961 Census)

2.3 The rate of growth of population for the District was always on the higher side when compared to that of the State, except for the period 1941-51 when it was slightly lesser than that of the State. This phenomenon can mainly be attributed to the large scale out-migration, from the District to the Malabar region of the State in search of better living by acquiring more land at lesser cost. This view is further supported by the fact that there are a quite number of Christian and other families in Kozhikode and Malappuram Districts who left their native District of Kottayam during the period from 1941-51. Another typical feature ~~fex~~ of the rate of growth is the considerably high rate for the decade 1921-31 for the District as well as for the State. During this period, the geometric rate of growth for the District has exceeded 3 percent per year where-as for the State as a whole it was only less than two percent. The reasons that could be atributed to this may be more than one. But the same trend has been noticed in the history of Indian population growth, where the year 1921 is considered as the "great divide". The failure to grow from 1911 to 1921 was the result of the great influenza pandemic of 1918-19, which was severe in India. Being a part of the nation, Kerala and Kottayam District was not an exception to this general rule. This, coupled with the slight over estimation in the 1931 census count for India as a whole, will account to a great extent for the comparatively high rate of growth of population during the decade 1921-31.

2.4 When the taluk-wise growth rate of population [illegible] sidered, the three taluks in the highland region, viz. Udumbanchola, Peermade and Devicolam have shown abnormal increase since 1921, possibly due to the fact that these hilly taluks have been considerably utilised by the hard working agriculturists during the last fifty years especially during the third decade of the present century. Inter-district and to some extent inter-state migration mainly from the neighbouring Districts of Tamilnadu might have played an important role in the past. The comparatively large improvement in plantation cultivation like Tea and Rubber also might have attracted persons from the bordering Districts.

III. Distribution of population

3.1 An idea of the distribution of population among the different regions, categories etc. are of great importance for a scientific study of the population problem of a region. An indication of the distribution of population is the population density. Besides, the proportion of the population between the urban and rural areas of the region is considered as an index of industrial development which further leads to assess the standard of living of the inhabitants.

3.2 The distribution of population in the natural regions and the taluks of the District give a picture of the uneven distribution of the population in the District. The overall density of the District is 272 persons per Sq.Km. (706 per Sq. mile) as against 435 per Sq.Km.(1127 per Sq.mile)for the State. The District has got the lowest density among the Districts of the State. The following table gives the density of population of the various Districts and rank of the District according to density.

TABLE III(a)

Name of District	Density per Sq.mile	Density Per Sq.Km.	Rank
Trivandrum	2067	798	2
Quilon	1062	410	6
Alleppey	2558	988	1
Kottayam	706	272	10
Ernakulam	1442	557	4
Trichur	1455	573	3
Palghat	844	326	8
Malappuram	938	362	7
Kozhikode	1108	428	5
Cannanore	812	314	9
Kerala	1127	435	

(Source: 1961 Census)

3.3 The density of population has shown substantial increase since the beginning of the present century. In 1901, the density was only 75 persons per Sq.Km. (194 per persons per Sq.mile), but by 1961, the density rose to the high figure of 272 per Sq.Km, (706 persons per Sq.mile) recording an increase of more than 3½ times during a period of sixty years. The corresponding figure of the State, as a whole is only 163 per Sq.Km. in 1901, 435 per Sq.Km. in 1961. The table below gives the density of population for the District and the State for all the censuses since 1901.

TABLE III(b) Variation in Density since 1901

Year	Density(persons/Sq.Km.) Kottayam District	Kerala State	Year	Density(persons/Sq.Km) Kottayam District	Kerala State
1	2	3	1	2	3
1901	75	163	1961	272	435
1911	88	181	1966(*)	315	493
1921	102	201	1967(*)	325	506
1931	140	245	1968(*)	335	519
1941	170	284	1971(*)	354	533
1951	209	349			

(*) Estimated

TABLE III(c) Population by natural regions - Taluk-wise

Taluk	Highland Actual	Highland Percentage	Midland Actual	Midland Percentage	Lowland Actual	Lowland Percentage
1	2	3	4	5	6	7
Changanacherry	..	..	196451	21.66	27980	11.03
Devicolam	123155	21.52	..	..	..	..
Kanjirappally	72112	12.60	76674	8.45	..	..
Kottayam	..	..	318438	35.12	103601	40.84
Meenachil	87878	15.35	221952	24.48	..	..
Peermade	133635	23.35	..	..	..	..
Udumbanchola	155584	27.18	..	..	..	..
Vaikom	..	..	93304	10.29	122116	48.13
DIST.TOTAL	572364	100.00	906819	100.00	253697	100.00

(Source - 1961 Census)

3.4 It can also be seen from the table given below that 33.00 percent of the population live in the highland region which covers an area of 73% of the total, 52.3% live in the midland region which extends to an area of about 21% of the total and the remaining 14.7% live in the lowland regions which covers an area of 6% of the total.

TABLE III(d) Area and population - Region-wise

Region	Area (Sq.Km.)		Population		Density per Sq.Km.
	Actual	Percentage	Actual	Percentage	
1	2	3	4	5	6
Highland	4663	73.00	572364	33.00	123
Midland	1298	21.00	906819	52.30	699
Lowland	399	6.00	253697	14.70	661
TOTAL	6360	100.00	1732880	100.00	272

The density of population is highest in the midland region and lowest in the highland region as naturally expected.

3.5 The taluk-wise details of the population in the District, according to each sex is given below:

TABLE III(e) Area, population and density - Taluk-wise

Taluk	Area in		Density		Total	Population(1961)	
	Sq.mile	Sq.Km.	Sq. mile	Sq. Km.		Male	Female
1	2	3	4	5	6	7	8
Changanacherry	101.15	261.98	2219	857	224431	112467	111964
Devicolam	685.00	1774.15	180	69	123155	64859	58296
Kanjirappally	135.65	351.33	1017	423	148786	76631	72155
Kottayam	208.40	539.76	2025	782	422039	212077	209962
Meenachil	279.04	722.71	1110	429	309830	155772	154058
Peermade	504.95	1307.82	265	102	133635	69337	64298
Udumbanchola	413.67	1071.41	376	145	155584	84090	71494
Vaikom	127.68	330.69	1687	651	215420	107347	108073
Dist: Total	2455.54	6359.85	706	272	1732880	882580	850300

(Source: 1961 Census)

The density of population is highest in Changanacherry followed by Kottayam and lowest in Devicolam taluk. In five out of the eight taluks the density is higher than that of the District. The three taluks where the density is lower than that of the District, lie entirely in the highland region.

3.6 The taluk-wise density (persons/Sq.mile) for the past five census reported in the following table gives some interesting conclusions.

TABLE III(f): Variation in density(1921-1961)- Taluk-wise

Taluk	Population density(persons/Sq.mile)during				
	1921	1931	1941	1951	1961
1	2	3	4	5	6
Changanacherry	885	1252	1600	2043	2218
Devicolam	48	83	92	121	180
Kanjirappally	373	526	670	855	1097
Kottayam	854	1141	1387	1697	2025
Meenachil	574	722	876	1000	1111
Peermade	43	82	115	171	265
Udumbanchola	15	28	34	48	376
Vaikom	868	1115	1264	1432	1687
DISTRICT TOTAL	265	362	441	541	706

(Source: 1961 census)

While the increase in density was between two and three times for the district and four taluks, in the three taluks in the highland region, it has further increased, the maximum increase being in Udumbanchola. This has been due to the tendency of the hard working agriculturists to occupy the un-inhabited areas in the highland regions and to bring the area under cultivation. Besides this, the large scale plantations in the high land area have attracted considerable number of migrants to these areas.

Urban - Rural distribution:

3.7 According to the 1961 census, there are four municipal towns (Kottayam, Changanacherry, Palai and Vaikom) and three non-municipal towns (Ettumanoor, Kanjirappally and Mundakayam) in this District. The distribution of the population among the rural and urban areas in each taluk is given below:

contd.....

TABLE III(g): Distribution of rural-urban populations - 1961 (Taluk-wise)

Taluk	Rural			Urban		
	No. of villages	Population	%age to total	No. of towns	Population	%age to total
1	2	3	4	5	6	7
Changanacherry	12	182055	81.11	1	42376	18.89
Devicolam	9	123155	100.00	..	..	..
Kanjirappally	6	124142	83.43	2	24644	16.57
Kottayam	20	356465	84.46	2	65574	15.54
Meenachil	22	294373	95.00	1	15457	5.00
Peermade	6	133635	100.00	...	..	..
Udumbanchola	12	155584	100.00	..	..	..
Vaikom	14	198002	91.90	1	17418	8.10
DISTRICT TOTAL	101	1567411	90.45	7	165469	9.55

(Source: 1961 census)

3.8 The proportion of urban population is more than fifteen percent in the case of Kottayam, Changanacherry and Kanjirappally taluks while that of the District as a whole is near about ten percent.

The increasing trend of urbanisation for the District as a whole, over the period from 1901 to 1961 as is revealed from the following:

TABLE III(h): Percentage of rural-urban population 1901-61

Year	Percentage population	
	Urban	Rural
1901	6.69	93.31
1911	5.78	94.22
1921	8.75	91.25
1931	8.80	91.20
1941	8.69	91.31
1951	11.97	88.03
1961	9.55	90.45

(Source: 1961 census)

The sudden drop in the proportion of urban population from the year 1951 to 1961 is due to the fact that the six towns (viz. Azhutha, Erattupetta, Munnar, Ponkunnam, Talayolaparambu and Vandiperiyar) of the 1951 census were declassified as villages in the 1961 census. During 1911 census the population of Kottayam Municipal town (one among the two towns in the District, the other being Changanacherry)

has shown a downward trend, possibly due to the delimitation of area, which accounts for the slight decrease in the urban population during the year.

3.9 The area, population and other details of the four municipal towns in the District according to 1961 census are given below:

TABLE III(i): Area and population of municipal towns

Name	Area in		Population(1961)			Density per	
	Sq. mile	Sq. Km.	Total	Male	Female	Sq. mile	Sq. Km.
1	2	3	4	5	6	7	3
Kottayam	6.00	15.54	52685	26850	25835	8782	3390
Changanacherry	5.12	13.26	42376	21389	20987	8277	3196
Vaikom	3.37	8.73	17418	8685	8733	5169	1995
Palai	5.62	14.56	15457	7937	7520	2751	1062

(Source: 1961 Census)

Among the Municipal towns, Kottayam, the headquarters town happens to be the most densely populated one, followed by Changanacherry, an important market centre in this District.

3.10 The distribution of villages according to the population size is presented in Table III(j) below.

TABLE III(j) Distribution of villages according to population size.

Taluk	No. of inhabited villages	No. of villages with population						
		< 200	200-499	500-999	1000-1999	2000-4999	5000-9999	10000+
1	2	3	4	5	6	7	8	9
Devicolam	9	..	..	1	3	1	..	4
Udumbanchola	12	..	..	..	1	..	4	7
Meenachil	22	..	..	..	..	..	3	19
Vaikom	14	..	..	..	..	..	2	12
Kottayam	20	..	..	..	1	..	1	18
Changanacherry	12	..	..	..	..	1	1	10
Kanjirappally	6	..	..	..	..	..	1	5
Peermade	6	..	..	..	1	..	..	5
DIST. TOTAL	101	..	..	1	6	2	12	80

(Source: 1961 census)

Among the 101 Revenue Villages in this District 80 have a population of more than 10,000, 12 fall in the category of

population size between 5000 and 9999, 2 villages have population between 2000 and 4999, six between 1000 and 1999 and one village comes under the category with population size between 500 and 999. The 101 Revenue villages are further divided into 509 census villages (Karas).

3.11 It may be noted that though the area of the District covers 16.2% of that of the State, it accounts only for 13.2 percent of the total cropped area of the State. 47.08% of the total area of the District is uncultivable (being under forest, barren and non-agricultural uses) and the available cultivable land is only 52.92% of the total. The density with reference to the availability of cultivable and therefore, works out to 1331 persons per Sq.mile (514 persons per Sq.Km.)

IV. Composition of population

4.1 The age and sex composition of a population is of utmost importance not only for population analysis, but also for planning and administrative purposes. Among the two, age composition is considered to be more important as it is the basis for planning for educational facilities, employment opportunities and old age benefits. In the same way sex composition is important for taking account of the maternal and child welfare activities and the like. In the present situation when the country as a whole is facing unprecedented growth rate of population, retarding the efforts for economic development, data relating to population composition and their implications are all the more important. In fact, the foundation of the family planning programme is based on these information. As such it may not be out of place to have a short discussion on the age and sex composition of the population of the District in comparison with that of the State.

4.2 The population according to age can be broadly grouped into five distinct categories as follows:

		Age group
1. Infants and young children	..	0 - 4
2. Boys and girls	..	5 - 14
3. Young men and women	..	15 - 34
4. Middle aged men and women	..	35 - 54
5. Elderly persons	..	55 and above.

This classification, eventhough a broad one, gives a clear idea of the level of dependency and other important implications of this important population characteristics. The proportion of population falling under each of the above groups, for the District as well as for the State is given below:

TABLE IV(a): Age distribution of population

Category	Age group	Percentage under each	
		Kottayam	Kerala
1. Infants and young children	0 - 4	15.1	15.8
2. Boys and girls	5 -14	28.1	25.2
3. Young men and women	15 -34	31.6	33.5
4. Middle aged men & women	35 -54	17.2	17.6
5. Elderly persons	55 & above	8.0	7.9
TOTAL	All ages	100.0	100.0

The base heavy nature of the population of the District as well as that of the State is a general phenomenon of the developing countries. The percentage of population under the age 15 is 43.2% for the District while that of the State is 41.0% only. Similarly the proportion of elderly persons is 8.0% for the District against the corresponding figure of 7.9% for the State. Higher proportion under these two age groups increases the dependency burden on the working population. Even among the population in the working age group, a considerable percentage will be unemployed and under-employed which adds further burden on the earners. The proportion of the population in the age group 15 - 54 is 51.1% for the State while that of the District is only 48.8%. Worked out on this basis the total dependency ratio (proportion of the population under age 15 and above age 55, to the population in the age group 15 - 54 expressed as percentage) for the District is 104.9 against a corresponding figure of 95.7 for the State.

Sex composition

4.3 If the sex-wise distribution is compared along with the age-distribution, it will throw light on some important features of the population. The following table gives the details of age and sex distribution separately for the rural and urban areas.

TABLE IV(b): Age and sex distribution of population in Kottayam

Age-group	Rural		Urban		Total	
	Male	Female	Male	Female	Male	Female
1	2	3	4	5	6	7
0 - 4	15.12	15.33	14.07	14.00	15.02	15.21
5 - 9	15.12	15.45	13.93	13.91	15.00	15.30
10 - 14	12.78	13.09	12.76	13.24	12.78	13.11
15 - 19	8.00	8.64	9.53	10.08	8.14	8.78
20 - 24	8.55	9.10	9.10	9.31	8.60	9.12
25 - 29	7.83	8.17	7.94	8.18	7.84	8.17
30 - 34	6.43	6.15	6.76	6.00	6.46	6.13
35 - 39	6.33	5.82	6.26	5.63	6.37	5.81
40 - 44	4.21	3.72	4.15	3.94	4.21	3.74
45 - 49	4.36	3.93	4.22	3.98	4.35	3.93
50 - 54	3.15	2.76	3.09	3.12	3.15	2.80
55 - 59	2.70	2.49	2.68	2.74	2.70	2.51
60 - 64	1.93	1.83	2.00	2.08	1.94	1.85
65 +	3.44	3.52	3.51	3.79	3.44	3.54
ALL AGES	100.00	100.00	100.00	100.00	100.00	100.00

(Source: 1961 census reports)

4.4 The proportion of female population appears to be higher than that of the males upto the age thirty, while for ages above thirty the reverse phenomenon occurs. Similarly the proportion of females in the reproductive age group (ages 15-44) is only 42% for the District against the corresponding figure of 44% for the State as a whole. No specific reasons could be attributed to this without going into further detailed enquiries in the matter. But in general, the lesser proportion of females in the reproductive and working age groups can be due to the effect of so many factors, like higher maternal death rate, higher proportion of females going out in search of employment, higher number of males in the working age groups etc.

4.5 In this District, women in the reproductive age group account for 41.6% and 43.1% of the respective female population in rural and urban areas. The corresponding figures for the State are 39.9% and 43.8% respectively. Male labour force population (15 - 59) shares 51.6% and 53.9% of the total male population in rural and urban areas respectively, against the corresponding figures of 51.1% and 53.9% for the State. The population of younger age group 0 - 14 is relatively higher in rural than in urban as in the case of the State.

4.6 A comparatively simpler index to study the sex distribution is the sex ratio, which is defined as the number of females per 1000 males. Kerala State has the rare distinction (along with Orissa) of having more females than males among the different States in India. But when the district-wise distribution of population is considered, there are three Districts (Kottayam, Quilon and Ernakulam) having more males than females contrary to the general trend of the population in the State. According to the 1961 census, the sex ratio for the District is only 963 against the corresponding figure of 1022 for the State. It may also be noted that the sex ratio for the District is the lowest among the different Districts in the State.

4.7 The variation in sex ratio since 1901 can be seen from the following table. The corresponding figures for Kerala and India are also given.

Table IV(c) Variation in sex ratio since 1901

Year	Sex ratio (females per 1000 males)		
	Kottayam	Kerala	India
1	2	3	4
1901	951	1004	972
1911	948	1008	964
1921	933	1011	955
1931	941	1022	950
1941	946	1027	945
1951	970	1028	946
1961	963	1022	941

The sex ratio during the period shows fluctuations. While there is an increasing trend in sex ratio for the State between 1901 to 1951 for the State, the figures for the District shows the same trend only for the period between 1931 to 1951. During 1901 to 1921 there is actually a decreasing trend. For India, a decreasing trend is noticed throughout the period

except during the decade 1941 to 1951. Only the decade 1951 - 1961 has shown a decreasing trend in sex ratio for Kottayam District, Kerala State and Indian Union.

4.8 The taluk-wise sex ratio shows an increase during 1961 when compared to 1951 in all taluks except Kottayam and Vaikom, where the sex ratio was on the decrease during the period. The relevant figures are given below:

Table IV(d) Taluk-wise sex ratio 1951 and 1961

Taluk	Sex ratio during	
	1951	1961
1	2	3
Changanacherry	959	995
Devicolam	868	899
Kanjirappally	916	942
Kottayam	1016	990
Meenachil	988	989
Peermade	892	927
Udumbanchola	803	850
Vaikom	1008	1007
District - Total	970	963

(Source: Census Reports)

It is interesting to note that in spite of the increase in the sex ratio in the six taluks the sex ratio of the District has been pulled down to a lower level, because of the decrease in the sex ratio of two Taluks.

IV(b) Religious composition

The important religions in this District, as in the case of the State, are Hinduism, Christianity and Islam in order. For the State, the proportion of Hindus is 60.81% of Christians is 21.23% and that of Muslims is 17.92%. The remaining 0.04% is accounted by other religions. But in Kottayam District, like Ernakulam and Malappuram, the proportion of Hindus is less than one half of the total population. Hindus form only 48.95%, Christians 47.20% and Muslims cover 3.83% of the total. The relevant figures for the District and the State are given below:

Table IV(e) Population according to Religion - 1961

Religion	Kottayam		Kerala	
	No.	Percentage to total	No.	Percentage to total
1	2	3	4	5
Hinduism	8,48,234	48.95	1,02,82,568	60.81
Christianity	8,17,939	47.20	35,87,365	21.23
Islam	66,310	3.83	30,27,639	17.92
Others	397	0.02	6,143	0.04
All Religions	17,32,880	100.00	1,69,03,715	100.00

(Source: 1961 Census)

V. Literacy and Education

5.1 This District occupies the top most place in the case of female literacy and the second place in the case of general literacy among the Districts in Kerala. The percentage of literates to the total population is 56.57% for the District against the corresponding figure of 46.85% for the State. The figures giving the literacy rates for 1951 and 1961 for each taluk in the District is given below.

Table V(a) Growth of literacy by sex - 1951-61

Taluk	Percentage of literacy					
	Male		Female		Total	
	1951	1961	1951	1961	1951	1961
1	2	3	4	5	6	7
Changanacherry	62.44	68.55	53.08	60.46	57.86	64.52
Devicolam	30.46	43.07	11.46	20.72	21.63	32.49
Kanjirappally	54.02	63.92	44.09	54.47	49.23	59.34
Kottayam	67.57	68.92	53.22	59.37	60.34	64.17
Meenachil	64.05	64.57	53.61	55.84	59.36	60.23
Peermade	39.52	50.91	18.58	30.70	29.65	41.19
Udumbanchola	31.96	54.10	9.75	38.24	22.07	46.31
Vaikom	63.42	64.50	43.83	48.69	53.59	56.57
District Total	59.32	62.41	45.97	50.51	52.73	56.57

(Source: Census of India 1961)

Among the taluks in the District, Changanacherry stands first as regard to literacy rate (64.52%) followed by Kottayam (64.17%) while Devicolam taluk comes last (32.49%). The literacy rates given above are with respect to the total population which includes children under age five. A modified index known as "the effective rate of literacy" defined as the proportion of the total literates to the population excluding the 0 - 4 age group expressed as a percentage, is also used to measure the level of literacy. The effective literacy rate for the District works out to 66.64%, the sex distribution being 73.44% for males and 59.56% for females.

5.2 The District enjoys an enviable position in regard to educational facilities. The C.M.S. College, Kottayam, started in 1816 and the S.B.College, Changanacherry started in 1922 are among the oldest and famous institutions in the District. At present the District is having 17 Colleges (including Junior Colleges), 5 professional and training Colleges, 1 (one) Medical College, one Homeo Medical College, one Oriental title Institution and 183 High Schools.

VI. Occupational Structure

6.1 In the earlier censuses, the criterion for measuring the number of workers was income. However during the 1961 census, a slight modification was made so as to include as workers those who worked in family economic activities but did not actually earn an income. Thus in the last census, the population was divided mainly into workers and non-workers. The working population was further divided into nine industrial categories. The distribution of population, among the different categories, of the District and the State is given below:

Table VI(a) Workers and non-workers (1951)

Category	Kottayam District		Kerala	
	No.	Percentage to total	No.	Percentage to total
1	2	3	4	5
1. Cultivators	113397	6.54	1178103	6.97
2. Agricultural Labourers	85170	4.91	978396	5.79
3. Mining, Quarrying, livestock, fishing, plantation etc.	142648	8.23	487359	2.88
4. Household industry	25907	1.50	488562	2.89
5. Manufacturing other than household industry	33945	1.96	529472	3.14
6. Construction	8870	0.51	70702	0.42
7. Trade and Commerce	28785	1.66	321933	1.90
8. Transport, storage and communication	11006	0.64	152513	0.90
9. Other services	115387	6.66	1423293	8.42
Total workers	565115	32.61	5630333	33.31
10. Non-workers	1167765	67.39	11273382	66.69
Total population	1732880	100.00	16903715	100.00

(Source: Statistical Abstract of Kerala)

6.2 Workers constitute only 32.61% of the total population of the District as against the corresponding figure of 33.31% for the State. A noteable feature of the occupational distribution of the population is the comparatively large proportion of persons under category three, which includes plantation and other allied activities and the relatively small proportions under categories four and five (household industry and manufacturing) when compared with the corresponding figures for the State and other Districts. Considering the importance of plantation and allied activities in this District, the higher proportion under category three can be accounted for to a great extent. The lower proportion of population falling under household industry and manufacture reflects the absence of large, medium and small scale industrial establishments in this District.

VII. Feritility

7.1 In a population which is not affected by migration both internal and external, the changes in the population is governed mainly by the level of fertility and mortality, which in turn is, of course, controlled by so many other factors, social, economical and cultural. The simplest among the indices to measure the level of fertility of a population is the crude birth rate which is the number of births per thousand population in an year. The main source of getting reliable figures of birth rate is the registration data. Despite the fact that the registration system in the Travancore area to which the District belongs was organised so early as 1895, the birth and death rates obtained from the registration data are

far from complete. Several studies conducted by the Bureau of Economics and Statistics have revealed that the extent of under registration of births in the State is of the order of 40 to 45 percent. As a result of the large extent of under registration in regard to births and deaths, the registered birth and death rates cannot be relied upon in studying the trend of fertility and mortality over time. However, the Government of India has launched a series of short term and long term schemes for improvement of Vital Statistics in the State.

7.2 The annual birth rates obtained from the registration data both for the District and the State since the formation of Kerala State are given below:

Table VII(a) Registered birth rates

Year	Kerala State			Kottayam District		
	Rural	Urban	Total	Rural	Urban	Total
1957	22.73	34.29	23.84	29.14	30.56	29.23
1958	23.56	39.47	24.60	26.72	31.48	27.02
1959	24.50	42.50	26.23	28.97	39.98	29.88
1960	22.13	40.09	23.92	27.55	33.90	28.07
1961	23.05	43.43	25.00	25.81	39.59	26.83
1962	20.40	44.73	22.73	23.30	34.19	24.11
1963	20.00	44.87	22.38	23.90	40.81	25.14
1964	21.38	46.56	23.32	24.58	40.08	25.73
1965	18.65	55.90	22.32	23.00	45.16	24.63
1966	18.25	62.85	22.52	21.19	66.49	24.54
1967	17.60	49.79	20.69	20.19	41.71	21.78

(Source: Vital Statistics Bullettins published by the Bureau of Economics and Statistics, Kerala.

7.3 The rate in urban areas is higher than that of the rural areas obviously because a considerable proportion of the events occuring in the hospitals in the urban areas will include events of the persons residing in the nearby rural areas. Further the rates for the District is always on the higher side than that of the State, possibly due to better registration and due to higher fertility performance of the women in this District. A decreasing trend in the birth rate is noticed both for the State and the District except during a few years where it was fluctuating. Assuming that the extent of under registration remains more or less constant overtime, there are reasons to believe that there is a decline in fertility at least since 1964, mainly due to the various efforts of the family planning activities launched by the Government.

7.4 The birth rate for the State, as obtained from the census data, during the period 1951-60 was 38.9 against the corresponding figure of 41.7 for India during the period. With a view to obtain reliable estimates of vital rates in the State, the Sample Registration scheme was started in 1965 in the rural areas of the State. The estimated birth rates based on the results of Sample Registration are as follows:

Period	Birth rate for Kerala
1965-66	37.9
1966-67	37.2
1967-68	35.4

7.5 The composition of the female population according to marital status is of much importance in assessing the fertility pattern of the population. According to the 1961 census, 37.6% of the females in this District is married, the corresponding figure for the State being 36.5%. The distribution of females aged 15 years and over according to marital status is as follows:

Table VII(b) Percentage distribution of Females 15 - 44 and 15 and over according to marital status

Marital Status	% of females 15 - 44		Percentage of females 15 and above	
	Kottayam District	Kerala State	Kottayam District	Kerala State
1	2	3	4	5
Never married	24.7	22.0	18.7	16.4
Married	69.8	68.7	66.6	62.2
Widowed	2.9	4.7	12.3	17.2
Divorced or Separated	2.6	4.5	2.4	4.1
Un-specified	..	0.1	..	..
Total	100.0	100.0	100.0	100.0

Though the higher percentage of married females and the lower percentages of widowed, divorced and separated females of the district of females 15 - 44 as well as 15 + are conducive to higher fertility, the higher percentage of never-married females, is likely to have a lowering effect on fertility.

7.6 The proportion of married females in the reproductive age group is also indicative of a higher level of fertility for the District. The relevant figures are given in the following table.

Table VII(c) Proportion of married females (1961)

Age group	Percentage of married females to the			
	Female population		Total population	
	Kottayam District	Kerala State	Kottayam District	Kerala State
1	2	3	4	5
15 - 19	19.5	28.5	9.9	14.8
20 - 24	73.2	72.2	36.9	38.0
25 - 29	87.6	84.1	43.9	44.8
30 - 34	88.7	84.1	42.4	43.2
35 - 39	87.2	81.4	40.8	40.5
40 - 44	82.6	73.5	38.1	36.4

(Source: Computed from 1961 census data)

The proportion of married females to the total females in each age group seems to be higher for the District than that of the State, in all age groups except 15 - 19, where the reverse situation occurs. Thus considering the age and marital status of women in the reproductive age-groups, it can be inferred that the fertility indices for the District can be on a higher level than those relating to the State. The lower proportion of married women in the age group 15 - 19 can be due to a higher age at marriage for girls in this District.

This conjucture appears to be reasonable, when we remember that the female literacy rate for the District is the highest among the Districts in the State and that nearly one-half of the population is accounted by the Christian Community where the age at marriage of girls is found to be slightly higher. The comparatively lesser variation in regard to the proportion of married females, to the total population in each age group for the District when compared to that of the State, is due to the lowest sex ratio prevailing in the District.

7.7 Though the Sample Registration scheme was started in 1965 in ten randomly selected samples in this District covering a population of nearly 1% of the total, no attempt has so far been made to estimate the vital rates at the District level. However based on the results of the half yearly surveys conducted so far it is roughly estimated that the crude birth rate for the District was near about 36 per 1000 during 1968 which has shown a reduction of 2 to 3 points during 1969 giving the crude birth rate for 1969 near about 34. Based on all these observations it can be inferred that the birth rate has started to have a declining trend.

VIII. Mortality

8.1 The demographic history of the country as a whole has shown that there was a rapid reduction of the level of mortality after the attainment of independence and especially during the second half of the present century. The simple measure to know the level of mortality is the crude death rate, while the infant death rate, maternal death rate etc. are indices to know the level of mortality occuring to a specific class or group of the population. As in the case of birth rates, the registration data do not provide reliable estimates of these indices.

8.2 The crude death rate for Kerala (No. of deaths per 1000 population in an year) as estimated by the Census Actualy during 1951-60 was 16.1 as against the all India figure of 22.8 for the same period.

8.3 The expectation of life at birth during the period was as follows.

	Expectation of life at birth (1951-1960)	
	Males	Females
Kerala	46.17	50.09
India	41.90	40.60

It is estimated that the expectation of life in India was 56.2 years for males and 60.0 years for females during 1960-70, the corresponding figures for India being 50.2 and 51.9 respectively. One novel feature of the expectation of life computed so far, is that the females in Kerala live longer than the males unlike the reverse situation for India and other developing countries.

8.4 The following table gives the mortality indices for Kottayam District and Kerala State based on the registration data since 1957.

Table VIII(a) Mortality indices since 1957

Year	Kottayam District				Kerala State			
	Crude death rate	Still birth rate	Infant-mortality rate	Maternal death rate	Crude death rate	Still birth rate	Infant-mortality rate	Maternal death rate
1	2	3	4	5	6	7	8	9
1957	8.66	12.93	51.59	2.38	9.57	12.01	51.02	2.66
1958	6.86	9.58	40.43	2.32	7.57	10.92	49.47	2.74
1959	7.10	10.07	42.66	2.05	7.80	10.30	49.77	2.46
1960	6.71	8.64	41.02	1.71	6.94	11.68	39.79	2.09
1961	6.87	7.85	43.35	1.95	7.25	9.06	41.82	2.38
1962	5.79	6.58	26.69	1.41	6.35	7.60	34.62	1.78
1963	5.61	7.06	30.43	2.65	5.99	7.93	32.02	1.86
1964	5.89	6.81	30.36	1.18	5.85	8.08	28.36	1.42
1965	5.13	6.03	30.35	1.36	5.25	8.53	27.28	1.21
1966	4.96	7.86	26.67	0.78	5.38	7.63	26.01	1.31
1967	4.35	4.77	25.79	1.01	4.86	7.25	24.08	0.84

(Source: Vital Statistics bulletings of the Bureau of Economics & Statistics, Kerala.

Since the extent of under registration is of the order of 40 to 50 percent as in the case of births, the possible conclusions that could be made from the above table are (i) that the death rate is constantly on a lower side for the District when compared to that of the State and (ii) that the death rate in the District is showing a declining trend over time.

8.5 Estimates from the sample registration data give a death rate of round about 10 per 1000 during the years 1965-66, 1966-67 and 1967-68. All the available data and evidences relating to mortality trend reveals that the death rate for the District during the past two or three years was more or less constant giving a figure of 10 to 11 per 1000 population.

IX. Progress of family planning

9.1 Family planning as a national movement is nearly two decades old, though some of the non-appliance methods of birth control were known and practised since the beginning of the history of mankind. In Kerala a modest beginning of the Programme was made in 1955. The programme attained momentum since 1964, when the State and District family planning bureaus were established in the Health Services Department.

10.2 The present growth rate implies that the population of the District will be doubled before 1991 unless one drastic reduction in birth rate takes place immediately. Estimated birth and death rates from the Sample Registration Scheme, reveals that more than 77,000 children are born and about 23,000 persons die every year. Thus a little more than half lakhs of persons are added to the population of the District in an year.

10.3 The problem which faces the District at present is, therefore, not only to provide educational, medical, housing and employment facilities to the existing population but also to share the additional burden of the population added every year. It is clear that the progress achieved by the various efforts and programmes for economic development will be retarded by the unprecedented increase in the population. The main reason for controlling births and hence the growth rate is, therefore, not the task of the Government alone, but of the people also. In fact Government can do little in controlling the birth rate, unlike the death rate. People should realise the gravity of the situation and should be ready to plan their families for their own welfare and for the welfare of the State as a whole.

1057

Natural Rubber (NR)