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SAMPLE REGISTRATION
KERALA STATE

REPORT NO. 2 FOR THE PERIOD 1966-67

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ISSUED BY

THE BUREAU OF ECONOMICS AND STATISTICS
TRIVANDRUM

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PREFACE

This is the 2nd report on sample registration. This pertains to the year 1966-67. The birth rate shows a slight reduction from that in 1965-66, which can be attributed to the effect of the sterilisations conducted. Attempts have been made to adjust the rates through noting all births and deaths that occurred in the sample areas through intensive surveys in selected samples. The performance of the Enumerators of some samples has to be improved. Also the half-yearly surveys in certain samples were not done with enough care as is revealed by the intensive surveys conducted later. It is hoped that the work will improve in the periods to follow.

The standard errors of the rates in strata with a large number of samples are small while in those with a small number of samples are naturally large. The State rates have only a small percentage standard error and can therefore be said to be of high reliability; while elaborate analysis has been avoided in this report, it is believed that all the necessary tables and notes have been included.

To conclude, I may say that ~~the~~ the birth rate has been found to be reduced to nearly 37 per 1000 while the death rate remains at the low position of 10 per 1000.

Dr. R. S. KURUP
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REPORT ON SAMPLE REGISTRATION - RURAL (FULL SCALE)
IN KERALA STATE 1966-67.

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FOR THE YEAR 1884

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REPORT ON SAMPLE REGISTRATION - RURAL (FULL SCALE)
IN KERALA - 1966-67.

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CHAPTER I

The conduct of the Scheme 'Sample Registration' in
Kerala in 1966-67.

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1.1. Introduction:

The Scheme 'Sample Registration' was initiated by the Registrar General of India in order to arrive at reliable estimates of birth and death rates. In Kerala the scheme is implemented by the Bureau of Economics & Statistics. A Pilot Study on Sample Registration was conducted in Kerala in 1964 both in rural and urban areas. Based upon the experience gained in the pilot study the full scale scheme was launched in the rural areas of Kerala in 1965. The details of the full scale survey in rural areas together with the results obtained during 1965-66 (first year of the scheme) were presented in the first report published in November 1967. The full scale scheme was continued in the same samples during 1966-67 also and the results for this period are presented in this report. The provisional results for the calendar year 1966 are also presented based upon the half-yearly surveys conducted in July 1966 and January 1967.

1.2. Coverage and period of the Survey:

The full scale scheme (Rural) was continued in the same 150 rural samples selected at the beginning of the scheme in July 1965. The distribution of the samples in the three natural divisions and among the population group strata are as follows:

Stratum	Population group	No. of census villages	Population 1961	Percentage of population	No. of villages selected
State	<500	85	27545	.19	1
low land	500 - 999	164	126496	.88	1
	1000 - 1999	349	512766	3.58	5
	2000 & above	609	2731775	19.15	23
	Total:	1207	3398582	23.80	36
State	<500	498	151292	1.06	1
Mid land	500 - 999	791	596342	4.18	6
	1000 - 1999	1178	1722319	12.07	18
	2000 & above	1566	6213177	43.55	66
	Total:	4033	8683130	60.86	91
State	<500	77	20310	.14	..
High land	500 - 999	69	51719	.36	1
	1000 - 1999	145	215801	1.51	3
	2000 & above	356	1897998	13.30	19
	Total:	647	2185828	15.31	23
STATE:		5887	14267540	100	150

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The survey was conducted through out the period of one year from 1st July 1966 to 30th June 1967. During this period the Enumerators registered events of births and deaths which occurred (both to usual residents and to visitors) inside the sample as also the events which occurred to usual residents outside the sample. Half-Yearly Surveys were conducted by the supervisors in January 1967 and July 1967.

1.3. Enumerators:

Part time Enumerators appointed at the beginning of the survey continued in all samples except in a few in which unwilling as well as inefficient Enumerators were replaced by substitutes. The Enumerators obtained information about the occurrence of events by contacting informants fixed for the purpose and also by local enquiries. They visited the households concerned and registered births and deaths with full details. The information obtained through the informants is supplemented by quarterly visits to the households when with the help of the list of pregnant women, all cases of births can be known. Also details about deaths that might have occurred are collected through these visits. The list of pregnant women is made up-to date, through these visits. The Enumerators were given intensive training at the beginning of the survey and later a refresher training class was conducted in each District for a day to clear their doubts and to give them a chance to share their experiences.

1.4. Informant System:

The Enumerators appointed under this scheme are invariably persons living within the sample. So they can get information about the occurrence of births and deaths in the sample without much difficulty. Yet it is possible that many events which take place at houses which are not near to their residences are missed. In order to avoid missing of information about events and to net all events in time, the Enumerators have fixed some informants at various centres in the samples with a request to make a note of births and deaths that they come to know of and to give information to the Enumerator who will visit them at regular intervals. Local Dais, Midwives, Barbers, Dhobies, Priests etc are generally fixed as informants because they are generally connected with the events of births and deaths or functions and ceremonies connected with births and deaths. Also some shop keepers, panchayat members, etc. are fixed as informants in some samples and they too are found to be helpful. As most of the Enumerators are selected from among teachers of schools, they are able to get information about births and deaths through their students with whom they have arranged to furnish such information. The performance of the informants and details of events obtained through them are given in Chapter V.

1.5. Supervisors:

Local supervisor have been appointed for most of the samples from among the staff of the Bureau mainly for the conduct of the half-yearly surveys. Though a system of monthly inspection was in vogue, due to the non-availability of spare time and the fact that most of them will not be having

work in or near the selected sample areas, these are not done now. Supervision is therefore limited to that done by the Vital Statistics staff in some samples. The defects noted in the work of the Enumerators are corrected and necessary instructions are issued to them.

1.6. Half-Yearly Surveys (H.Y.S.):

Half Yearly Surveys were conducted in January and July of each year by the local supervisors and other staff who are given the work as special item. During the Half-Yearly Survey the house list and household schedules are brought upto date and complete lists of births and deaths are prepared by an independant enquiry. These births and deaths are matched with the events registered by the enumerators; and unmatched events are subjected to independant verification in the field for correctness. It is noted that generally, what the Enumerators are missing are events to usual residents which take place outside the sample. In some samples the events taking place in pockets difficult for the Enumerator to reach, are found to have been missed.

CHAPTER II

Birth and Death rates, their standard errors and changes in population.

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2.1. Birth rate (Table 1):

The birth rate for the whole of Kerala State (Rural and urban combined) for the period 1951-1961 was 38.9 per thousand population per year as estimated by the Registrar General of India after the census of 1961.

The birth rate for the year 1965-66 was found to be 37.91 for rural Kerala from the results of Sample Registration. During this period the birth rate was found to be highest (39.03) in the high land areas followed by 37.66 for mid land stratum. In the low land stratum the birth rate was 37.54.

For the year under report (1966-67) the unadjusted birth rate for rural Kerala was found to be 34.21 with a standard error of 0.83%. During this year also the rate is highest (35.91) in the high land stratum followed by (34.19) in the mid land stratum. The rate is lowest (33.10) in the low land stratum. These rates have been adjusted on the basis of results obtained through an intensive survey in randomly selected samples. The adjusted state rural rate is 37.19, the low-land rate when adjusted comes to 35.10, and that in the mid land and high land come to 37 and 41.15 respectively (vide Chapter IV)

Among the population groups the villages with 500 or more population have a uniformly high unadjusted birth rate above 34 while in villages in the less than 500 population group the unadjusted birth rate is only 28.3.

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2.2. Death rate (Table 1):

The average death rate for the whole of Kerala State (Rural and urban combined) for the period 1951-1961 was 16.1 per thousand per year as estimated by the Registrar General from the results of 1961 and 1951 census.

The death rate for 1965-66 for rural Kerala according to Sample Registration was found to be 10.11. During this period the death rate was found to be highest (12.13) in the high land stratum, followed by 9.83 in the low land stratum. In the mid land stratum the death rate was 9.70.

For the year under report (1966-67) the death rate for rural Kerala was found to be 9.88 with a standard error of 1.22% without adjustment for events missed as known through the intensive enquiry. For this year also the death rate is found to be highest (11.68) in the high land stratum followed by (9.66) the low land. In the mid land stratum the death rate was 9.51. The adjusted State, low land, mid land and high land rates are 10.40, 9.93, 10.03 and 12.56 respectively (vide Chapter IV).

Among population groups the villages with less than 500 population have a death rate of nearly 12 and for other villages the death rate is less than 10.

2.3. Birth & Death rates for Calendar year 1966 (Table 2):

The birth and death rates for the calendar year 1966 was also estimated in Sample Registration from the results of the half yearly surveys conducted in July 1966 and January 1967. For this year the unadjusted birth rate was found to be 35.89 and the death rate was 10.19 but if the adjustment is made by adding half the correction factor the rates are 37.38 and 10.45 respectively assuming that the missing of events have a uniform distribution during the two half years in 1966-67.

2.4. Still births and infant deaths (Table 3):

The number of still births per 1000 births (live + still) for 1966-67 for rural Kerala is estimated from Sample Registration as 26.53. The still birth rate (33.07) is highest for the high land stratum followed by (28.49) for the low land. For the midland stratum the still birth rate is 24.03, being the lowest.

The infant death rate according to Sample Registration 1966-67 is estimated as 72.31 per thousand of live births for the State rural areas. In the high land stratum the rate (97.17) is highest while it is lowest (67.03) in the mid land stratum. For the low land the infant death rate for 1966-67 is found to be 68.86. It may be noted that during 1951-1961 the infant death rate for the whole state was put as 120. No adjustment is made for the calculation of these rates from the results of the intensive enquiry.

In 1966-67 among the three strata birth and death rates (adjusted) are lowest in the low land; but infant death rate and still birth rate are lowest in the mid land stratum.

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2.5. Adjustment in the rates of birth & death for events missed by both Enumerators and Supervisors:

If a, b, c, d denote respectively the number of events registered by Enumerator and listed by Supervisor, the number of events registered by Enumerator but missed by Supervisor, the number of events listed by Supervisor but missed by the Enumerator and the number of events missed by both, according to Chandrasekar and Deming formula d can be estimated as $\frac{bc}{a}$.

Applying this formula to the various strata and comparing the events missed by both as estimated through intensive survey (vide table 4) it is seen that the formula gives a much lower estimate than that obtained through estimation of events through intensive surveys. It is also seen that for each sample the formula gives estimates different from those obtained through intensive surveys. Hence the Chandrasekar and Deming formula is not applied here for correction of rates. Probably the conditions stipulated by the formula are not strictly observed in this scheme, at least in this State. If e is the number of events (births or deaths) missed by both Enumerator and Supervisor in the samples selected for intensive enquiry from out of all the samples of stratum S and if p and P are the populations in the samples selected for intensive survey and all the selected samples respectively, the total number of events missed in all the samples of stratum S is estimated as equal to $e \times \frac{P}{p}$. The total rates have been obtained by weighting with the total populations in the strata. The calculation of standard errors for adjusted rates, being too laborious, is not attempted here.

According to the adjustment effected the birth rate for rural Kerala for 1966-67 is 37.19 and death rate is 10.40 (Table 1).

2.6. Test of significance of stratum rates:

The stratum birth and death rates have been tested assuming normality. It was seen that at 5% level of significance, the birth rates in the mid land and high land areas between the strata with population 1000 to 1999 and 2000 and above are significantly different. The State rates are significantly different from the rates in the natural divisions except for the birth rate in the midland areas. Considering population strata, the State death rate is significantly different from that in the strata with population 2000 and above. These tests have been performed on the basis of unadjusted rates and their standard errors. The low land birth rate is significantly lower and the high land birth rate is significantly higher than state rates. The mid land birth rate represents the State rural rate. Regarding death rates after adjustment the rates follow in increasing order in the low land, midland and high land areas though difference between low land and the mid land rates is negligible.

2.7. Population changes in the state rural areas (Table 5):

Population changes have two components, one due to migration and the other due to natural increase. While in the total population the changes in toto have been delineated,

the effect of migration is not discussed here due to insufficiency of data. The population changes are compared to the rate of natural increase which is the difference between the birth and death rates.

The total population of rural Kerala as on 1-7-1965, the date of commencement of the scheme, was 16065446* according to the base line survey. This population increased to 16674365 in the first one year showing an increase of 3.8%. But the natural increase recorded is only 2.8% for that period. The increase of nearly 6 lakh is probably due to inaccuracies in the base line survey.

During the second year of the survey the population has increased by 4.21 lakhs to 17095734 recording an increase of 2.5% against a natural increase of 2.4%. It may be noted here that the geometric rate of growth during 1951-1961 was 2.24% and the arithmetic growth was 2.5%.

Among the natural regions the maximum percentage change in population (+2.9%) is seen in the high land stratum during 1966-67. It is well known that immigration is great in this stratum. Hence the increase is found to be 2.9% during 1966-67 against a natural increase of 2.4%. Also the low-land stratum has an increase of 2.7% in population against a natural increase of 2.3%. But in the mid land stratum the increase of 2.4% is less than the natural increase of 2.5%. Hence it may be presumed that resultant outmigration is great in the mid land stratum and resultant in migration is great in the other two strata, though however, no firm conclusion can be drawn from the data presented herein.

Among the population group strata, the group with population 500-999 has the maximum increase of 3.9% against a natural increase of 2.6%. In population group less than 500 the increase of 0.6% is less than the natural increase of 1.6%, but no final conclusion can be drawn because only two samples have been selected in this strata.

CHAPTER III

Performance of Enumerators and Supervisors

(1966-67)

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The performance of Enumerators who do continuous registration and of Supervisors who conduct the Half Yearly Survey has been compared with the total number of events to usual residents found as correct on re-verification (see table 6). The events detected by intensive enquiry are not considered in this chapter; but the performance in samples selected for intensive enquiry is discussed separately.

It is seen that on the whole nearly 92% of live births to usual residents are listed by the Supervisors but only 84% are registered by the Enumerators. Among deaths to usual residents the corresponding percentages are 90 and 85.

* High land sub-stratum in population group less than 500 with 1961 population of 20310 is excluded because no sample has been selected in this sub-stratum.

In the low land areas the supervisors listed 95% of births and 94% of deaths while the enumerators registered 89% of births and 92% of deaths. In the midland areas the percentage of events obtained by the Supervisors and Enumerators are almost the same as for the State as a whole. In the high land areas only 88% of births and 84% of deaths are listed by the Supervisors while the performance of Enumerators is poorer (76% for both birth and death). It is thus evident that in difficult areas both registration and Half Yearly Surveys are conducted less efficiently.

Among population groups it is note worthy that in the samples with large population the trend is more disheartening. The size group 2000 persons and above shows poorer performance when compared to the group 1000 to 2000 except as regards registration of deaths in mid land areas and listing of deaths in high land areas. On the whole the deficiency is noteworthy and has to be taken care of by suitable methods.

CHAPTER IV

Intensive Surveys for improvement of rates

4.1. Intensive survey conducted after the third half yearly Survey:

As soon as the third half yearly survey was over it was decided to conduct an intensive enquiry in three randomly selected samples and to prepare a complete list of all births and deaths in these samples, covering the period of the third Half Yearly Survey. The object was to assess the number of events missed by both the Enumerators and Supervisors in these samples and to make the necessary adjustment in the rates. It was also thought that the correction factor given in the Chandrasekhar, Deming formula could be verified in the field under the conditions created by the sample registration scheme. The degree of missing is not found to be uniform. In two of the three samples selected it was noted that all births and deaths had been covered by registration and half yearly survey. Only in one sample six births and two deaths were detected to have been missed by both the Enumerator and Supervisor. Those events were included in the Half Yearly Survey reports and no attempt was made to estimate the total number of events missed in other samples.

4.2. Intensive survey conducted after the fourth H.Y.S.

After the fourth H.V.S. was over it was decided to conduct an intensive enquiry on a larger scale. A total of 27 samples were selected at random. The list of samples in each district was used as frame for selecting samples for intensive enquiry in the district. The enquiry was conducted by gazetted officers of the Bureau posted in the districts as well as by the Supervising Officer and Chief Supervisors of the scheme at the rate of one sample for each person. For reasons beyond control, the enquiry could not be conducted in 4 of the 27 samples selected. The reference period of the fourth H.Y.S. was the period covered.

On analysing the results of the enquiry it was found that in five samples no events (UR) were missed by the Enumerator and Supervisor taken together*. The degree of missing of events by Enumerator and Supervisor varies from sample to sample. But one interesting finding of the enquiry is that there are samples in which the birth rate is below 25 and no birth has been missed. Also there are samples with birth rate higher than 58 without intensive enquiry and the rate is more than 68 with intensive enquiry. The latter case reveals that even with a high rate, in certain areas chances of missing are much. These areas are usually difficult areas. During the H.Y.S. some events were listed in addition to what was registered. The psychological tendency of 'go-slow' after detecting much events is responsible for this phenomenon. Fixing of standard rates induces this tendency.

As for adjustments made in the rates of birth and death made on the basis of the number of events detected see para 2.5 and Table 4.

4.3. Intensive enquiry conducted after the fifth H.Y.S.:

Encouraged by the results of the previous intensive enquiries a third enquiry was planned and carried out after the fifth H.Y.S. This time 14 samples were selected and all the selected samples were surveyed. During this round it was decided to cover a period extending over the three preceding H.Y. Surveys. It was found that events were missed both by the Enumerators and Supervisors in varying degrees. The adjustments effected in the rates of birth and death for the year 1966-67 (periods of third & fourth Half Yearly Surveys) are given in table 4.

CHAPTER V

Informant System

5.1. Need for informant system and how it is handled:

The need for informant system is given under para 1.4. In the early stages of the scheme the informant system was introduced and it was found to be helpful. There was a feeling among Enumerators that the informants may not co-operate because they are not given any monetary incentive; but later it was proved that this fear was unfounded. Some informants fixed in the early stage were not found to be helpful and such informants were substituted by others. The Enumerators were given complete freedom to choose informants and to replace non-co-operative informants with others more helpful. One difficulty experienced is that the informants are not able to report events (UR) which take place outside the sample. In order to overcome this, a system of quarterly visits to all households by the Enumerator was introduced.

The number of births reported by informants during the third Half Yearly Survey has been compiled for each district (see table 7). On an analysis of the above it is seen that the designated co-operative persons (informants) fixed by the

* Later it was found that the intensive enquiry in one of these five samples had not been done properly and some events were detected by the Chief Supervisor.

Enumerators have given information on 43% of births. The households have reported 10% of births. The births found out by Enumerators by house visits comes to 23%. 17% of births have been detected during Half Yearly Surveys. 7% of births have been reported by other informants.

During the first year (1965-67) the number of births reported by designated co-operative persons was only 37%. Later the Enumerators were directed to replace non co-operative informants by friendly substitutes and as a result the percentage has risen to 43. This rise in percentage has resulted in low percentage under 'visits' and 'reporting' by households.

The fact that the percentage of events detected through Half Yearly Surveys has risen from 3 in the first year to 16.83 (in 1966-67) shows either that the quality of work by the enumerators has deteriorated or that the Supervisors have put in more efforts.

Now comparing between districts the percentage of births missed by the enumerators and detected in half yearly surveys is greatest in Cannanore District followed by Kozhikode, and Palghat Districts. It is brought to light in all cases except Trivandrum District that wherever the events reported by informants are more, missing by Enumerator is less.

CHAPTER VI

Summary and Conclusions

The birth rate (1951-1961) obtained from analysis of census data was 38.9 for the whole of Kerala and the death rate was 16.1. According to the pilot study conducted in 1964 the birth rate in rural Kerala was 35.36 and the death rate was 11.13. The results of the Sample Registration Scheme (Rural - full scale) revealed the birth rate as 37.9 and the death rate as 10.1 for the year 1965-66. As for 1966-67 the rates of birth and death according to Sample Registration was found to be 34.2 and 9.9 respectively without taking into consideration the events detected through intensive enquiries. If adjustment for events missed by both Enumerators and Supervisors is effected the birth rate comes to 37.19 and death rate comes to 10.40.

It is evident that the birth rate has come down by 1.7 points from 38.9 and the death rate has come down by nearly 6 from 16.1. Compared to the previous year the reduction in birth rate is only .7. This reduction may perhaps be due to the effect of Family Planning activities carried out in the State.

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TABLE I

Estimated rates and standard errors.

Sl. No.	Stratum No.	Description.	Birth rate	Standard error %	Death rate	Standard error %	Adjusted Birth rate.	Adjusted death rate.
1	I (Low land A)	Population less than 500.	26.40	*	13.98	*	26.40	13.98
2	,, B	500-999	30.06	*	7.84	*	30.06	7.84
3	,, C	1000-1999	33.91	2.47	9.52	17.02	35.81	9.52
4	,, D	2000 & more	33.18	5.36	9.72	1.89	35.31	10.05
5	Total Low Land		33.10	1.06	9.66	3.73	35.10	9.93
6	II Middle Land A)	Population less than 500	28.74	*	11.50	*	28.74	11.50
7	,, B	500-999	35.20	7.47	8.47	16.29	35.20	8.97
8	,, C	1000-1999	33.61	4.40	9.61	6.82	36.31	9.99
9	,, D	2000 & more	34.37	1.12	9.54	1.48	37.54	10.12
10	Total Mid land		34.19	1.32	9.51	2.00	37.00	10.03
11	III High land A)	Population less than 500	--	--	--	--	--	--
12	,, B	500-999	37.67	*	17.89	*	37.67	17.89
13	,, C	1000-1999	40.61	5.27	11.98	16.61	40.61	11.98
14	,, D	2000 & more	35.46	0.88	11.50	1.69	41.29	12.49
15	Total High land		35.97	0.97	11.68	2.14	41.15	12.56
16	State A	Population less than 500	28.30	*	11.96	*	28.30	11.96
17	,, B	500 -999	34.48	*	8.96	*	34.48	9.34
18	,, C	1000-1999	34.25	3.18	9.79	6.03	36.57	10.06
19	,, D	2000 & more	34.26	0.73	9.93	1.01	37.64	10.52
	Total State		34.21	0.83	9.88	1.22	37.19	10.40

* Standard error is not worked out since the sample size is too small.

TABLE. 2

Rates of birth and death(1966)

Stratum No.	Description	Estimated Population on 1-7-1966.	Birth Rate unadju- sted.	Death rate unad- justed.	Birth rate (rate adju- sted.)	Death rate (adju- sted.)	Rate
I Low land Population							
A	Less than 500	34515	33.93	11.30	33.93	11.30	
,,	B 500-999	150113	40.00	9.33	40.00	9.33	
,,	C 1000-1999	566598	34.98	8.98	36.43	8.98	
,,	D 2000 & more	3195100	34.12	9.62	35.13	9.78	
I Low land		3946326	34.41	9.53	35.41	9.66	
II Mid land							
A	Less than 500	157502	36.62	14.08	36.62	14.08	
B	500-999	680632	37.28	8.36	37.28	8.61	
C	1000-1999	2010958	34.69	9.27	36.04	9.46	
D	2000 & more	7309829	36.57	10.09	38.15	10.38	
II Mid land		10158921	36.20	9.87	37.60	10.13	
III. High Land							
B	500-999	56328	28.23	19.76	28.23	19.76	
C	1000-1999	233827	43.45	12.31	43.45	12.31	
D	2000-& more.	2272667	36.15	12.36	39.06	12.86	
III. High land		2562822	36.64	12.51	39.23	12.95	
State							
A	less than 500	192017	36.14	13.58	36.14	13.84	
B	500-999	887073	37.16	9.25	37.16	9.44	
C	1000-1999	2811383	35.48	9.47	36.64	9.60	
D	2000 & more	12777596	35.89	10.37	37.58	10.66	
Total State		16668069	35.89	10.19	37.38	10.45	

Stratum	Population of all samples (1-1-67)	Population of selected for interview (1-1-67)	Ratio		BIRTH			DEATH			
			Col. 2	Col. 3	No. of births detected in samples selected for interview	Estimated No. of missed in all samples	Adjustment for birth rate	No. of deaths detected in samples selected for intensive enquiry	Estimated No. of missed in all samples	Adjustment for death rate	
I	2	3	4	5	6	7	8	9	10	11	12
A	644										
B	765	1570	5.35	3	16	1.90	0	0	0	0	0
C	8405	15497	3.33	33	110	2.13	5	17	0.33	0	0
D	51537					2.00			0.27		
Total low land											
II.A	348										
B	6022	2003	3.01	0	0	0	1	3	0.05	1	0
C	31835	10550	3.08	28	86	2.70	4	12	0.38	3	0
D	119731	22432	5.34	71	379	3.17	13	69	0.58	4	2
Total mid land											
III.A						2.81			0.52		
B	1062										
C	5343										
D	36350										
Total High land		10034	3.60	59	212	5.83	10	36	0.99	3	1
State A						5.18			0.88	50	3
B						0			0		
C						0			0.38		
D						2.32			0.27		
Total State						3.38			0.59		
						2.98			0.52		

TABLE 5

Population Changes.

Stratum	Population as on 1-7-1965.	Population as on 1-7-66,	Population as on 1-7-67.	1-7-67 1-7-66 Ratio	1966-67 increase %	1966-67 natural increase (BR-DR)
I A	34571	34515	35631	1.032	3.2	1.2
I B	98374	150113	156117	1.040	4.0	2.2
I C	546312	566598	583001	1.029	2.9	2.4
I D	3078092	3195100	3277672	1.026	2.6	2.3
Total I	3757649	3946326	4052421	1.027	2.7	2.3
II A	133101	157502	157503	1.000	0.0	1.7
II B	673578	680632	703346	1.038	3.8	2.7
II C	1972895	2010958	2037373	1.013	1.3	2.4
II D	7001775	7309829	7498757	1.025	2.5	2.5
Total II	9781349	10158921	10399979	1.024	2.4	2.5
III A	-	-	-	-	-	-
III B	57017	56328	59137	1.050	5.0	2.0
III C	219744	233827	237489	1.016	1.6	2.9
III D	2249687	2272667	2346708	1.030	3.0	2.4
Total III	2526448	2562822	2643334	1.029	2.9	2.4
A		193017	193104	1.006	0.6	1.6
B		887073	921600	1.039	3.9	2.6
C		2811383	2857863	1.017	1.7	2.4
D		12777596	13123137	1.027	2.7	2.4
Total State	16065446	16668069	17095734	1.025	2.5	2.4

Table No.7

No. of births reported by informants, found out by house visits by Enumerators and detected through half yearly surveys. Period 1-7-1966 to 31-12-1966.

The corresponding percentages for 1965-66 are given within brackets.

No.	D		I		M		C		H		H		G		V		I		D		HYS		Total
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	
1. Trivandrum	22	6.4	-	-	-	-	-	-	40	11.7	3	0.9	193	56.3	4	1.2	37	10.8	44	12.8	343		
2. Quilon	382	62.4	-	-	3	0.5	-	-	43	7.0	1	0.2	142	23.2	2	0.3	11	1.8	28	4.6	612		
3. Alleppey	261	53.4	-	-	2	0.4	-	-	63	14.1	37	8.3	67	15.0	-	-	7	1.6	10	2.2	447		
4. Kottayam	280	51.2	-	-	48	8.8	-	-	70	12.8	2	0.4	78	14.3	1	0.2	7	1.3	61	11.2	547		
5. Ernakulam	279	41.6	1	0.1	23	3.3	-	-	82	12.2	16	2.4	146	21.8	9	1.3	-	-	116	17.3	671		
6. Trichur	242	50.0	-	-	1	0.2	-	-	43	9.3	64	0.8	140	23.9	-	-	1	0.2	51	10.5	484		
7. Palghat	584	47.0	-	-	19	1.5	-	-	62	5.0	60	4.8	226	18.2	9	0.7	40	3.2	242	19.5	1242		
8. Kozhikode	853	42.6	-	-	15	0.9	-	-	210	10.5	46	2.3	409	20.4	16	0.8	28	1.4	423	21.1	2004		
9. Cannanore	255	24.6	5	0.5	10	1.0	2	0.2	151	14.6	27	2.3	288	27.8	12	1.2	18	1.7	268	25.9	1036		
TOTAL	3158	42.75	6	0.1	124	1.67	2	0.02	766	10.37	193	2.65	1609	22.86	53	0.72	149	2.02	1243	16.83	7386		
		(37)		(1)		(2)		(5)	(17)		(31)		(2)		(2)		(2)		(2)		(3)		

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