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GOVERNMENT OF KERALA

**SAMPLE REGISTRATION
'KERALA—RURAL
ANNUAL REPORT 1986
No. 24**

DEPARTMENT OF
ECONOMICS & STATISTICS
TRIVANDRUM, 1988

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SAMPLE REGISTRATION

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GOVERNMENT OF CANADA

MINISTER OF INDUSTRY

REPORT

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DEPARTMENT OF INDUSTRY & COMMERCE

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P R E F A C E

The sample registration system was introduced in all the States of India under the directions of the Registrar General of India with the objective of obtaining quick and reliable estimates of vital rates in the country regularly.

This report presents the results of the study in rural areas of Kerala state for the year 1986. The estimates of vital rates viz. crude birth and death rates, infant mortality rate, etc. and also the statistics of marriages obtained through the study are included in this report.

This report was prepared by the sample registration unit of the Directorate of Economics and Statistics.

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Director of Economics & Statistics

Trivandrum,
25-4-1988.

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Chapter 1 - INTRODUCTION

Sample registration system has been recognised as a unique technique for obtaining quick and reliable data on vital rates, in the context of deficiencies in the statutory registration system. The Department of Economics and Statistics is the agency for the study of sample registration system in rural areas whereas the census department is conducting the study in urban areas of the State, as per the directions of the Registrar General of India. This report is based on the findings of the study in 150 samples selected in rural areas of the State for the year 1986.

The sample registration system, basically a sample survey designed to obtain quick and reliable data on vital rates, was introduced in the State as a pilot project during 1964-65 in 20 rural and 5 urban samples. The full fledged scheme was introduced on 1st July 1965 covering 150 samples in rural areas of the State on a regular basis. Samples were selected after stratifying the census villages into four types according to the population of 1981 census viz. below 500, 500-999, 1000-1999 and 2000 & above under the two regions of the state consisting all the northern districts of the state beyond Trichur as northern region and the remaining districts from Trivandrum to Trichur as southern region and allocating samples to different strata in proportion to the population of the strata to the total population. The number and population of the samples and the total number in each stratum are given in table 29 appended to this report.

1.2 Staff

One hundred and fifty part-time enumerators were engaged in the regular field work for registering the births and deaths occurred in each sample during each month and 15 Statistical Assistants/Computors deputed from Census Department in half yearly surveys. Additional District Officers in each district conducted the supervision of work in their jurisdiction and also the reverification of the unmatched and partially matched events noticed in the samples. At the state headquarters staff consisting of a Regional Statistical Officer, a Research Assistant, a Computer from Census department and two Compilers attended to the work relating to sample registration system.

1.3 Field work

Originally a base-line survey was conducted in all the sample units selected for fixing the resident population. The details of births and deaths occurring in these samples were registered by the enumerators on a regular basis through informants and house visits and reported to the district and state headquarters every month. The Statistical Assistants/Computors conducted half yearly surveys independent of the enumerators for updating the population and for collecting details of births and deaths. The data collected by both the enumerators and the supervisors were matched at the district headquarters and the re-verification of the unmatched and partially matched events was done by the Additional District Officers concerned.

1.4 Overlapping survey

During each half yearly survey, the data relating to the previous half year were also collected in order to bring out the events missed, if any, by both the enumerator and supervisor during the previous half year. By this procedure 134 births and 34 deaths were detected during the year.

1.5 Intensive enquiry

In 30 samples of the state identified as defecient units for the year, an intensive enquiry was conducted by the Additional District Officers of this department through which 38 births and 4 deaths were detected.

Chapter 2 - POPULATION AND ITS GROWTH

The estimated population of Kerala rural was 2,19,83,500 as on 1-7-1986 and 2,21,50,972 as on 1-1-1987 recording an increase of 0.76 per cent during the second half of 1986 as against 0.77 per cent during the same period of the previous year. The increase in population during the period in northern region was 0.87 per cent and that in southern region was 0.69 per cent. Mid-year population has shown an increase of 1.69 per cent over the previous year.

2.2 Sex-ratio & percentage distribution of population by age group.

The sex ratio and percentage distribution of population for different age-groups for the years 1971, 1985 and 1986 are presented in table 4 appended. The sex-ratio is seen decreased from 1066 in 1985 to 1065 in 1986. Children below the age 14 constitute 33 per cent of the total population during 1985 while it has come down to 32.4 per cent during 1986.

2.3 Religion-wise population

Percentage of estimated population for Hindus, Muslims and Christians for the year were 57.16, 20.97 and 21.87 respectively while the percentages were 57.56, 21.02 and 21.42 respectively during the previous year.

Chapter 3 - MEASURES OF FERTILITY

The crude birth rate which is the most common measure of fertility, age specific fertility rate, general fertility rate, total fertility rate, gross reproduction rate and net reproduction rate for the year 1986 have been estimated and presented in this chapter.

3.2 Crude birth rate

Crude birth rate is defined as the number of live births per 1000 of mid year population. Only the births to the usual residents in the area are taken into account for calculation of vital rates.

The crude birth rate for Kerala rural for the year 1986 was estimated as 22.6 which is 0.6 less than that of the previous year. Birth rates for Kerala rural and India rural for the years 1980 to 1986 are given in Table A1.

Table A1 - Crude birth rate for Kerala rural and India rural 1980 to 1986

Year	Kerala - rural			India - rural
	Northern region	Southern region	Total	
1	2	3	4	5
1980	30.5	23.4	26.8	35.0
1981	28.0	21.5	24.7	35.5
1982	27.9	21.3	24.3	35.5
1983	29.3	19.5	23.5	35.3
1984	28.5	20.3	23.7	35.1
1985	27.2	20.4	23.2	34.0*
1986	27.0	19.4	22.6	34.1*

* provisional

From table A1, it can be seen that the birth rate in northern region was always higher than that of the southern region. This is due to the social conditions such as low age at marriage of females, reluctant attitude towards family welfare activities, low literacy etc. prevalent among the majority of the residents in northern region.

3.3 Birth rate of the neighbouring states

The birth rates for rural areas and rural and urban areas together estimated provisionally for the year 1986 by the Registrar General of India in respect of the neighbouring states of Kerala and the whole of India are given in table A2.

Table

Table A2 - Birth rates of neighbouring states

States	Rural	Rural & urban combined
1. Andhra pradesh	32.2	31.4
2. Karnataka	29.7	28.8
3. Tamilnadu	24.1	23.7
4. Kerala	22.3	22.4
All India	34.1	32.4

Comparing the birth rates in rural areas of the neighbouring states, it can be seen that Andhra pradesh records the highest birth rate 32.2 during the year 1986 and Karnataka stands second having birth rate 29.7. As in the previous years Kerala keeps the lowest birth rate.

3.4 Birth rates by religion

The birth rates among the three religious groups Hindus, Muslims and Christians in the state for the year estimated separately for the two regions are given in table 14 appended.

Comparing the birth rates among the three religions in the State, Muslims recorded the highest birth rate 31.4, Christians recorded the lowest birth rate 19.6 and Hindus 20.5.

The muslims in northern region who forms 34.3 per cent of the total population in the area, and 68.4 per cent of the total muslim population in the state are having the highest birth rate 34.7 as against 34.3 during the previous year. The lowest birth rate 19.0 is recorded by Christians in the southern region who constitutes 32 per cent of the total population in the region and 85 per cent of the total christian population in the state. During the previous year, the lowest birth rate 19.6 was recorded by Hindus in the southern region.

3.5 Distribution of sample villages under different birth rates

The distribution of sample villages by crude birth rates for the year 1986 and previous two years are given in table 12 appended. Comparing the birth rates in different sample villages with that of the States' rate, it is seen that 20 samples (32.9 per cent) in northern region and 76 samples (85.4 per cent) in southern region were having birth rates less than 24. The state rate 22.6 falls in the group 20 and less than 24 during the year 1986 also as in the previous year. Only one sample is having birth rate above 44 in the northern region and 2 samples are having birth rate above 32 in the southern region. The number of samples having birth rate below 16 is 2 in northern region where as it is 22 in southern region.

3.6 Age specific fertility rate

Age specific fertility rate can be defined as the number of live births in an year to 1000 women of specific age group. Age specific fertility

rates for the year 1986 are given in table 8 appended. For comparison of rates, the age specific fertility rates relating to Kerala rural for the years 1980 to 1986 are given in table A3.

Table A3 - Age specific fertility rates in Kerala - rural
for the years 1980 to 1986

Age group	1980	1981	1982	1983	1984	1985	1986
1	2	3	4	5	6	7	8
15 to 19	47.0	39.3	31.8	34.9	34.5	33.7	36.7
20 to 24	197.2	175.9	176.5	172.7	179.2	177.0	166.1
25 to 29	184.3	166.2	168.0	161.0	168.0	155.4	147.1
30 to 34	105.8	98.6	95.4	87.5	74.6	73.0	67.5
35 to 39	59.5	53.9	53.8	42.5	35.8	29.6	27.4
40 to 44	15.9	19.4	18.1	13.6	14.1	14.2	11.2
45 to 49	3.6	4.9	3.8	3.1	4.0	1.8	2.9

3.7 Age specific marital fertility rate

Age specific marital fertility rate can be defined as the number of live births in an year to 1000 married women of specific age group. Age specific marital fertility rates for the year 1986 are given in table 8 appended. Age group 20 to 24 records the highest marital fertility rate as in the case of fertility rate.

3.8 General fertility rate (G.F.R.)

General fertility rate is the number of live births in an year to 1000 women in the reproductive age group 15 to 49. General fertility rate for the two regions separately are given below.

Northern region	-	100.6
Southern region	-	67.8
State	-	81.0

General fertility rate for the years 1980 to 1986 are given below.

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
GFR	101.1	92.2	90.8	87.1	87.5	84.4	81.0

3.9 Total fertility rate (T.F.R.)

Total fertility rate denotes the average number of children that would be born to a woman during her life time, if she was to pass through her child bearing years conforming to the age specific fertility rates of the year. Total fertility rates for the two regions separately are given below.

Northern region	-	2.9
Southern region	-	1.9
State	-	2.3

Total fertility rate of Kerala rural for the years 1980 to 1986 are given below.

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
TFR	3.1	2.8	2.7	2.6	2.6	2.4	2.3

3.10 Gross reproduction rate (G.R.R.)

Gross reproduction rate is the average number of female children that would be born to a woman during her life time, if she was to pass through her child bearing years conforming to the age specific fertility rate of the year. The gross reproduction rate for the year is calculated as 1.1. The gross reproduction rate of Kerala rural for the years 1980 to 1986 are given below.

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
GRR	1.5	1.3	1.3	1.2	1.3	1.2	1.1

3.11 Net reproduction rate (N.R.R)

Net reproduction rate is the average number of female children that would be born to a woman during her life time conforming to the age specific fertility rates and mortality conditions during the year. It is obtained by multiplying the age specific female birth rates of the child bearing age groups by corresponding proportion of survivors, as per life table for females (L_x/l_x) and then repeating the process as in gross reproduction rate. Net reproduction rate for the year 1986 is 1.09. Net reproduction rate for the years 1980 to 1986 are given below.

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
NRR	1.34	1.21	1.22	1.15	1.26	1.20	1.09

3.12 Still birth rate (S.B.R)

Still birth rate is the number of still births to 1000 births (both live births and still births). The still birth rate was estimated as 14.0 for the year 1986. Still birth rate for northern region was 15.3 and southern region 12.6. The corresponding rates for the previous year were 16.3 and 10.4 respectively. Still birth rates for males and females were estimated as 11.9 and 16.2 respectively whereas the rates were 17.5 and 9.0 respectively during the previous year. The still birth rates for the years 1980 to 1986 are given below.

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
SBR	18.3	20.8	12.6	13.5	10.5	13.3	14.0

3.13 Order of birth

The percentage distribution of birth by age of mother and order of birth of child is given in table 11 appended. 86.06 per cent of the births came under first three orders of birth, while the same was 85.85 per cent

during the previous year. The birth under seventh order and above during the year was 2.33 per cent as against 2.43 per cent during the previous year.

3.14 Births by type of medical attention received

The percentage distribution of births by type of medical attention received during the years 1980 to 1986 are given in table A4.

Table A4 - Percentage distribution of births by type of medical attention received for the years 1980 to 1986

Year	Institu- tional	Trained pro- fessional	Untrained professional	Non-profe- ssional	Not stated
1	2	3	4	5	6
1980	46.6	24.4	28.2	0.7	0.1
1981	47.8	26.7	23.6	1.7	0.2
1982	59.1	21.8	18.2	0.9	-
1983	68.9	16.1	13.1	1.9	-
1984	73.3	9.2	13.6	3.7	0.2
1985	76.5	8.2	12.8	2.2	0.3
1986	80.2	6.3	9.7	3.7	0.1

More and more people were seen utilising the institutional facilities provided for maternal and child health year by year. The details of medical attention received for births during the year are given in table 10 appended. It is seen that institutional medical attention received during the year in northern region and southern region were 67.2 and 93.6 per cent respectively whereas the services of untrained professionals used were 17.6 and 1.7 per cent respectively.

3.15 Sex-ratio at birth

Sex-ratio at birth is defined as the number of male children born to 100 female children. Sex ratio at birth for the years 1980 to 1986 are given below.

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Sex-ratio	107.4	108.8	107.2	108.7	100.8	100.2	110.7

Sex ratio at birth in northern region and southern region were 112.6 and 108.9 respectively as against 92.5 and 108.5 respectively during the previous year.

3.16 Child woman ratio (C.W.R.)

Child woman ratio is defined as the estimated number of children in the age group 0-4 years per 1000 women in the reproductive age group 15 to 49.

Estimated number of children in the age group 0 to 4 years is 23,14,600.

Estimated number of women in the age group 15 to 49 is 61,27,731.

The child woman ratio for the years 1980 to 1986 are given below.

<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
CWR 466	441	401	400	390	377	378

3.17 Comparison between the vital rates under sample registration system and civil registration system

Civil registration system is a statutory system to record all the events of births and deaths. But on a review of data on vital rates under sample registration system and civil registration system, it can be seen that the performance of civil registration system has to improve to a great extent. The birth rates and still birth rates worked out from the data on civil registration system and sample registration system for the years 1980 to 1986 are given in table A5.

Table A5 - Vital rates under civil registration system and sample registration system - Kerala - rural for 1980 to 1986

Year	Birth rate		Still birth rate	
	Civil registration	Sample registration	Civil registration	Sample registration
1	2	3	4	5
1980	15.7	26.8	5.4	18.3
1981	15.9	24.7	5.1	20.8
1982	15.4	24.3	5.1	12.6
1983	14.3	23.5	3.9	13.5
1984	13.8	23.7	4.9	10.5
1985	13.6*	23.2	N.A.	13.3
1986	15.1*	22.6	N.A.	14.0

*provisional

3.18 Rate of marriage per 1000 population and percentage distribution according to age and sex

The rate of marriages and remarriages per 1000 population and percentage distribution of marriages according to age and sex are given in table 25 appended. The highest rate of first marriage to 1000 female population during the year was 73.9 in the age group 20 to 24 as against 66.6 in the same age group during the previous year. In the case of males, the highest rate was 69.5 in the age group 25 to 29 as against 68.8 in the same age group during the previous year. The rate of marriage of females in the age group 15 to 19 was seen increased by 2.8 over the previous year. Of the total marriages 3.7 per cent were remarriages while it was 4.1 per cent during the previous year. The mean age at marriage for males and females were seen as 26.9 and 21.6 respectively where as the mean age at marriage was 26.8 and 21.6 respectively during the previous year.

Chapter 4 - MORTALITY MEASURES

The crude death rate is defined as the number of deaths per 1000 of mid-year population. As in the case of birth, deaths occurred to usually resident members only were taken into account for calculating the death rate. The crude death rate for the year in Kerala rural was seen as 6.0 as against 6.6 during the previous year. The death rate in northern region was 6.0 and in southern region 6.1. The region-wise crude death rates for Kerala rural and all India rural for the years 1980 to 1986 are given in table B1 below.

Table B1 - Crude death rate in Kerala rural and all India rural for the years 1980 to 1986

Year	Kerala - rural			All India rural
	Northern region	Southern region	Combined	
1	2	3	4	5
1980	7.5	6.7	7.1	13.7
1981	6.9	6.1	6.5	13.6
1982	6.3	5.6	5.9	13.1
1983	7.2	6.2	6.6	13.1
1984	6.9	6.0	6.4	13.7
1985	6.8	6.4	6.6	12.9*
1986	6.0	6.1	6.0	11.1*

* provisional

4.2 Death rates of neighbouring states

The death rates in rural areas and rural and urban areas combined estimated provisionally by the Registrar General of India in respect of the neighbouring States and India are given in table B2.

Table B2 - Death rates of rural, rural & urban combined of neighbouring States and All India

States	Rural	Rural & urban combined
1	2	3
1. Andhra pradesh	10.7	9.9
2. Karnataka	9.3	8.6
3. Tamil nadu	10.7	9.4
4. Kerala	6.7	6.7
All India	12.1	11.1

In rural areas Andhra pradesh and Tamil nadu recorded the highest death rates 10.7 as in the previous year. As usual Kerala recorded the lowest death rate 6.7 during the year. When compared the death rates in rural and urban areas together, Andhra pradesh recorded the highest death rate 9.9 and Kerala the lowest death rate 6.7.

4.3 Death rates among religions

The death rates among Hindus, Muslims and Christians are given in table 14 appended. As in the previous year, the highest death rate 6.5 was among Hindus in northern region and the lowest death rate 2.9 was among Christians in the same region. At State level, the highest death rate 6.4 was among Hindus and lowest death rate 5.4 was among Muslims as in the previous year. It is seen that the death rates for all the three religions have been decreased during the year.

4.4 Distribution of samples according to death rate of each sample

The distribution of samples according to death rates for the year 1986 and for the previous two years are given in table 20 appended. During the year under report 40 samples forming 65.6 per cent of northern region and 61 samples forming 68.5 per cent of southern region recorded the death rates less than 7 as against 59.1 per cent and 66.4 per cent respectively of the previous year. At the State level, 101 samples forming 67.3 per cent of the total samples recorded the death rates less than 7. The number of samples recorded death rates 11 and above was 3 during the year as against 10 during the previous year. The percentages were 2.0 and 6.7 respectively during the current year and previous year.

4.5 Age specific death rate

Age specific death rate is the number of deaths in a specific age group among 1000 persons of that age group in an year. The age specific death rates for different age groups are given in table 17 appended. As usual the age specific death rates were highest 76.5 in the age group 70 and above and lowest 0.5 in the age group 10 to 14 during the year 1986 also. The age specific death rates for the group 70 and above were 81.9 for southern region, 74.0 for northern region, 85.7 for males, 69.1 for females and 76.5 for the state as a whole. The difference between the age specific death rates of males and females in the age group 70 and above was 16.6 during the year, while it was 7.3 during the previous year. The death rates for males and females were 6.9 and 5.2 respectively during the year.

4.6 Infant mortality rate

Infant mortality rate is the estimated number of deaths of infants below one year of age out of 1000 live births in an year. The estimated number of infant deaths and infant mortality rate in Kerala rural are given in table 21 appended. The infant mortality rate for Kerala rural for the years 1980 to 1986 are given below.

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Infant mortality rate	42.5	40.4	30.3	38.9	30.1	33.0	28.6

Infant mortality rates in northern region and southern region were 31.5 and 25.8 respectively as against 43.8 and 22.8 respectively during the previous year. The infant mortality rate in the northern region has been decreased by 12.3 whereas it has been increased by 3.0 in the southern region.

4.7 Neo-natal death rate

Neonatal death rate can be defined as the number of deaths of children below 28 days of age per 1000 live births in an year. The infant mortality has been distributed according to the period within which the infant died before completing one year of age such as less than 7 days, 7 to 27 days and 28 days and above. The same is furnished in table B3 below.

Table B3 - Infant mortality rates in different periods within which the infant died

Region	Less than 7 days	7 to 27 days	Less than 28 days	28 days & above	Total
1	2	3	4	5	6
Southern region	20.47	3.42	23.89	7.62	31.51
Northern region	16.22	4.23	20.45	5.31	25.76
State	18.35	3.82	22.17	6.47	28.64

Neo-natal death rate for the year in respect of northern region, Southern region and state were 23.89, 20.45 and 22.17 respectively as against 33.8, 17.6 and 25.6 respectively during the previous year.

4.8 Medical attention before death

The percentage distribution of deaths according to medical attention received before death during the year 1980 to 1986 are given in table B4 below.

Table B4 - Percentage distribution of deaths according to type of medical attention received for the years 1980 to 1986

Year	Institutional	Qualified medical practitioner	Unqualified medical practitioner	Noni
1	2	3	4	5
1980	32	30	18	20
1981	41	31	12	16
1982	44	31	10	15
1983	46	26	13	15
1984	46	24	8	22
1985	49	23	11	17
1986	49	27	6	18

From the above table, it can be seen that the number of persons receiving institutional medical facilities before death have been increased year by year.

4.9 Comparison of mortality rates under civil registration system and sample registration system.

Death rates and infant mortality rates under civil registration system and sample registration system in respect of Kerala rural compiled from the data collected for the years 1980 to 1986 are given in table B5.

Table B5 - Mortality rates under civil registration system and sample registration system for the years 1980 to 1986

Year	Death rate		Infant mortality rate	
	Civil registration	Sample registration	Civil registration	Sample registration
1	2	3	4	5
1980	4.0	7.1	11.7	42.5
1981	4.0	6.5	12.2	40.4
1982	3.7	5.9	10.9	30.3
1983	3.6	6.6	11.3	38.9
1984	3.6	6.4	9.1	30.1
1985	3.7*	6.6	N.A.	33.0
1986	4.2*	6.0	N.A.	28.6

*provisional

The table above shows that a good number of events has been left unregistered under civil registration system.

4.10 Expectation of life based on age specific death rates for the last three years.

Life tables have been constructed separately for males, females and males and females together based on the age specific death rates for the years 1984, 1985 and 1986. The details are appended as tables 26, 27 and 28 of this report. The expectation of life at birth for males, females and males and females together were calculated as 66.9, 72.8 and 69.7 respectively as against 65.7, 72.5 and 68.9 respectively during the previous year. The expectation of life for the last six years are given in table B6 below.

Table B6 - Expectation of life

Based on age specific death rates for the years	Males	Females	Males & females together
1	2	3	4
1979, 1980 & 1981	64.7	69.0	66.8
1980, 1981 & 1982	66.4	70.7	68.5
1981, 1982 & 1983	66.0	71.8	68.8
1982, 1983 & 1984	66.5	73.4	69.7
1983, 1984 & 1985	65.7	72.5	68.6 68.9
1984, 1985 & 1986	66.9	72.8	69.7

Method adopted for calculation of life table

$$m_x = \frac{\text{Total of A.S.D.R. of the last } n \text{ years}}{n \times 1000}$$

$$q_0 = \frac{D1}{B1} + \frac{D2}{B2}$$

where D1 is the number of deaths of children born during the previous year and died during the current year and D2 is that of the children born and died during the current year. B1 and B2 denote the total number of births occurred during the previous year and current year respectively.

$$q_x = \frac{2 \times n \times m_x}{2 + n \times m_x}$$

Let l_0 be 100000

$$l_x = l_0 - d_0$$

$$d_x = q_x \times l_x$$

Let d_{70} is equal to 170

$$L_0 = f \times l_0 + (1-f) l_1 \text{ where } f = \frac{D1}{D1 + D2}$$

$$L_x = \frac{(l_x + l_{x+1}) \times c}{2} \text{ where } c \text{ is the class interval}$$

$$L_{70} \text{ is equal to } \frac{d_{70}}{m_{70}}$$

Let L_{70} be T_{70}

$$T_{70} - 1 = T_{70} + L_{70} - 1$$

$$\text{Expectation of life } E_x = \frac{T_x}{l_x}$$

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APPENDIX

<u>Table no.</u>	<u>List of tables - 1986</u>
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1. Mid-year estimated population, births, deaths and vital rates.
2. Sample population and estimated population for mid-year and at the beginning of the next year.
3. Mid-year sample population and estimated population according to age and sex.
4. Sex-ratio and percentage distribution of population by age group (1971, 1985 and 1986)
5. Religion-wise sample population and estimated population.
6. Live-births observed in samples and estimated according to sex.
7. Estimated number of women, married women and live births in the reproductive age groups.
8. Age specific fertility rate, age specific marital fertility rate, G.F.R., T.F.R. and G.R.R.
9. Live-births observed in samples classified by month of occurrence.
10. Live-births observed in samples by type of medical attention at delivery.
11. Percentage distribution of births by age of mother and order of birth of child.
12. Distribution of samples according to birth rate of each sample.
13. Still-births observed in samples and estimated according to sex and still birth rates.
14. Religion-wise birth and death rates.
15. Deaths observed in samples and estimated according to sex.
16. Deaths observed in samples according to age and sex.
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22. Infant deaths observed in samples of children born during the current year and previous year.
23. Births and deaths detected through overlapping survey and intensive enquiry classified according to place and type of birth and death.
24. Distribution of births and deaths recorded by enumerator, supervisor, detected through overlapping survey and intensive enquiry.
25. Distribution of rate of marriage per 1000 population and percentage distribution of marriages according to age and sex.
26. Life table of males based on age specific death rates for the years 1984, 1985 and 1986.
27. Life table of females based on age specific death rate for the years 1984, 1985 and 1986.
28. Life table of males and females together based on age specific death rates for the years 1984, 1985 and 1986.
29. Number of units and population in the universe and in samples.

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Table 1 - Mid-year estimated population, births, deaths and vital rates

Stratum	Estimated population, births and deaths				Vital rates					
	Population	Births	Deaths	Still birth	Infant death	Birth rate	Death rate	Still birth rate	Infant death rate	
1	2	3	4	5	6	7	8	9	10	
I	A	34820	957	151	-	-	27.48	4.3	-	-
	B	170134	3788	891	111	-	22.26	5.2	28.47	-
	C	857603	22992	4462	97	776	26.81	5.2	4.20	33.75
	D	8148185	220989	49505	3657	7062	27.12	6.1	16.28	31.96
Northern region	9210742	248726	55009	3865	7838	27.00	6.0	15.30	31.51	
II	A	94806	2191	365	-	-	23.11	3.8	-	-
	B	329310	4250	1870	-	170	12.91	5.7	-	40.00
	C	1397383	23986	8846	365	364	17.16	6.3	14.99	15.18
	D	10951259	217057	66338	2789	5841	19.82	6.1	12.69	20.91
Southern region	12772758	247484	77419	3154	6375	19.38	6.1	12.58	25.76	
State	21983500	496210	132428	7019	14213	22.57	6.0	13.95	28.64	

Table 2 - Sample population and estimated population for mid-year and at the beginning of the next year

Stratum	Observed population in samples in each stratum		Estimated population for each stratum		
	1-7-1986	1-1-1987	1-7-1986	1-1-1987	
1	2	3	4	5	
I	A	691	689	34820	34720
	B	1527	1557	170134	173476
	C	8040 8840	8885	857603	861968
	D	95792	96640	8148185	8220317
Northern region total	106850	107771	9210742	9290481	
II	A	779	791	94806	96267
	B	1937	1951	329310	331690
	C	15322	15460	1397383	1409968
	D	125629	126447	10951259	11022566
Southern region total	143667	144649	12772758	12860491	
State	250517	252420	21983500	22150972	

Table 3 - Mid-year sample population and estimated population according to age and sex

Age	Observed population			Estimated population		
	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7
0 - 1	2941	2816	5757	257190	245992	503182
1 - 4	10472	10215	20687	916971	894447	1811418
5 - 9	13767	13471	27238	1205038	1179943	2384981
10 - 14	14123	13601	27724	1237678	1191499	2429177
15 - 19	14266	15003	29269	1252488	1316253	2568741
20 - 24	12221	14647	26868	1074064	1284307	2358371
25 - 29	10449	11974	22423	917794	1051156	1968950
30 - 34	8401	9210	17611	736071	807400	1543471
35 - 39	6936	7553	14489	608713	663455	1272168
40 - 44	5499	5948	11447	482913	522197	1005110
45 - 49	5116	5491	10607	449325	482963	932288
50 - 54	4603	5120	9723	404857	450231	855088
55 - 59	3794	4010	7804	334165	352962	687127
60 - 64	3121	3521	6642	273979	309958	583937
65 - 69	2546	2785	5331	224259	246233	470492
70 & above	3071	3826	6897	272100	336899	608999
Total	121326	129191	250517	10647605	11335895	21983500

Table 4 - Sex ratio and percentage distribution of population by age group (years 1971, 1985 & 1986)

Age group	1971		1985		1986	
	Sex-ratio	Percentage population	Sex-ratio	Percentage population	Sex-ratio	Percentage population
1	2	3	4	5	6	7
0 - 4	980	13.5	996	10.4	971	10.5
5 - 9	974	13.6	964	11.2	979	10.8
10 - 14	983	13.5	985	11.4	963	11.1
(0 - 14)	(976)	(40.6)	(981)	(33.0)	(971)	(32.4)
15 - 19	1078	10.9	1057	11.7	1051	11.7
20 - 24	1046	9.2	1170	10.6	1196	10.7
25 - 29	1103	6.4	1162	8.7	1145	9.0
30 - 34	1080	5.6	1073	6.9	1097	7.0
35 - 39	1080	6.0	1103	5.6	1090	5.8
40 - 44	1005	4.6	1099	4.6	1081	4.6
45 - 49	941	4.5	1087	4.3	1075	4.2
50 - 54	969	3.2	1120	3.9	1112	3.9
55 - 59	982	2.7	1050	3.1	1056	3.1
60 - 64	1044	2.3	1114	2.7	1131	2.7
65 - 69	1086	1.6	1117	2.1	1098	2.1
70 & above	1116	2.4	1187	2.8	1238	2.8
Total	1020	100.0	1066	100.0	1065	100.0

Table 5 - Religion-wise sample population and estimated population

Stratum	Observed in samples				Estimated population				
	Hindu	Muslim	Chri- stian	Total	Hindu	Muslim	Chri- stian	Total	
1	2	3	4	5	6	7	8	9	
I	A	381	134	176	691	19199	6752	8869	34820
	B	1090	432	5	1527	121445	48132	557	170134
	C	4566	4043	231	8840	442966	392227	22410	857603
	D	55911	31829	8052	95792	4755858	2707414	684913	8148185
Northern region total		61948	36438	8464	106850	5339468	3154525	716749	9210742
II	A	84	8	687	779	10223	973	83610	94806
	B	1064	-	873	1937	180891	-	148419	329310
	C	7524	1215	6583	15322	686197	110810	600376	1397383
	D	72825	15426	37378	125629	6348259	1344706	3258294	10951259
Southern region total		81497	16649	45521	143667	7225570	1456489	4090699	12772758
State		143445	53087	53985	250517	12565038	4611014	4807448	21983500

Table 6 - Live births observed in samples and estimated according to sex

Stratum	Observed in samples			Estimated			
	Male	Female	Total	Male	Female	Total	
1	2	3	4	5	6	7	
I	A	13	6	19	655	302	957
	B	17	17	34	1894	1894	3788
	C	141	96	237	13679	9313	22992
	D	1358	1240	2598	115513	105476	220989
Northern region		1529	1359	2888	131741	116985	248726
II	A	8	10	18	974	1217	2191
	B	12	13	25	2040	2210	4250
	C	116	147	263	10579	13407	23986
	D	1324	1166	2490	115415	101642	217057
Southern region		1460	1336	2796	129008	118476	247484
State		2989	2695	5684	260749	235461	496210

Table 7 - Estimated number of total women, married women and live births in different age groups

Region	Age group of women								Total
	15-19	20-24	25-29	30-34	35-39	40-44	45-49		
	1	2	3	4	5	6	7	8	9
A. Estimated number of total women									
I. Northern region	549044	507430	411323	323540	268098	221547	192943		2473925
II. Southern region	767209	776877	639833	483860	395357	300650	290020		3653806
State	1316253	1284307	1051156	807400	663455	522197	482963		6127731
B. Estimated number of married women									
I. Northern region	113202	327881	339300	278581	226060	175694	140046		1600764
II. Southern region	43886	338661	501119	422935	345454	255028	228738		2135821
State	157088	666542	840419	701516	571514	430722	368784		3736585
C. Estimated number of live births									
I. Northern region	35099	100668	66675	28490	11937	4910	947		248726
II. Southern region	13203	112707	87928	26019	6229	962	436		247484
State (all births)	48302	213375	154603	54509	18166	5872	1383		496210
State (Female births)	22497	101472	73462	25294	9264	2516	956		235461

Table 8 - Age specific fertility rate, age specific marital fertility rate, G.F.R., T.F.R and G.R.R.

Regions	Age group women							
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54
	1	2	3	4	5	6	7	8
A. Age specific fertility rate								
I. Northern region	63.93	198.39	162.10	88.06	44.52	22.16	4.91	
II. Southern region	17.21	145.08	137.42	53.77	15.76	3.20	1.50	
State (all births)	36.70	166.14	147.08	67.51	27.38	11.24	2.86	
State (female births)	17.09	79.01	69.89	31.33	13.96	4.82	1.98	
B. Age specific marital fertility rate								
I. Northern region	310.06	307.03	196.51	102.27	52.80	27.95	6.76	
II. Southern region	300.85	332.80	175.46	61.52	18.03	3.77	1.91	
State (all births)	307.48	320.12	183.96	77.70	31.79	13.63	3.75	
	I. Northern region		II. Southern region		State			
G.F.R.	100.6		67.8		81.0			
T.F.R.	2.9		1.9		2.3			
G.R.R.					1.1			

Table 9 - Live births observed in samples classified by month of occurrence

Stratum	Number of live births reported from samples													Total
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
I	A	2	2	2	3	3	3	1	-	-	-	-	3	19
	B	4	1	6	5	5	1	-	3	2	2	2	3	34
	C	23	24	22	21	22	28	13	11	8	24	18	23	237
	D	227	187	228	210	234	239	232	223	173	207	221	217	2598
Northern region		256	214	258	239	264	271	246	237	183	233	241	246	2888
II	A	3	1	2	1	2	1	1	2	1	2	-	2	18
	B	-	2	4	-	4	-	3	2	-	4	4	2	25
	C	16	28	31	18	27	18	23	20	21	28	24	9	263
	D	197	187	237	209	221	203	226	202	198	184	205	221	2490
Southern region		216	218	274	228	254	222	253	226	220	218	233	234	2796
State		472	432	532	467	518	493	499	463	463	451	474	480	5684

Table 10 - Births by type of medical attention at delivery

Stratum	Type of medical attention received					Total	
	Institu- tional	Trained professional	Untrained professional	Non-pro- fessional	Not stated		
1	2	3	4	5	6	7	
I	A	18	-	1	-	-	19
	B	7	19	7	1	-	34
	C	161	28	28	20	-	237
	D	1754	215	471	152	6	2598
Northern region		1940	262	507	173	6	2888
II	A	17	-	-	1	-	18
	B	24	1	-	-	-	25
	C	243	20	-	-	-	263
	D	2334	73	48	35	-	2490
Southern region		2618	94	48	36	-	2796
State		4558	356	555	209	6	5684

Table 11 - Percentage distribution of births by age of mother and order of birth of child

Age group of mother	Order of birth of child										Total
	1	2	3	4	5	6	7	8	9	10	
1	2	3	4	5	6	7	8	9	10	11	12
15 - 19	86.80	12.30	0.90	-	-	-	-	-	-	-	100.00
20 - 24	55.01	33.57	9.09	2.01	0.24	0.08	-	-	-	-	100.00
25 - 29	23.20	36.20	24.83	10.69	3.11	1.35	0.51	0.11	-	-	100.00
30 - 34	11.98	24.76	23.16	16.77	11.02	7.35	2.56	1.44	0.48	0.48	100.00
35 - 39	5.24	11.43	18.09	10.95	15.24	15.24	10.00	4.76	5.24	3.81	100.00
40 - 44	1.47	4.41	8.82	10.29	11.77	17.65	11.77	17.65	7.35	8.82	100.00
45 - 49	6.25	6.25	25.00	-	-	6.25	12.50	6.25	18.75	18.75	100.00
All	40.85	30.10	15.11	6.56	2.99	2.06	0.99	0.60	0.39	0.35	100.00

Table 12 - Distribution of samples according to birth rate of each sample

Birth rate	Northern region				Southern region				State					
	No.		Percent		No.		Percent		1986		1985		1984	
	2	3	4	5	6	7	8	9	10	11				
Less than 16	2	3.3	22	24.7	24	16.0	15	10.0	17	11.3				
16 & less than 20	6	9.9	30	33.7	36	24.0	38	25.3	36	24.0				
20 & less than 24	12	19.7	24	27.0	36	24.0	39	26.0	36	24.0				
24 & less than 28	17	27.9	7	7.9	24	16.0	31	20.7	29	19.4				
28 & less than 32	11	18.0	4	4.5	15	10.0	10	6.7	13	8.7				
32 & less than 36	6	9.8	-	-	6	4.0	6	4.0	5	3.3				
36 & less than 40	5	8.2	2	2.2	7	4.6	8	5.3	8	5.3				
40 & less than 44	1	1.6	-	-	1	0.7	1	0.7	4	2.7				
44 & above	1	1.6	-	-	1	0.7	2	1.3	2	1.3				
Total	61	100.0	89	100.0	150	100.0	150	100.0	150	100.0				

Table 13 - Still births observed in samples and estimated according to sex and still birth rates

Stratum	Still births observed			Still births estimated			Total estimated no. of live births and still births	Still birth rate
	Male	Female	Total	Male	Female	Total		
1	2	3	4	5	6	7	8	9
I A	-	-	-	-	-	-	957	-
B	1	-	1	111	-	111	3899	28.47
C	-	1	1	-	97	97	23089	4.20
D	20	23	43	1701	1956	3657	224646	16.28
Northern region	21	24	45	1812	2053	3865	252591	15.30
II A	-	-	-	-	-	-	2191	-
B	-	-	-	-	-	-	4250	-
C	3	1	4	274	91	365	24351	14.99
D	12	20	32	1046	1743	2789	219846	12.69
Southern region	15	21	36	1320	1834	3154	250638	12.58
State	36	45	81	3132	3887	7019	503229	13.95

Table 14 - Religion-wise birth and death rates

Religion	Birth rate			Death rate		
	Northern region	Southern region	State	Northern region	Southern region	State
1	2	3	4	5	6	7
Hindus	23.02	18.60	20.48	6.51	6.32	6.40
Muslims	34.65	24.23	31.36	5.76	4.66	5.41
Christians	23.02	19.02	19.62	2.86	6.09	5.62
Total	27.00	19.38	22.57	5.97	6.06	6.02

Table 15 - Deaths observed in samples and estimated according to sex

Stratum	Death observed in samples			Estimated number of death			
	Male	Female	Total	Male	Female	Total	
1	2	3	4	5	6	7	
I	A	-	3	3	-	151	151
	B	3	5	8	334	557	891
	C	22	24	46	2134	2328	4462
	D	313	269	582	26624	22881	49505
Northern region		338	301	639	29092	25917	55009
II	A	1	2	3	122	243	365
	B	7	4	11	1190	680	1870
	C	56	41	97	5107	3739	8846
	D	430	331	761	37484	28854	66338
Southern region		494	378	872	43903	33516	77419
State		832	579	1511	72995	59433	132428

Table 16 - Distribution of deaths observed in samples according to age and sex

Age group	Northern region			Southern region			State		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10
Below 1	47	44	91	36	36	72	83	80	163
1 - 4	12	17	29	9	17	26	21	34	55
5 - 9	12	9	21	7	3	10	19	12	31
10 - 14	3	6	9	1	3	4	4	9	13
15 - 19	5	4	9	7	3	10	12	7	19
20 - 24	4	6	10	13	8	21	17	14	31
25 - 29	6	7	13	10	10	20	16	17	33
30 - 34	9	4	13	9	5	14	18	9	27
35 - 39	9	13	22	11	8	19	20	21	41
40 - 44	7	4	11	24	6	30	31	10	41
45 - 49	18	5	23	23	9	32	41	14	55
50 - 54	22	5	27	28	12	40	50	17	67
55 - 59	29	10	39	29	21	50	58	31	89
60 - 64	25	28	53	45	27	72	70	55	125
65 - 69	44	40	84	61	43	104	105	83	188
70 & above	86	99	185	181	167	348	267	266	533
All	338	301	639	494	378	872	832	679	1511

Table 17 - Age specific death rates based on estimated values

Age group	Northern region	Southern region	State		
			Total	Males	Females
1	2	3	4	5	6
Less than 1	32.50	24.33	28.25	28.01	28.49
1 - 4	2.83	2.54	2.68	2.06	3.31
5 - 9	1.53	0.78	1.14	1.44	0.84
10 - 14	0.72	0.27	0.47	0.29	0.67
15 - 19	0.71	0.59	0.64	0.83	0.46
20 - 24	0.72	1.35	1.14	1.45	0.89
25 - 29	1.44	1.45	1.45	1.51	1.40
30 - 34	1.85	1.40	1.58	2.23	0.98
35 - 39	3.82	2.18	2.84	2.88	2.80
40 - 44	2.30	4.56	3.63	5.75	1.68
45 - 49	5.38	5.00	5.19	7.94	2.56
50 - 54	7.08	6.63	6.81	10.72	3.28
55 - 59	13.39	10.05	11.28	15.10	7.65
60 - 64	21.49	17.25	18.79	22.57	15.46
65 - 69	43.84	30.75	35.43	41.00	30.36
70 & above	81.93	73.97	76.49	85.70	69.05
All	5.97	6.06	6.02	6.86	5.24

Table 18 - Deaths observed in samples classified by month of occurrence

Stratum	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
I A	-	1	-	-	1	-	-	-	-	-	-	1	3
B	2	-	3	-	1	-	-	-	-	2	-	-	8
C	3	3	4	5	5	4	7	7	2	3	2	1	46
D	49	38	58	45	35	53	64	53	47	41	44	55	582
Northern region	54	42	65	50	42	57	71	60	49	46	46	57	639
II A	-	-	-	1	1	-	-	-	-	-	-	1	3
B	3	2	-	1	-	1	-	-	-	2	1	1	11
C	4	8	8	8	5	9	10	10	9	4	12	10	97
D	58	52	50	58	63	88	68	67	73	69	52	63	761
Southern region	65	62	58	68	69	98	78	77	82	75	65	75	872
State	119	104	123	118	111	155	149	137	131	121	111	132	1511

Table 19 - Deaths observed in samples classified by medical attention received

Stratum	Medical attention received					Total	
	Institutional	Qualified medical practitioner	Unqualified medical practitioner	None	Not stated		
1	2	3	4	5	6	7	
I	A	2	-	-	1	-	3
	B	4	1	2	-	1	8
	C	22	12	6	6	-	46
	D	226	198	53	91	14	582
Northern region	254	211	61	98	15	639	
II	A	2	1	-	-	-	3
	B	8	3	-	-	-	11
	C	47	36	1	12	1	97
	D	427	154	34	120	26	761
Southern region	484	194	35	132	27	872	
State	738	405	96	230	42	1511	

Table 20 - Distribution of samples according to death rate of each sample

Birth rate	Northern region		Southern region		State					
	No.	Percent	No.	Percent	1986		1985		1984	
					No.	Percent	No.	Percent	No.	Percent
1	2	3	4	5	6	7	8	9	10	11
Less than 2	2	3.3	1	1.1	3	2.0	3	2.0	3	2.0
2 & less than 3	3	4.9	9	10.1	12	8.0	6	4.0	10	6.7
3 & less than 5	17	27.9	19	21.3	36	24.0	33	22.0	34	22.6
5 & less than 7	18	29.5	32	36.0	50	33.3	53	35.3	53	35.3
7 & less than 9	18	29.5	18	20.2	36	24.0	31	20.7	23	15.3
9 & less than 11	2	3.3	8	9.0	10	6.7	14	9.3	21	14.0
11 & less than 13	1	1.6	2	2.3	3	2.0	8	5.3	4	2.7
13 & less than 15	-	-	-	-	-	-	1	0.7	1	0.7
15 & above	-	-	-	-	-	-	1	0.7	1	0.7
Total	61	100.0	89	100.0	150	100.0	150	100.0	150	100.0

Table 21 - Infant deaths observed and estimated according to sex and infant death rate

Stratum	Infant deaths observed			Infant deaths estimated			Estimated live births	Infant mortality rate	
	Male	Female	Total	Male	Female	Total			
1	2	3	4	5	6	7	8	9	
I	A	-	-	-	-	-	957	-	
	B	-	-	-	-	-	3788	-	
	C	5	3	8	485	291	776	33.75	
	D	42	41	83	3574	3488	7062	220989	31.96
Northern region	47	44	91	4059	3779	7838	248726	31.51	
II	A	-	-	-	-	-	2191	-	
	B	-	1	1	-	170	170	4250	40.00
	C	2	2	4	182	182	364	23986	15.18
	D	34	33	67	2964	2877	5841	217057	26.91
Southern region	36	36	72	3146	3229	6375	247484	25.76	
State	83	80	163	7205	7008	14213	496210	28.64	

Table 22 - Infant deaths observed in samples of children born during the current year and previous year

	Born in 1985								Born in 1986								
	Less than 7 days		Less than 28 days		28 days & less than 1 year		Total		Less than 7 days		Less than 28 days		28 days & less than 1 year		Total		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
I	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	C	-	-	-	-	-	1	-	1	4	2	4	2	1	-	5	2
	D	1	-	1	1	3	2	4	3	26	26	32	29	6	9	38	38
Northern region	1	-	1	1	3	3	4	4	30	28	36	31	7	9	43	40	
II	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	B	-	-	-	-	-	-	-	-	1	-	1	-	-	-	1	
	C	-	-	-	-	-	-	-	-	2	-	2	2	-	2	2	
	D	-	-	-	-	4	4	4	4	20	22	28	26	2	3	30	29
Southern region	-	-	-	-	4	4	4	4	20	25	28	29	4	3	32	32	
State	1	-	1	1	7	7	8	8	50	53	64	60	11	12	75	72	

M-male F-female

Table 23 - Births and deaths detected through overlapping survey and intensive enquiry classified according to place and type of birth and death

Stratum	Birth						Death				
	Total	Place		Kind		Total	Place		Kind		
		In	Out	Live births	Still births		In	Out	Infant deaths	Other deaths	
1	2	3	4	5	6	7	8	9	10	11	
I	A	-	-	-	-	-	-	-	-	-	-
	B	1	-	1	1	-	-	-	-	-	-
	C	-	-	-	-	-	-	-	-	-	-
	D	50	10	40	49	1	12	8	4	3	9
Northern region		51	10	41	50	1	12	8	4	3	9
II	A	1	-	1	1	-	-	-	-	-	-
	B	-	-	-	-	-	1	1	-	-	1
	C	13	-	13	13	-	4	2	2	-	4
	D	108	7	101	108	-	20	8	12	2	18
Southern region		122	7	115	122	-	25	11	14	2	23
State		173	17	156	172	1	37	19	18	5	32

Table 24 - Distribution of births & deaths recorded by Enumerator, Supervisor, detected through overlapping survey and intensive enquiry

Items	Births			Deaths			
	Northern region	Southern region	State	Northern region	Southern region	State	
1	2	3	4	5	6	7	
1. Common to enumerator & supervisor	2169	2085	4254	503	713	1216	
2. Registered by enumerator	No.	2290	2186	4476	539	758	1297
	Percent	79.29	78.21	78.74	84.35	86.92	85.83
3. Listed by supervisor	No.	2691	2564	5255	586	800	1386
	Percent	93.17	91.74	92.45	91.71	91.74	91.73
4. Total netted by enumerator & supervisor	2812	2665	5477	622	845	1467	
5. Detected by others	26	9	35	5	1	6	
6. Overlapping survey	40	94	134	11	23	34	
7. Intensive enquiry	10	28	38	1	3	4	
Total	2888	2796	5684	639	872	1511	

Table 25 - Distribution of rate of marriage per 1000 population and percentage distribution of marriages according to age and sex

Age group	Rate of marriage per 1000 population						Percentage					
	First marriage		Remarriage		All marriages		First marriage		Remarriage		All marriages	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1	2	3	4	5	6	7	8	9	10	11	12	13
15 - 19	0.4	45.1	-	0.5	0.4	45.6	0.4	31.0	-	10.1	0.4	30.3
20 - 24	32.7	73.9	0.6	1.8	33.3	75.7	27.3	49.6	11.5	34.2	26.7	49.1
25 - 29	69.5	30.7	1.6	1.7	71.1	32.4	49.7	16.8	27.9	25.3	48.8	17.1
30 - 34	33.5	4.8	1.1	1.7	34.6	6.5	19.3	2.0	14.7	20.2	19.1	2.7
35 - 39	6.2	0.9	1.2	0.4	7.4	1.3	3.0	0.3	13.1	3.8	3.3	0.4
40 - 44	0.9	0.5	2.4	0.7	3.3	1.2	0.3	0.2	21.3	5.1	1.2	0.3
45 - 49	-	0.4	1.4	0.2	1.4	0.6	-	0.1	11.5	1.3	0.5	0.1
15 - 49	23.2	31.3	1.0	1.1	24.2	32.4	100.0	100.0	100.0	100.0	100.0	100.0

Table 26 - Life table of males based on age specific death rates of the years 1984, 1985 and 1986

Age x to x + n	Age specific death rate			Mean age specific death rate (n m x)	Probability of a person aged x dying before age x + n (qx)	No. of deaths (d x)	No. of surviving to age out of 10000 born alive (lx)	Years of life lived between x & x + n (Lx)	Years of life lived at x and above (Tx)	Expectation of life in years (Ex)	Beginning age (x)
	1984	1985	1986								
1	2	3	4	5	6	7	8	9	10	11	12
less than 1	39.40	36.67	28.01	0.03469	0.02788	2788	100000	97481	6688302	66.88	0
1 - 4	3.39	5.00	2.06	0.00348	0.01382	1343	97212	386162	6590821	67.80	1
5 - 9	1.03	1.11	1.44	0.00119	0.00059	566	95869	477930	6204659	64.72	5
10 - 14	0.69	0.49	0.29	0.00049	0.00024	229	95303	475943	5726729	60.09	10
15 - 19	1.42	0.93	0.83	0.00106	0.00053	504	95074	474110	5250786	55.23	15
20 - 24	1.58	1.88	1.45	0.00164	0.00082	775	94570	470913	4776676	50.51	20
25 - 29	2.54	2.10	1.51	0.00205	0.00102	957	93795	466583	4305763	45.91	25
30 - 34	2.61	3.29	2.23	0.00271	0.00135	1253	92838	461058	3839180	41.35	30
35 - 39	2.75	3.13	2.88	0.00292	0.00145	1328	91585	454605	3378122	36.89	35
40 - 44	4.51	6.67	5.75	0.00564	0.00278	2509	90257	445013	2923517	32.39	40
45 - 49	5.91	6.61	7.94	0.00682	0.00335	2940	87748	431390	2478504	28.25	45
50 - 54	12.84	10.69	10.72	0.01142	0.00555	4707	84808	412273	2047114	24.14	50
55 - 59	16.77	13.97	15.10	0.01528	0.00736	5895	80101	385768	1634841	20.41	55
60 - 64	21.00	26.07	22.57	0.02321	0.01097	8140	74206	350680	1249073	16.83	60
65 - 69	30.26	37.13	41.00	0.03613	0.01657	10947	66066	302963	898393	13.60	65
70 & above	98.49	93.51	85.70	0.09257	1.00000	55119	55119	595430	595430	10.80	70

Table 27 - Life table of females based on age specific death rates of the years 1984, 1985 and 1986

Age x to x + n	Age specific death rate			Mean age specific death rate (m_x)	Probability of a person aged x dying before age x + n (q_x)	No. of deaths (d_x)	No. of surviving to age out of 10000 born alive (l_x)	Years of life lived between x & x + n (L_x)	Years of life lived at x and above (T_x)	Expectation of life in years (Ex)	Beginning age (x)
	1984	1985	1986								
1	2	3	4	5	6	7	8	9	10	11	12
less than 1	27.61	32.51	28.49	0.02954	0.02951	2951	100000	97344	7279244	72.79	0
1 - 4	2.86	3.98	3.31	0.00338	0.01343	1303	97049	385590	7181900	74.00	1
5 - 9	1.11	0.94	0.84	0.00096	0.00048	460	95746	477580	6796310	70.98	5
10 - 14	0.91	0.56	0.67	0.00071	0.00035	334	95286	475595	6318730	66.31	10
15 - 19	0.62	0.40	0.46	0.00049	0.00024	228	94952	474190	5843135	61.54	15
20 - 24	1.24	0.98	0.89	0.00104	0.00052	493	94724	472388	5368945	56.68	20
25 - 29	1.80	1.03	1.40	0.00141	0.00070	660	94231	469505	4896557	51.96	25
30 - 34	1.36	1.47	0.98	0.00127	0.00063	589	93571	466183	4427052	47.31	30
35 - 39	1.40	1.12	2.80	0.00177	0.00085	790	92982	462935	3960669	42.60	35
40 - 44	1.06	1.36	1.68	0.00137	0.00068	627	92192	459393	3497734	37.94	35
45 - 49	3.61	2.71	2.56	0.00296	0.00147	1346	91565	454460	3038341	33.18	45
50 - 54	4.55	3.61	3.28	0.00381	0.00189	1705	90219	446833	2583881	28.64	50
55 - 59	5.93	5.77	7.65	0.00645	0.00317	2806	88514	435555	2137048	24.14	55
60 - 64	13.59	14.12	15.46	0.01439	0.00695	5957	85708	413648	1701493	19.85	60
65 - 69	23.26	22.57	30.36	0.02540	0.01194	9522	79751	374950	1287845	16.15	65
70 & above	75.59	86.16	69.05	0.07693	1.00000	70229	70229	912895	912895	13.00	70

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Table 27 - Life table of males & females together based on age specific death rates for the years 1984, 1985 & 1986

Age x to x + n	Age specific death rate			Mean age specific death rate ($n m_x$)	Probability of a person aged x dying before age x + n (q_x)	No. of deaths (D_x)	No. of surviving to age out of 10000 born alive (l_x)	Years of life lived between x & x + n (L_x)	Years of life lived at x and above (T_x)	Expectation of life in years (Ex)	Beginning age (x)
	1984	1985	1986								
1	2	3	4	5	6	7	8	9	10	11	12
less than 1	33.53	34.62	28.25	0.03213	0.02865	2865	100000	97416	6974483	69.74	0
1 - 4	3.13	4.49	2.68	0.00343	0.01363	1324	97135	385892	6877067	70.80	1
5 - 9	1.07	1.03	1.14	0.00108	0.00054	517	95811	477763	6491175	67.75	5
10 - 14	0.80	0.53	0.47	0.00060	0.00030	286	95294	475755	6013412	63.10	10
15 - 19	1.01	0.66	0.64	0.00077	0.00038	361	95008	474138	5537657	58.29	15
20 - 24	1.40	1.39	1.14	0.00131	0.00065	615	94647	471698	5063519	53.00	20
25 - 29	2.15	1.52	1.45	0.00171	0.00085	799	94032	468163	4591821	48.83	25
30 - 34	1.97	2.35	1.58	0.00197	0.00098	914	93233	463880	4123658	44.23	30
35 - 39	2.04	2.07	2.84	0.00232	0.00115	1062	92319	458940	3659778	39.64	35
40 - 44	2.74	3.89	3.63	0.00342	0.00170	1551	91257	452408	3200838	35.07	40
45 - 49	4.71	4.58	5.15	0.00481	0.00238	2135	89706	443193	2748430	30.64	45
50 - 54	8.53	6.95	6.81	0.00743	0.00365	3196	87571	429865	2305237	26.32	50
55 - 59	11.29	9.77	11.28	0.01070	0.00525	4430	84375	410600	1875372	22.23	55
60 - 64	17.18	19.77	18.79	0.01858	0.00880	7099	79945	38127	1464572	18.32	60
65 - 69	26.56	29.64	35.43	0.03048	0.01416	10315	72846	33845	1082594	14.86	65
70 & above	86.09	89.52	76.49	0.08403	1.00000	62531	62531	744151	744151	11.90	70

Table 29 - Number of units and population in the universe and in samples

Stratum	Universe		Samples		Percentage of sample population	Raising factor for stratum estimates	
	No. of villages	Popula- tion 1981	No. of units selected	Popula- tion 1981			
1	2	3	4	5	6	7	
I	A	73	33158	2	658	1.98	50.39210
	B	217	171582	2	1540	0.90	111.41688
	C	519	773395	6	7972	1.03	97.01392
	D	1263	7421252	51	87246	1.17	85.06123
Northern region	2074	8399387	61	97416	1.16		
II	A	260	87991	2	723	0.82	121.70263
	B	415	325570	3	1915	0.59	170.01044
	C	894	1353880	10	14845	1.09	91.20108
	D	2134	10515577	74	120631	1.15	87.17143
Southern region	3703	12283018	89	138114	1.12		
State	5777	20682405	150	235530	1.14		

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