

THE NATIONAL SAMPLE SURVEY

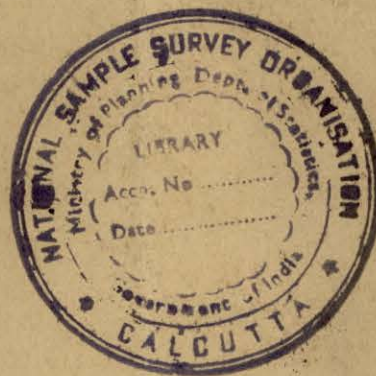
FOURTEENTH ROUND
JULY 1958—JULY 1959

NUMBER 48

PRELIMINARY ESTIMATES OF BIRTH AND
DEATH RATES AND OF THE RATE OF
GROWTH OF POPULATION



सत्यमेव जयते



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The Cabinet Secretariat : Government of India

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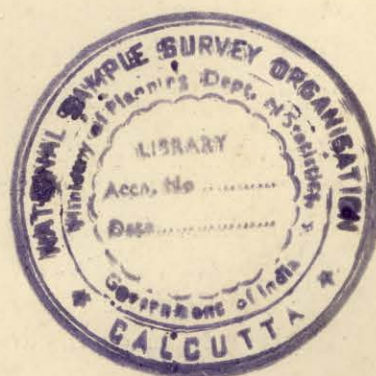
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CONTENTS

		PAGE
CHAPTER ONE	: Introduction	1
TWO	: Summary of findings	8
THREE	: Rates of birth, death and natural increase and rate of increase of population, including migration ...	11
FOUR	: Infant death proportion	21
FIVE	: Births and deaths by place of occurrence and type of attendance	24
SIX	: Population characteristics	27
APPENDIX 1	: List and presentation of detailed tables	36
2	: Notes on sample design and errors of estimate ...	86
3	: Rates of births, deaths and growth from the NSS Rounds, 1953-59	95
4	: Rate of marriage	107
5	: Facsimilie of the Schedules of Investigations ...	127

INDEX TO TABLES IN THE TEXT

CHAPTER ONE

TABLE 1.1 :	Total number of sample villages surveyed and numbers of sample households and persons in the rural zones in the six sub-rounds : NSS 14th round, rural ..	6
-------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------	---

CHAPTER TWO

TABLE 2.1 :	Birth and death rates (per 1000 population) estimated and registered, and expectation of life at birth : British India 1881-90 to 1931-40 and Indian Union 1941-50 ..	8
2.2 :	Growth of population of the Indian Union	8

CHAPTER THREE

TABLE 3.1 :	Rates per 1000 persons for births, deaths and the difference of births and deaths in the rural zones from two interpenetrating samples in the six sub-rounds : NSS 14th round rural	12
3.2 :	General fertility rate per 1000 females aged 15-44 in the rural zones from two interpenetrating samples in the six sub-rounds : NSS 14th round rural	15

National Sample Survey

PAGE

<p>TABLE 3.3 : Rate of increase (per cent per year) of rural population (including migration) obtained from the enumeration and re-enumeration of population in the same set of sample villages in the first two sub-rounds (first sub-round : July-September 1958; second sub-round : September-November 1958) and the last two sub-rounds (fifth sub-round : March-April 1959; sixth sub-round : May-July 1959) with the population enumerated in the first two sub-rounds as base 100, by state and all-India from two interpenetrating samples : NSS 14th round rural</p> <p>3.4 : Percentage of persons remaining in the same sample villages and moving from one village to another in the same State during the interval of enumeration and re-enumeration in the first two and last two sub-rounds from two interpenetrating samples : NSS 14th round rural</p>	16
19	

CHAPTER FOUR

<p>TABLE 4.1 : Number of infant deaths per 1000 live births in the rural zones from two interpenetrating samples in the six sub-rounds : NSS 14th round rural</p> <p>4.2 : Infant death proportion (with an average exposure of six months) and conventional infant mortality per 1000 live births from two interpenetrating samples : NSS 14th round rural, first sub-round (July-September 1958)</p>	22
23	

CHAPTER FIVE

<p>TABLE 5.1 : Percentage distribution of births by type of attendance and place of occurrence and attendance type from two interpenetrating sample : all-India rural households, NSS 14th round, first and second sub-rounds combined</p> <p>5.2 : Percentage distribution of deaths by type of attendance and place of occurrence and attendance type from two interpenetrating samples : all-India rural households, NSS 14th round, first and second sub-rounds combined</p>	25
26	

CHAPTER SIX

<p>TABLE 6.1 : Percentage distribution of population by sex and sex-ratio (number of males per 100 females) in age groups in the rural zones from two interpenetrating samples : NSS 14th round, all sub-rounds combined</p> <p>6.2 : Percentage distribution of population in age groups by sex in the rural sector : Census 1951 and NSS rounds : all-India rural</p> <p>6.3 : Average household size and percentage distribution of population by religion and status of economic activity from two interpenetrating samples : NSS 14th round rural, all sub-rounds combined</p> <p>6.4 : Percentage distribution of the sample population by activity status and sex from two interpenetrating samples : NSS 14th round rural, first sub-round (July-September 1958)</p> <p>6.5 : Percentage distribution of the gainfully employed (sample population) by industry group and sex from two interpenetrating samples : NSS 14th round rural, first sub-round (July-September 1958)</p> <p>6.6 : Percentage distribution of the gainfully employed (sample population) by occupation group and sex from two interpenetrating samples : NSS 14th round rural, first sub-round (July-September 1958)</p>	28
29	
31	
33	
34	
35	

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FOURTEENTH ROUND : JULY 1958—JULY 1959

NUMBER 48

PRELIMINARY ESTIMATES OF BIRTH AND DEATH RATES AND OF THE RATE OF GROWTH OF POPULATION

*This report entitled, "Preliminary Estimates of Birth and Death Rates and of the Rate of Growth of Population, Fourteenth Round, July 1958—July 1959", was prepared by the Indian Statistical Institute, Calcutta and is being published in the form in which it was submitted to the Government of India and the Government are not responsible for the views expressed in the report.**

CHAPTER ONE

INTRODUCTION

1.1. The importance of obtaining firm estimates of the current growth rate of population in India is obvious. In all programmes of economic planning meant to raise the per capita income of the nation, a proper allowance has necessarily to be made for population growth. In the first and the second Five Year Plans of India, the Census 1941-50 rate of growth of 1.3 per cent per year was assumed. If the current rate is more than that of the previous census decade, obviously planning should be made with reference to the increased population. If the rate for the Census 1941-50 decade continues now, population can be taken to increase by about 5 million per year; but if the rate is 1.8 or 1.9 per cent per year, then population can be taken to increase by 7 or 8 million per year. The difference these estimates make is tremendous. But apart from the birth and death rates calculated by the Census Actuary for the census decade 1941-50¹, no reliable estimates of the birth and death rates and of the rate of natural increase in India were available for the recent period; and the computed rates for the 1941-50 decade were centred at about 1946. A Sample Census of births and deaths was conducted by the Census authorities in 20 States in 1952-54². The rates of births and deaths obtained from this Sample Census were

* The draft report (Number **D.36**) was submitted to the Government of India in March 1960 and the revised Report in November 1960.

¹ Census of India 1951, Paper No. 6, 1954, "*Estimation of birth and death rate in India during 1941-50*", Government of India.

² Census of India, Paper No. 1, 1955, "*Sample Census of births and deaths in 1953-54, Uttar Pradesh*"; Paper No. 2, 1955, "*Sample Census of births and deaths, 1952-53*".

National Sample Survey

admittedly under-estimates and in the absence of any knowledge of the extent of underestimation of the components, the position of the rate of natural increase, which is obtained as a balancing item, remained uncertain.

1.2. Birth and death registration is known to be extremely defective in India as in many other countries, the extent of under-registration being estimated by the Census Actuary to be of the order of 31 per cent for births and 28 per cent for deaths in the census decade 1941-50. The registration system is known to have broken down during the last war and even the earlier levels of registration efficiency have not reportedly been reached³. The registration birth and death data have not in fact been utilised in any of the successive censuses in constructing the Indian Life Tables. The registration of births and deaths is not likely to improve appreciably in the near future. Attempts have been made from time to time by a number of demographers to utilise the registration data to find the "true" vital rates. Such method could not be adopted on an all-India basis to provide the current vital rates and also the estimated rates so obtained from the registration data did not in some cases appear favourable with the estimates of vital rates obtained from the enumeration of the population at successive censuses and use either of the reverse survival method or of the difference method : on the other hand, the successive censuses can give only the overall vital rates for the preceding decades and have a lag of at least five years. For obtaining the current vital rates, therefore, properly designed sample surveys with built-in methods of obtaining plausible rates appear to be the most promising approach in demographic studies in India at present.

1.3. The importance of demographic sample surveys in India to provide the rate of growth was emphasised by Professor Mahalanobis as early as 1937⁴. Some local surveys conducted in the past by the Indian Statistical Institute, the All-India Institute of Hygiene and Public Health and Gokhale Institute of Politics and Economics also covered information on fertility and mortality. A more elaborate population study was taken up under the joint auspices of the United Nations and the Government of India in 1952 in the Mysore State⁵. But these local surveys were naturally not able to provide the national picture.

1.4. The fertility history of couples began to be collected from the NSS 2nd round (April-June 1951) and the NSS Report No. 7, "Couple fertility"⁶, was prepared on the basis of the materials of the second and the fourth rounds. Information on the current births and deaths was collected on an exploratory basis from the NSS 7th round (October 1953-March 1954) on a very small scale. The results of an analysis done on these data have been presented in Appendix III.

³ "The registration system is reported to have deteriorated during the last war. This deterioration of the war period has not been set right so far, and the lower levels shown by the data both for birth and death may be due partly to under-registration." *Planning Commission Document No. CSO-PU/59-3*, March 20, 1959.

⁴ P. C. Mahalanobis (1937) : "The need of a sample survey of the growth of Population in India", *Sankhyā*, 3.

⁵ United Nations-Government of India : "*Mysore Study : Population Trend and Socio-economic Development in Selected Areas of Mysore State*" (Draft).

⁶ By A. Das Gupta, R. K. Som, M. Majumdar and S. Mitra; Government of India, 1955.

Estimates of Birth and Death Rates and Growth of Population

1.5. At the request of Professor Mahalanobis, Honorary Statistical Advisor to the Cabinet, the Working Group on Vital and Health Statistics of the Planning Commission, in its first meeting held on 13th and 14th March 1958, examined this question and recommended to the National Sample Survey (NSS) to give high priority to the use of the NSS for obtaining reliable estimates of birth and death rates and of the rate of natural increase. A Sub-Committee was formed to explore possibilities to utilise the NSS for obtaining national estimates of vital rates, etc. at whose request some exploratory work relating to the estimation of the rate of increase of population and of birth and death rates in the rural areas as a first priority was incorporated in the 14th round by NSS Programme Committee. Accordingly, the 14th round of the NSS, which covered a period July 1958-July 1959, included provision to enumerate the population, birth and death in 2,616 sample villages: this survey is being continued in the 15th round covering the period July 1959-July 1960. The 14th round was divided into six sub-rounds, each of which covered a period of two months. Information was collected by field investigators by personal visits to each household. Preliminary results based on each of the six sub-rounds have been submitted to the Government of India as the sub-rounds were completed⁷ and the present report gives the preliminary results for all the sub-rounds together. A fuller report will be prepared later.

SAMPLE DESIGN

1.6. A note on the sample design is given in Appendix II. Broadly speaking, 436 sample villages were covered in each sub-round of two months in the form of two independent and interpenetrating sub-samples (with replacement) of equal size of 218 villages: all households in the sample villages were completely enumerated. Each sub-sample is equally valid and supplies equally valid estimates of all population characteristics.

ORGANISATION

1.7. The Field Directorate of the National Sample Survey under the control of the Cabinet Secretariat of the Government of India collects the information (excepting for West Bengal and Bombay city which are directly covered by the staff of the Indian Statistical Institute), while the Institute is responsible for the sample design, the field schedules and the processing and tabulation of the data.

CONCEPTS AND DEFINITIONS

1.8. *Definition of a household*: A *de jure* concept was adopted, and a household was considered to consist of its normal resident members only and births and deaths occurring to these members, whatever be the place of occurrence, were

⁷ National Sample Survey Draft Number 36/1, 23 December 1958; Number 36/2, 9 April 1959; Number 36/3, 31 May 1959; Number 36/4, 30 June 1959; Number 36/5, 31 July 1959; Number 36/6, 26 September 1959; Number 36/5.1, 15 December 1959; and Number 36/6.1, 31 December 1959.

recorded. Persons who normally pass nights under the same roof and take food from the same kitchen irrespective of the immediate length of stay in the household, were considered as normally resident members in the household; normally resident members thus exclude guests but include temporary absentees. The inclusion of an item "period of absence, if any" in the schedule was useful as a check in this regard. The decision as to whether a particular person would be treated as a normally resident member in a household was left to the informant, the judgement of the investigator being exercised to know that a person is (a) not claimed to be a normally resident member in more than one household or (b) not omitted in all households: a normally resident member in a household should not have formed a separate household, or joined, as a usual member, another household. Thus, a student residing in a hostel who has a normal place of residence is excluded from the hostel and included in the place of normal residence, but orphans residing in a hostel and without any other normal places of residence are included in the hostel. Casual patients at hospital are excluded, not the permanent patients. The count of population was on a *de facto* basis only for the floating population without any normal residence who were looked for and counted in the place where they were found at the time of investigation.

1.9. Instruction was given specifically to seek for and count single member households, if alive. Deaths to persons constituting single member households are known to be difficult to ascertain. It should be noted that if the frame consists of the extant households only, the population would refer to that obtaining on the date of survey and would, by definition, exclude single member households which ceased to exist consequent on the death of the persons. Information on single member households, both alive and dead, was sought from the neighbours and responsible individual persons in the village; enquiry was also made in every tenth household surveyed. In this setting, the chance of omission of the single member households is likely to be small.

ITEMS OF INFORMATION

1.10. The following items of information were collected for the households in schedule 12.1 for the first two sub-rounds. Detailed particulars of persons normally resident in the household were taken—relationship to the head of the household; for the member absent on the date of survey, the period of most recent, continuous absence from the household (in weeks); sex, age last birth day (in years); marital status; for ever-married females, total number of live births; usual activity status; and industry and occupation. For the vital events of births, the reference to mother in the household, the age of mother (in years) at reported and at first birth, the sex of the child, the month and year of birth, and the mode of determination of the time of birth (definite statement of age; relating with—local or religious festival,—agricultural season; and others whose ages are known; registration certificates; other evidences; guess, no evidence) the place of birth (within or outside the village; in own premises; mother's father's premises; other premises; hospital, maternity homes

Estimates of Birth and Death Rates and Growth of Population

and other medical institutions; and others), the type of birth (still birth, born alive but since dead, and born alive and also alive at the time of the survey), the type of medical attendance to the mother at the time of delivery (*dhai*, i.e. untrained midwife, qualified midwife or nurse; physician; relatives; others; no attendance), the age of the child on the date of survey or at death (in weeks) and the informant's relationship to the child were taken; for the deaths, information was collected on the relationship of the deceased to the head, sex, age at death (in years), the month and year of death and the mode of determination of the time of death, the place of death and the medical attendance type, the relationship of the informant to the deceased, and whether the deceased was with or without gainful employment prior to his death.

1.11. In contrast to the first two sub-rounds, only a brief schedule (12.2) was canvassed in the third to the sixth sub-rounds: the demographic particulars of the individual household members—age, sex, marital status, total number of live births, usual activity status, usual industry-occupation were not taken; only the number of the usual household members was collected under three broad age groups (0-14, 15-44, and 45-above) by sex. The reliability of the current vital data when a brief schedule, without provision for recording information for each usual household member separately is used for survey could thus be examined. The same information on births and deaths and on the household characteristics as in the first two sub-rounds also continued to be collected in the third to sixth sub-rounds.

1.12. In the fifth and the sixth sub-rounds, while re-enumerating the population in the same set of villages enumerated in the first and second sub-rounds respectively (see paragraph 1 and Chapter Three), the re-enumeration schedule 12.1.1. was used. The investigators were supplied with schedules containing household identification as also some identification particulars for members of the household (relation to head, sex, age and marital status). A check was made for each normally resident person with these lists and the cause of decrement (by death, or by emigration), or increment (by birth or immigration) were ascertained as also the origin or destination for the migrants (rural areas of the same State and other States, urban areas of the same State and other States, outside India). The births and deaths occurring in the intervening period were also recorded in the appropriate blocks. The facsimile of the three types of schedule are shown in Appendix V. To test the re-enumeration work of the investigators, a number of dummy entries was introduced in these schedules; the results were wholly satisfactory. Also, a new item of information, "days sick during last month" was to be entered so that on the one hand the investigator has to ask pointed questions about an individual earlier enumerated and this would on the other hand incidentally help him to secure indirectly any delicate information about death which may have taken place⁸.

⁸ P. C. Mahalanobis and D. B. Lahiri (1960): "Analysis of errors in censuses and surveys with special reference to experience in India", *International Statistical Conference, Tokyo*.

National Sample Survey

TABLE (1.1): TOTAL NUMBER OF SAMPLE VILLAGES SURVEYED AND NUMBERS OF SAMPLE HOUSEHOLDS AND PERSONS IN THE RURAL ZONES IN THE SIX SUB-ROUNDS : NSS 14TH ROUND ALL-INDIA RURAL

zone	sample ^a	first sub-round (July-September 1958)			second sub-round (September- November 1958)			third sub-round (November 1958- January 1959)		
		vill- ages	house- holds	per- sons	vill- ages	house- holds	per- sons	vill- ages	house- holds	per- sons
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1. north	1	44	3167	16865	41	2700	15104	41	2965	17062
	2	45	2928	15985	43	3029	16990	41	2631	15324
	C	89	6095	32850	84	5729	32094	82	5596	32386
2. central	1	47	3872	19625	44	3043	15605	46	4525	23217
	2	44	3568	18020	47	3559	18019	43	3004	16061
	C	91	7440	37645	91	6602	33624	89	7528	39278
3. east	1	51	3551	18891	50	3666	19264	49	4515	23845
	2	51	4039	21645	48	4690	24650	48	3253	17141
	C	102	7590	40536	98	8356	43914	97	7768	40986
4. south	1	39	4547	21062	39	5726	25645	39	5752	27025
	2	39	5302	24112	39	4747	22258	39	4777	22064
	C	78	9849	45174	78	10473	47903	78	10529	49089
5. west	1	35	3264	16886	36	3875	18596	36	4654	24419
	2	35	4124	20159	36	4191	21236	36	3529	18270
	C	70	7388	37045	72	8066	39832	72	8183	42689
6. all-India rural	1	216	18401	93329	210	19010	94214	211	22410	115568
	2	214	19961	99921	213	20216	103153	207	17194	88860
	C	430	38362	193250	423	39226	197367	418	39604	204428

sample ^a	fourth sub-round (January-March 1959)			fifth sub-round (March-May 1959)			sixth sub-round (May-July 1959)			all sub-rounds combined			
	vill- ages	house- holds	per- sons	vill- ages	house- holds	per- sons	vill- ages	house- holds	per- sons	vill- ages	house- holds	per- sons	
(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	
1. 1	39	2743	14864	42	3478	19113	43	3894	22987	250	18947	105995	
	2	41	3172	18083	42	3282	18531	41	3299	19452	253	18341	104365
	C	80	5915	32947	84	6760	37644	84	7193	42439	503	37288	210360
2. 1	43	4011	20670	44	3019	15276	46	3302	17130	270	21771	111523	
	2	46	4130	20521	47	3787	18694	46	4114	20708	273	22152	112023
	C	89	8141	41191	91	6806	33970	92	7416	37838	543	43933	223546
3. 1	51	3486	19586	49	3947	20913	50	3844	19799	300	23009	122298	
	2	50	4465	24639	50	4223	23497	49	4200	22239	296	24870	133811
	C	101	7951	44225	99	8170	44410	99	8044	42038	596	47879	256109
4. 1	39	4319	20295	39	5342	26114	39	4581	21913	234	30267	142054	
	2	38	4911	22935	39	5067	23497	39	5778	26986	233	30582	141852
	C	77	9230	43230	78	10409	49611	78	10359	48899	467	60849	283906
5. 1	36	3912	21093	36	2976	15449	36	3170	17248	215	21851	113691	
	2	36	3349	18000	36	4221	21680	35	3130	16887	214	22544	116232
	C	72	7261	39043	72	7197	37129	71	6300	34135	429	44395	229923
6. 1	208	18471	96508	210	18762	96865	214	18791	99077	1269	115845	595561	
	2	211	20027	104178	214	20580	105899	210	20521	106272	1269	118499	608283
	C	419	38498	200686	424	39342	202764	424	39312	205349	2538	234344	1203844

^aIn this and following tables "C" indicates samples 1 and 2 combined.

Estimates of Birth and Death Rates and Growth of Population

1.13. *Definition of birth and death rates* : The number of births and deaths in the household was recorded with the month of event for the two years preceding the date of survey and those for the year preceding the date of survey only have been taken into account for calculating the vital rates given in this report. This method is aimed at minimising omissions in reporting cases arising from lapse of memory. In calculating birth and death rates, the population *as enumerated* was taken as the base; but in calculating the percentage increase and decrease of population from the enumeration and re-enumeration of the same set of villages after an interval of time, the population at the base period was taken as the base. The conventional method is however to take the mid-year population as the base; it is easy however to translate one into the other.

1.14. Estimates of birth and death rates and of the balance of births over deaths, that is, the rate of natural increase were obtained for each of the six sub-rounds. The rate of growth of population was also directly obtained by enumerating in the 5th and 6th sub-rounds, the population of the same set of villages which were enumerated in the 1st and 2nd sub-rounds respectively. The time-interval between the first and the second enumeration was about eight months in each case. Apart from providing the rate of natural increase obtained as the excess of births over deaths in the base population in the inter-enumeration period, this method had the additional advantage of singling out the effect of migration on population growth.

DISTRIBUTION OF SAMPLE VILLAGES

1.15. The number of the sample villages surveyed, and of sample households and persons in the different zones are shown in Table (1.1): the composition of the zones is given in Table (2.3.0) in Appendix I. A number of sample villages could not be surveyed due to various reasons and for preparation of estimates substitution was effected at the tabulation stage.

CHAPTER TWO

SUMMARY OF FINDINGS

2.1. The preliminary results of the NSS 14th round population, birth and death data have been summarised in this chapter. Before the main results are presented it may be useful to have the trend of the birth and death rates for the previous census decades which are reproduced in Table (2.1) and of the growth of population in Table (2.2). The population of the re-organised States and Zones have been given in Table (2.3.0) of Appendix I.

TABLE (2.1): BIRTH AND DEATH RATES (PER 1000 POPULATION), ESTIMATED AND REGISTERED, AND EXPECTATION OF LIFE AT BIRTH: BRITISH INDIA 1981-90 TO 1931-40 AND INDIAN UNION 1941-50

items	census decade						
	1881-90	1891-00	1901-10	1911-20	1921-30	1931-40	1941-50
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. birth rate/1000							
1.1 estimated ^a	48.9	45.8	48.1	49.2	46.4	45.2	39.9
1.2 registered ^b		34	37	37	34.2	34.2	27.5
2. death rate/1000							
2.1 estimated ^a	41.3	44.4	42.6	48.6	36.3	31.2	27.4
2.2 registered ^b				34.3	25.6	23.3	19.7
2.3 Life Table death rate	40.0	42.0	43.7	49.8	37.3	31.5	31.2
3. expectation of life at birth ^c	24.6	23.6	22.6	18.9	26.9	32.1	32.5

^aEstimated rates, excepting for 1941-50, quoted in Census of India 1951, Paper No. 6, 1954, from "The population of India and Pakistan", by Kingsley Davis, Princeton University Press, 1951: these relate to the British India. Estimated rates for 1941-50 computed by the Census Actuary and presented in the above-mentioned Census Paper. For the 1941-50 decade, A. J. Coale and E. M. Hoover have estimated the birth and death rates at 41.3/1000 and 30.9/1000 respectively ("Population Growth and Economic Development in Low-Income Areas", Princeton University, 1958).

^bFrom Census of India, 1951, Paper No. 6, 1954.

^cFrom Census of India 1951, Paper No. 2, 1954.

TABLE (2.2): GROWTH OF POPULATION OF THE INDIAN UNION

item	census year					
	1901	1911	1921	1931	1941	1951
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. population ^a (in lakh=10 ⁵)	2,355	2,490	2,481	2,755	3,128	3,569
2. rate of increase (percent per annum)	-0.02	0.56	-0.04	-1.04	1.27	1.32

^aCensus of India 1951, Volume I Part IA—Report pp. 122, 126: adjusted for area and inflation; the figures exclude Jammu and Kashmir where the Census was not conducted in 1951.

Estimates of Birth and Death Rates and Growth of Population

2.2. *Birth and death rates and rate of growth* : For rural India as a whole, the birth rate for the reference period July 1957–July 1959 came out at 38.3/1000 (with sub-sample estimates of 38.5 and 38.0) the death rate at 19.0/1000 (with sub-sample estimates of 19.5 and 18.6), the rate of natural increase at 1.92 per cent per year (with sub-sample estimates of 1.90 and 1.94). On the other hand, the rate of increase (including migration), obtained on re-enumeration of the same set of sample villages after an interval of time, came out at 1.39 per cent per year (with sub-sample estimates of 1.31 and 1.44 per cent), the net rural-urban migration being estimated at 0.34 per cent (with sub-sample estimates of 0.61 and 0.11 per cent) per year of the rural population : the rate of natural increase from these values came out at 1.72 per cent per year (with sub-sample estimates of 1.90 and 1.57 per cent). From the analysis of the vital data of the earlier NSS rounds made in Appendix III, it was seen that the birth rate has remained at the level of 38-40/1000 but the death rate has declined from 24/1000 in NSS 7th Round (1953-54), through 21/1000 in NSS 9th-10th rounds (1955-56), to 19.0/1000 in NSS 14th round (1958-59).

2.3. The general fertility rate, which expresses the fertility per thousand females aged 15-44, came out at 175 at the all-India rural level.

2.4. *Infant death proportion* : The infant death proportion, that is the number of children who were born within the reference period of the preceding 365 days and were dead at the time of the survey, that is with an average exposure of about six months came out at 113/1000 at the all-India rural level (with sub-sample estimates of 115 and 110). The rate was the highest, 153/1000 in the central zone and the lowest 84/1000 in the north and south zones. On the other hand, the infant mortality rate, calculated by relating the children who died within the reference year before completing one year of life (some of whom were born outside the reference year) to the children born in the reference year, came out at 159/1000.

2.5. *Births and deaths by type of attendance and place of occurrence* : About 87 per cent of births and 92 per cent of deaths occurred to the households in the same villages in which they were enumerated for the purpose of the survey; 1.6 per cent of the birth and 1.2 per cent of the death occurred in hospitals, maternity homes, etc. About 10.2 per cent of the births occurred in the mother's father's premises. About 20 per cent of births and 17 per cent of the deaths were attended by physicians.

2.6. *Household size* : The average size of the household was 5.14 at the all-India level. The north zone returned the highest household size, 5.64, and the south zone the lowest, 4.67.

2.7. *Age distribution* : About 40.6 per cent of the population were in the age group 0-14, 44.3 per cent in the age group 15-44 and the rest 15.1 per cent, aged 45-above. In the earlier two age groups the sex ratio, defined as the number of males per 100 females, was 107 and 102 respectively; it was, however, 99 for persons aged 45-above. Among the zones, the maximum proportion of population below 15, 42.6 per cent, occurred in the north zone and the minimum, 38.9 per cent, in the south

zone. The sex ratio was the highest (111) in the north zone and the lowest (99) in the south zone.

2.8. *Status of economic activity* : In the population enquiry, information was also collected on the usual status of economic activity of all persons in the first two sub-rounds. About 45.8 per cent of the rural population were returned as gainfully employed, 0.2 per cent unemployed, the rest 54 per cent economically inactive at all-India rural level. The proportion of population economically active was the highest, 52.3 per cent, in the west zone and the lowest, 38.7 per cent, in the east zone; at the all India rural level, 46.0 per cent of the population (60.2 per cent of the males and 30.0 per cent of the females) were economically active.

2.9. *Industry and occupation* : Agriculture and related industries employed 86.1 per cent of the gainfully employed population in rural India; and 84.9 per cent of the gainfully employed had agricultural occupations.

CHAPTER THREE

RATES OF BIRTH, DEATH AND NATURAL INCREASE AND RATE OF INCREASE OF POPULATION, INCLUDING MIGRATION

BIRTH AND DEATH RATES AND RATE OF NATURAL INCREASE

3.1. The rates of births, deaths and of growth in the five rural zones for six sub-rounds and also for all the sub-rounds combined, each with two independent, interpenetrating sample estimates, are shown below in Table (3.1); the results for the States have been given in Appendix I. For rural India as a whole, the agreement between the sub-sample estimates seems to be reasonable but the difference naturally becomes bigger over the zonal breakdowns owing to the decreasing size of samples. The variation in the estimates over the sub-rounds is not too great and the effect of the introduction of the brief schedule in the third to sixth sub-rounds seems to be negligible. The birth rate for the round as a whole came out at 38.3/1000 (with sub-sample estimates of 38.5 and 38.0), the death rate at 19.0/1000 (with sub-sample estimates of 19.5 and 18.6), and the rate of natural increase at 1.92 per cent (with sub-sample estimates of 1.90 and 1.94). A comparison with the rate of natural increase obtained from the re-enumeration of the population in the same set of villages and with the estimated birth and death rates for the earlier decades and consideration of the various factors at work during the intervening period, detailed in Appendix III, would indicate that the birth and death rates calculated for the reference period of last year are generally plausible and consistent and do not suggest any gross amount of under-reporting. For 1958 the registered birth rate for all-India was 25.1/1000, and death rate 11.3/1000, which were admittedly under-estimates.

GENERAL FERTILITY RATES

3.2. The overall birth rates discussed above have the total population as the base 1000, and show the net result of the sex-ratio of the population, the age composition of females, and the current conditions of marriage, widowhood and marital fertility. Such rates are often termed "crude" birth rates. It is possible, as is well-known, to calculate fertility rates taking separate accounts of the various factors—the composition of the female population, specially those ever-married and currently married in the child bearing age-span in the different regions. The fertility rate per 1000 females aged 15-44, also called the "general fertility rate", would give the effect of differences in age composition of the female population and the conditions of marriage, widowhood (and separation and divorce), and marital fertility; the fertility rate per 1000 ever-married (currently married, widowed, divorced and separated) females aged 15-44 would give the "nuptial fertility" rate and the fertility rate per 1000 currently married women would give the rate of "marital fertility". Table (3.2) gives below the general fertility rate per 1000 females in the child bearing age group 15-44 for the five rural zones, for the six sub-rounds separately : the other two types

National Sample Survey

of fertility rates can be calculated only after the tabulation of the data by sex, age and marital status. At the all-India rural level, the general fertility rate comes out to be 175 per 1000 females aged 15-44. The ordering of the zones remains the same for both the birth and fertility-rates indicating that the zones do not vary much in regard to the proportion of females in the child-bearing age-group to the total population: this will also be evident from Table (6.1) of Chapter Six on population characteristics. The fertility rate was the highest (204) in the central zone and lowest, about (152-153) in the south and the east zones. The interpenetrating sample agreement was also generally good for the sub-rounds and the zones.

TABLE (3.1): RATES PER 1000 PERSONS FOR BIRTHS, DEATHS AND DIFFERENCE OF BIRTHS AND DEATHS IN THE RURAL ZONES FROM TWO INTERPENETRATING SAMPLES IN THE SIX SUB-ROUNDS: NSS 14TH ROUND RURAL

zone ^a (number of sample villages)	sample	rates/1000 persons						
		birth						
		first sub- round	second sub- round	third sub- round	fourth sub- round	fifth sub- round	sixth sub- round	com- bined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. north:	1	42.46	43.87	40.23	50.32	36.65	37.15	41.86
	2	39.87	37.62	37.53	43.22	40.77	35.74	39.18
	(540) C	41.18	41.33	38.87	46.83	38.64	36.48	40.60
2. central:	1	45.06	45.70	42.62	45.60	40.87	43.42	43.99
	2	44.80	51.51	39.13	45.89	39.85	42.12	44.23
	(564) C	44.94	49.19	41.18	45.73	40.32	42.67	44.11
3. east:	1	32.19	33.79	33.62	37.03	34.47	35.98	34.58
	2	32.98	34.51	30.05	35.24	35.61	32.85	33.67
	(612) C	32.61	34.19	32.05	36.10	35.03	34.18	34.11
4. south:	1	32.73	34.30	33.69	37.07	33.29	34.73	34.19
	2	35.37	36.29	32.13	33.47	33.49	36.39	34.40
	(468) C	34.14	35.17	32.86	35.05	33.41	35.62	34.30
5. west:	1	38.22	39.48	37.81	40.55	37.18	38.61	38.65
	2	40.57	38.06	39.92	36.86	38.88	42.15	39.23
	(432) C	39.39	38.68	38.68	38.67	38.08	40.35	38.94
6. all-India: (rural)	1	38.37	38.76	37.49	41.63	36.33	38.13	38.50
	2	38.56	40.45	35.50	38.65	37.33	37.65	38.02
	(2,616) C	38.47	39.66	36.36	40.13	36.85	37.87	38.26

^aStates constituting zones: (1) north: Rajasthan, Punjab, Himachal Pradesh, Delhi, and Jammu and Kashmir; (2) Central: Uttar Pradesh and Madhya Pradesh; (3) east: Bihar, Orissa, West Bengal, Assam, Manipur and Tripura; (4) south: Andhra Pradesh, Madras and Kerala; (5) west: Bombay and Mysore.

Estimates of Birth and Death Rates and Growth of Population

TABLE (3.1) (Contd.): RATES PER 1000 PERSONS FOR BIRTHS, DEATHS AND DIFFERENCE OF BIRTHS AND DEATHS IN THE RURAL ZONES FROM TWO INTERPENETRATING SAMPLES IN THE SIX SUB-ROUNDS: NSS 14TH ROUND RURAL

zone ^a (number of sample villages)	sample	rates/1000 persons						
		death						
		first sub- round	second sub- round	third sub- round	fourth sub- round	fifth sub- round	sixth sub- round	com- bined
(1)	(2)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1. north :	1	17.96	13.89	15.72	18.57	14.46	13.39	15.39
	2	19.73	16.39	15.86	17.63	15.33	13.04	16.20
	(540) C	18.83	14.91	15.79	18.11	14.88	13.23	15.77
2. central :	1	26.85	32.20	30.50	27.95	27.58	22.42	28.04
	2	25.52	32.11	27.89	30.34	24.04	24.38	27.51
	(564) C	26.24	32.15	29.42	29.02	25.65	23.56	27.78
3. east :	1	13.16	18.26	14.35	22.84	19.51	13.53	17.20
	2	13.51	14.89	16.20	15.51	16.67	13.17	14.94
	(612) C	13.35	16.38	15.16	19.03	18.13	13.32	16.02
4. south :	1	13.95	14.64	13.49	14.77	12.70	13.66	13.86
	2	17.82	13.42	13.64	12.71	12.03	14.94	14.08
	(468) C	16.01	14.11	13.57	13.61	12.35	14.35	13.97
5. west :	1	17.90	17.62	18.88	15.07	24.61	17.00	18.41
	2	18.97	16.65	19.04	16.33	15.88	17.53	17.33
	(432) C	18.44	17.07	18.94	15.71	19.96	17.26	17.87
6. all-India (rural)	1	18.98	19.50	19.82	21.57	20.04	16.28	19.47
	2	19.12	19.89	18.81	19.08	17.24	17.22	18.58
	(2,616) C	19.05	19.70	19.36	20.32	18.60	16.79	19.02

^aStates constituting zones : (1) north : Rajasthan, Punjab, Himachal Pradesh, Delhi, and Jammu and Kashmir; (2) central : Uttar Pradesh and Madhya Pradesh; (3) east : Bihar, Orissa, West Bengal, Assam, Manipur and Tripura; (4) south : Andhra Pradesh, Madras and Kerala; (5) west : Bombay and Mysore.

National Sample Survey

TABLE (3.1) (Contd.): RATES PER 1000 PERSONS FOR BIRTHS, DEATHS AND DIFFERENCE OF BIRTHS AND DEATHS IN THE RURAL ZONES FROM TWO INTERPENETRATING SAMPLES IN THE SIX SUB-ROUNDS: NSS 14TH ROUND RURAL

zone ^a (number of sample villages)	sample	rates/1000 persons						
		growth = birth-death						
		first sub- round	second sub- round	third sub- round	fourth sub- round	fifth sub- round	sixth sub- round	com- bined
(1)	(2)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
1. north :	1	24.50	29.98	24.51	31.75	22.19	23.76	26.47
	2	20.14	21.23	21.67	25.59	25.44	22.70	22.98
	(540) C	22.35	26.42	23.08	28.72	23.76	23.25	24.83
2. central :	1	18.21	13.50	12.12	17.65	13.29	21.00	15.95
	2	19.28	19.40	11.24	15.55	15.81	17.74	16.72
	(564) C	18.70	17.04	11.76	16.71	14.67	19.11	16.33
3. east :	1	19.03	15.53	19.27	14.19	14.96	22.45	17.38
	2	19.47	19.62	13.85	19.73	18.94	19.68	18.73
	(612) C	19.26	17.81	16.89	17.07	16.90	20.86	18.09
4. south :	1	18.78	19.66	20.20	22.30	20.59	21.07	20.33
	2	17.55	22.87	18.49	20.76	21.46	21.45	20.32
	(468) C	18.13	21.06	19.29	21.44	21.06	21.27	20.33
5. west :	1	20.32	21.86	18.93	25.48	12.57	21.61	20.24
	2	21.60	21.41	20.88	20.53	23.00	24.62	21.90
	(432) C	20.95	21.61	19.74	22.76	18.12	23.09	21.07
6. all-India (rural)	1	19.39	19.26	17.67	20.06	16.29	21.85	19.03
	2	19.44	20.56	16.19	19.57	20.09	20.43	19.44
	(2,616) C	19.42	19.96	17.00	19.81	18.25	21.08	19.24

^aStates constituting zones : (1) north : Rajasthan, Punjab, Himachal Pradesh, Delhi and Jammu and Kashmir; (2) central : Uttar Pradesh and Madhya Pradesh; (3) east : Bihar, Orissa, West Bengal, Assam, Manipur and Tripura; (4) south : Andhra Pradesh, Madras and Kerala; (5) west : Bombay and Mysore.

Estimates of Birth and Death Rates and Growth of Population

RATE OF INCREASE, INCLUDING MIGRATION

3.3. The rate of increase of the population obtained from the two sets of sample villages re-enumerated for population after an interval of about eight months in NSS fifth and sixth sub-rounds combined are given in Table (3.3) below. In calculating the percentages in this table, the base population prevailing at the time of the first and the second sub-rounds was taken as 100; in Table (3.1), however, while giving the rates of birth and death and natural increase, the population as enumerated at the time of each of the six-rounds was taken as base for calculation of the birth and death rates for each sub-round. It is easy, however, to translate one into the other. Table (3.3) shows the combined results from the re-enumeration in the fifth and sixth sub-rounds for each State (or State-group) the percentage decrease by death; by emigration to urban areas within the same State and within other States, to rural areas of other States, and outside India; and the percentage increase by birth, by immigration from the urban areas within the same State, and within other States, from rural areas of other States, and outside India; and also shows the net population after an effective interval of one year with the base population in the first two sub-rounds as 100.

TABLE (3.2) : GENERAL FERTILITY RATE PER 1000 FEMALES AGED 15-44 IN THE RURAL ZONES, FROM TWO INTERPENETRATING SAMPLES IN THE SIX SUB-ROUNDS :
NSS 14TH ROUND RURAL

zone (number of sample villages)	sample	sub-round						all sub- rounds combined
		I	II	III	IV	V	VI	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. north	1	214	219	203	237	182	178	206
	2	196	189	178	211	203	173	192
	(540) combined	205	207	190	224	192	176	199
2. central	1	219	218	191	208	191	199	204
	2	220	251	175	207	183	184	204
	(564) combined	219	238	185	206	187	190	204
3. east	1	156	156	147	161	151	156	154
	2	158	160	132	158	156	147	152
	(612) combined	158	158	141	159	153	150	153
4. south	1	146	149	146	166	151	150	151
	2	162	167	138	148	148	159	153
	(468) combined	155	157	142	* 156	150	155	152
5. west	1	181	192	169	181	162	180	177
	2	187	179	181	174	180	194	182
	(432) combined	184	184	174	178	171	187	179
6. all-India (rural)	1	183	181	167	187	165	172	176
	2	183	191	155	176	169	168	174
	(2,616) combined	183	187	162	181	167	170	175

TABLE (3.3) : RATE OF INCREASE (PER CENT PER YEAR) OF RURAL POPULATION (INCLUDING MIGRATION) OBTAINED FROM THE ENUMERATION AND RE-ENUMERATION OF POPULATION IN THE SAME SET OF SAMPLE VILLAGES IN THE FIRST TWO SUB-ROUNDS (FIRST SUB-ROUND : JULY-SEPTEMBER 1958; SECOND SUB-ROUND : SEPTEMBER-NOVEMBER 1958) AND THE LAST TWO SUB-ROUNDS (FIFTH SUB-ROUND : MARCH-APRIL 1959; SIXTH SUB-ROUND : MAY-JULY 1959) WITH THE POPULATION ENUMERATED IN THE FIRST TWO SUB-ROUNDS AS BASE 100, BY STATE AND ALL INDIA FROM TWO INTERPENETRATING SAMPLES : NSS 14TH ROUND, RURAL

state (number of sample villages)	sample	base popula- tion	by death	decrease				increase				current popula- tion			
				by emigration to				by immigration from							
				urban areas within state	other states	rural area (other states)	outside India	gross decrease	by births	urban areas within state	other states		rural areas (other states)	outside India	gross increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1. Rajasthan	1	100.00	1.98	0.07	3.15	0.16	—	5.36	3.77	0.03	0.64	0.16	—	4.60	99.24
	2	100.00	1.32	0.13	1.30	0.32	0.03	3.10	3.28	0.10	0.16	0.17	—	3.71	100.61
	(40)	combined	100.00	1.66	0.10	2.36	0.23	0.01	4.36	3.56	0.06	0.44	0.16	—	4.22
2. Punjab	1	100.00	2.01	0.25	0.39	—	0.23	2.88	5.09	0.32	—	0.19	—	5.60	102.72
	2	100.00	1.16	0.46	0.39	0.11	—	2.12	3.08	0.04	0.12	—	—	3.24	101.12
	(32)	combined	100.00	1.56	0.36	0.39	0.06	0.11	2.48	4.02	0.17	0.06	0.14	—	4.39
3. Jammu and Kashmir	1	100.00	1.63	0.06	—	—	—	1.69	2.42	0.12	0.02	—	0.02	2.58	100.89
	2	100.00	1.66	—	0.02	—	—	1.68	2.11	0.01	—	—	0.06	2.18	100.50
	(108)	combined	100.00	1.65	0.02	0.01	—	1.68	2.23	0.05	0.01	—	0.05	2.34	100.66
4. Uttar Pradesh	1	100.00	3.32	0.50	0.83	0.24	0.10	4.99	4.55	0.34	0.46	0.15	0.12	5.62	100.63
	2	100.00	2.14	0.13	0.40	0.18	0.02	2.87	3.37	0.12	0.41	0.09	0.00	3.99	101.12
	(104)	combined	100.00	2.58	0.27	0.56	0.21	0.05	3.67	3.81	0.20	0.43	0.11	0.05	4.60
5. Madhya Pradesh	1	100.00	1.45	0.14	—	0.07	0.01	1.67	3.64	0.35	0.07	0.11	—	4.17	102.50
	2	100.00	1.74	0.06	0.06	0.10	—	1.96	3.32	0.18	0.25	0.18	—	3.93	101.97
	(84)	combined	100.00	1.58	0.11	0.03	0.09	0.00	1.81	3.50	0.28	0.15	0.14	—	4.07

TABLE (3.3) (Contd.): RATE OF INCREASE (PER PER CENT YEAR) OF RURAL POPULATION (INCLUDING MIGRATION) OBTAINED FROM THE ENUMERATION AND RE-ENUMERATION OF POPULATION IN THE SAME SET OF SAMPLE VILLAGES IN THE FIRST TWO SUB-ROUNDS (FIRST SUB-ROUND : JULY-SEPTEMBER 1958; SECOND SUBROUND : SEPTEMBER-NOVEMBER 1958) AND THE LAST TWO SUB-ROUNDS (FIFTH SUB-ROUND : MARCH-APRIL 1959; SIXTH SUB-ROUND : MAY-JULY 1959) WITH THE POPULATION ENUMERATED IN THE FIRST TWO SUB-ROUNDS AS BASE 100, BY STATE AND ALL INDIA, FROM TWO INTERPENETRATING SAMPLES : NSS 14TH ROUND, RURAL

state (number of sample villages)	sample	base popula- tion	by death	decrease				increase				gross increase	current popula- tion		
				by emigration to			gross decrease	by immigration from							
				urban area within state	other states	rural area (other states)		outside India	urban areas within state	other states	rural areas (other states)			outside India	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
6. Bihar	1	100.00	1.61	0.65	0.54	0.13	0.02	2.95	3.38	0.10	0.42	0.24	—	4.14	101.19
	2	100.00	1.84	0.26	0.30	0.07	0.03	2.50	3.15	0.13	0.08	0.07	0.01	3.44	100.94
	(76)	combined	100.00	1.75	0.41	0.40	0.09	0.02	2.67	3.24	0.12	0.22	0.14	0.01	3.73
7. Orissa	1	100.00	1.96	0.47	1.01	0.08	—	3.52	2.84	0.35	0.36	0.12	—	3.67	100.15
	2	100.00	1.52	0.12	0.31	0.08	—	2.03	3.04	0.05	0.10	0.15	—	3.34	101.31
	(40)	combined	100.00	1.75	0.30	0.68	0.08	—	2.81	2.93	0.21	0.24	0.14	—	3.52
8. West Bengal	1	100.00	0.71	0.02	—	—	0.04	0.77	3.82	0.04	0.01	—	0.18	4.05	103.28
	2	100.00	0.74	0.12	0.01	0.07	0.01	0.95	2.49	0.07	—	—	—	2.56	101.61
	(56)	combined	100.00	0.73	0.07	0.01	0.04	0.03	0.88	3.03	0.06	0.00	—	0.07	3.16
9. Assam	1	100.00	1.05	1.49	—	0.03	—	2.57	2.69	—	—	—	—	2.69	100.12
	2	100.00	1.02	0.08	—	0.12	0.31	1.53	3.95	—	0.07	0.27	0.07	4.36	102.83
	(32)	combined	100.00	1.03	0.81	—	0.08	0.15	2.07	3.30	—	0.03	0.13	0.03	3.49
10. Andhra Pradesh	1	100.00	2.09	0.90	0.29	0.34	—	3.62	3.05	0.20	0.03	0.02	0.06	3.36	99.74
	2	100.00	1.39	0.06	0.00	0.19	—	1.64	2.55	0.01	0.02	0.01	—	2.59	100.95
	(72)	combined	100.00	1.70	0.43	0.13	0.26	—	2.52	2.77	0.09	0.02	0.01	0.03	2.92

TABLE (3.3) (Contd.): RATE OF INCREASE (PER CENT PER YEAR) OF RURAL POPULATION (INCLUDING MIGRATION) OBTAINED FROM THE ENUMERATION AND RE-ENUMERATION OF POPULATION IN THE SAME SET OF SAMPLE VILLAGES IN THE FIRST SUB-ROUNDS (FIRST SUB-ROUND: JULY-SEPTEMBER 1958; SECOND SUB-ROUND: SEPTEMBER-NOVEMBER 1958) AND THE LAST TWO SUB-ROUNDS (FIFTH SUB-ROUND: MARCH-APRIL 1959; SIXTH SUB-ROUND: MAY-JULY 1959) WITH THE POPULATION ENUMERATED IN THE FIRST TWO SUB-ROUNDS AS BASE 100, BY STATE AND ALL INDIA, FROM TWO INTERPENETRATING SAMPLES: NSS
14TH ROUND, RURAL

state (number of sample villages)	sample	base popula- tion	by death	decrease				gross decrease	by births	increase				gross increase	current popula- tion
				by emigration to						by immigration from					
				urban areas within state	other states	rural area (other states)	outside India			urban areas within state	other states	rural areas (other states)	outside India		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
11. Madras	1	100.00	1.89	1.77	0.32	0.01	0.20	4.19	4.47	1.15	0.23	0.05	0.47	6.37	102.18
	2	100.00	1.52	0.40	—	0.61	0.09	2.62	2.71	0.20	0.03	0.63	0.04	3.61	100.99
(60)	combined	100.00	1.70	1.07	0.15	0.32	0.14	3.38	3.57	0.67	0.13	0.35	0.25	4.97	101.59
12. Kerala	1	100.00	1.80	—	0.91	0.19	0.10	3.00	3.59	0.01	0.08	0.05	—	3.73	100.73
	2	100.00	0.75	—	0.17	0.44	0.06	1.42	3.78	0.02	0.23	0.27	—	4.30	102.88
(24)	combined	100.00	1.21	—	0.49	0.33	0.08	2.11	3.70	0.02	0.16	0.18	—	4.06	101.95
13. Bombay	1	100.00	1.70	0.82	0.02	0.03	—	2.57	4.21	0.58	0.03	0.19	—	5.01	102.44
	2	100.00	1.41	0.24	0.02	0.21	—	1.88	3.27	0.22	0.04	0.21	0.03	3.77	101.89
(104)	combined	100.00	1.53	0.49	0.02	0.13	—	2.17	3.68	0.38	0.04	0.20	0.02	4.32	102.15
14. Mysore	1	100.00	1.26	0.16	0.01	—	—	1.43	3.74	0.22	—	0.01	—	3.97	102.54
	2	100.00	1.45	0.07	0.06	0.48	—	2.06	3.29	0.35	0.11	0.53	—	4.28	102.22
(40)	combined	100.00	1.36	0.11	0.04	0.24	—	1.75	3.51	0.29	0.05	0.28	—	4.13	102.38
15. all-India (rural)	1	100.00	1.90	—	—	1.14	0.05	3.09	3.80	—	—	0.53	0.07	4.40	101.31
	2	100.00	1.56	—	—	0.38	—	0.03	1.97	3.13	0.27	—	0.01	3.41	101.44
(872)	combined	100.00	1.71	—	—	0.73	—	0.03	2.47	3.43	0.39	—	0.04	3.86	101.39

Estimates of Birth and Death Rates and Growth of Population

TABLE (3.4): PERCENTAGE OF PERSONS REMAINING IN THE SAME SAMPLE VILLAGES AND MOVING FROM ONE VILLAGE TO ANOTHER IN THE SAME STATE DURING INTERVAL OF ENUMERATION AND RE-ENUMERATION IN THE FIRST TWO SUB-ROUNDS FROM TWO INTERPENETRATING SAMPLES:
NSS 14TH ROUND RURAL

state	number of sample villages	percentage of persons					
		remaining in the same village			moving from one village to another in the state		
		sample 1	sample 2	combined	sample 1	sample 2	combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Rajasthan	40	92.10	93.41	92.70	2.54	3.49	2.94
2. Punjab	32	94.28	94.56	94.42	2.84	3.32	3.10
3. Jammu and Kashmir	108	90.87	95.82	93.88	7.44	2.50	4.44
4. Uttar Pradesh	104	93.16	95.63	94.70	1.85	1.50	1.63
5. Madhya Pradesh	84	95.73	95.14	95.46	2.60	2.90	2.73
6. Bihar	76	93.98	94.16	94.09	3.07	3.34	3.24
7. Orissa	40	92.76	95.00	93.83	3.72	2.97	3.36
8. West Bengal	56	97.13	97.33	97.25	2.10	1.72	1.87
9. Assam	32	93.99	93.73	93.87	3.44	4.74	4.06
10. Andhra Pradesh	72	91.17	95.53	93.61	5.21	2.83	3.87
11. Madras	60	89.84	92.78	91.36	5.97	4.60	5.26
12. Kerala	24	89.82	93.43	91.85	7.18	5.15	6.04
13. Bombay	104	93.30	95.10	94.32	4.13	3.02	3.51
14. Mysore	40	94.95	93.92	94.43	3.62	4.02	3.82
15. all-India (rural)	872	93.29	94.92	94.19	3.62	3.11	3.34

National Sample Survey

3.4. From the information it was possible to calculate not only overall rate of increase, in contrast to the rate of natural increase shown in Table (3.1) above, but also the components of such increase—rural-urban and inter-State migration¹. The intervening period between the first and the fifth and between the second and the sixth sub-rounds was about eight months but for each village separately the actual number of days between the enumeration and re-enumeration was calculated and the data adjusted so as to provide percentage increase or decrease of population for reference period of one year : this assumes that there is no seasonal bias in the results obtained on the basis of the re-survey. Vital events of births, deaths, and migration may, however, have some relations with the seasons.

3.5. At the all-India rural level, the decrease in population by emigration from the rural areas could be only to the urban areas and to areas outside India and the increase by immigration could be from the urban areas and also from areas outside India. At the all-India level, the agreement between the two sub-sample estimates seems to be reasonable but the difference naturally becomes bigger for the State breakdowns owing to the decreasing size of samples. For rural India as a whole with the combined sample of 872 villages corresponding to the period July 1958-July 1959, the rate of increase of population comes out at 1.39 per cent per year (with sub-sample estimates of 1.31 and 1.44 per cent) while the rate of natural increase, being given by the balance of the increase by births over the decrease by deaths, comes out at 1.72 per cent per year (with sub-sample estimates of 1.90 and 1.57 per cent)². The migration from rural to urban areas was 0.73 per cent per year (with sub-sample estimates of 1.14 and 0.38 per cent), the migration from urban to rural areas 0.39 per cent per year (with sub-sample estimates of 0.53 and 0.27 per cent) and the net rural-urban migration was 0.34 per cent per year (with sub-sample estimates of 0.61 and 0.11 per cent) of the rural population.

3.6. The proportion of persons who remained in the same sample villages and the proportion of persons who moved from one village to another in the same State during the interval may be of some interest. Table (3.4) shows such proportions obtained from the re-enumeration in the fifth and sixth sub-rounds combined for the States, for the two independent samples. It may be noted that these two proportions together give for any State the proportion of persons who remained in the rural areas of the State, also obtainable from Table (3.3) by subtracting from unity the proportion of gross decrease. The corresponding results from the re-enumeration in the fifth and sixth sub-rounds separately are given in Appendix I.

¹The names of the state of origin (for immigrants) and of destination (for emigrants) were not recorded. A corresponding table for the zones (which comprised certain states) could not, therefore, be prepared.

² The increase by births relate to the infants born during the interval and alive at the time of the re-enumeration. Infants who were born and also died during the interval are not included either in the increase by births and the decrease by deaths.

CHAPTER FOUR

INFANT DEATH PROPORTION

4.1. Table (4.1) gives the infant death proportion per thousand live births in the five rural zones in the six sub-rounds obtained from the two interpenetrating samples. This infant death proportion was obtained by expressing the number of children who were born in the reference year and were dead by the time of the survey as a ratio of the total children born in the reference year. The average exposure for the children born last year was thus the interval between the time of birth and the time of interview, that is, on an average, six months. When the age of the children, at present (if alive) or at death (if dead), is tabulated, it would be possible to calculate the infant death proportion for the full exposure of one year on some assumptions. The infant death proportion with an average exposure of six months came out at 113/1000 at the all-India rural level (with sub-sample estimates of 115 and 110). The rate was the highest, 153/1000, in the central zone and the lowest, 84/1000, in the north zone. The infant death proportions for the different States are shown in the Appendix I.

4.2. From the data collected in the survey, infant mortality rate can be calculated in another manner, by expressing the number of children dying at age "O" (that is, before completing one year of life) last year (some of whom were born outside the reference period of last year) to the total children born last year. This is the conventional "infant mortality rate" and in this calculation it will be noticed that the same cohort of children born in a year is not investigated for one year after birth. Table (4.2) shows the conventional infant mortality rates so calculated along with the infant death proportion (with an average exposure of six months) for the rural zones and all-India rural from the first sub-round of the NSS 14th round by two interpenetrating samples. While the infant death proportion (with an average exposure of six months) was 125/1000 (with sub-samples estimates of 126 and 123), the conventional infant mortality rate was 159/1000 (with sub-sample estimates of 166 and 153). It is well known that even if infant death proportions were calculated with a full exposure of one year, the rate would not generally be the same as that for the conventional infant mortality.

4.3. The registered infant mortality rate was 98/1000 total births (including still births) in 1957 : this is admittedly an under-estimate, the infant deaths being under-reported to a greater extent than the total births. The implied infant mortality rate in the Census 1941-50 Life Tables, calculated by the Census Actuary, was 183/1000 live births. Coale and Hoover have, however, estimated the rate at 225/1000 for the same period¹.

¹ A. J. Coale and E. M. Hoover, "*Population Growth and Economic Development in Low-Income Areas*", Princeton University Press, 1958.

National Sample Survey

TABLE (4.1): NUMBER OF INFANT DEATHS PER 1000 LIVE BIRTHS IN THE RURAL ZONES, FROM TWO INTERPENETRATING SAMPLES IN THE SIX SUB-ROUNDS: NSS 14TH ROUND RURAL

zone (number of sample villages)	sample	sub-round						all sub- rounds combined
		I	II	III	IV	V	VI	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. north (540)	1	134	85	94	98	74	88	93
	2	83	66	66	99	52	68	72
	combined	111	78	81	98	63	79	84
2. central (564)	1	151	184	176	138	125	127	152
	2	154	196	151	135	105	155	153
	combined	153	191	167	138	114	143	153
3. east (612)	1	113	128	131	89	109	88	109
	2	102	110	138	98	108	74	103
	combined	107	118	134	93	109	80	106
4. south (468)	1	77	103	58	78	88	83	82
	2	128	90	83	54	65	92	86
	combined	105	97	71	65	76	88	84
5. west (432)	1	127	98	97	87	108	103	103
	2	105	115	80	83	77	85	92
	combined	116	107	90	85	91	94	97
6. all-India rural (2,616)	1	126	124	124	106	104	100	115
	2	123	134	111	102	87	104	110
	combined	125	130	119	104	95	102	113

4.4. In NSS Report No. 7, "Couple Fertility", the infant death proportion (with the full exposure of one year) among children of the couples married in 1946-51 and belonging to rural areas came out at 181/1000 live births in NSS 2nd round (April-June 1951) and at 184/1000 (with sub-sample estimates of 178 and 189) in NSS 4th round (April-September 1952): for the whole of India the rate was estimated at 183/1000. In the Health Survey of West Bengal conducted by the Indian Statistical Institute in 1955, the infant death proportion for ever-married females married in 1940-45 and having five or more terminations came out at 188/1000 in the rural areas².

4.5. In the NSS 7th round (October 1953-March 1954) the infant death proportion (with average exposure of six months) and the conventional infant mortality rate, calculated from sample frequencies, were respectively 111/1000 and 150/1000 in the rural sector. It appears that these rates were under estimates as compared to those in the NSS 14th Round.

² R. K. Som and N. C. Das, "On recall lapse in infant death reporting", *Sankhyā*, 21, 1959.

Estimates of Birth and Death Rates and Growth of Population

TABLE (4.2): INFANT DEATH PROPORTION (WITH AN AVERAGE EXPOSURE OF SIX MONTHS) AND CONVENTIONAL INFANT MORTALITY PER 1000 LIVE BIRTHS FROM TWO INTERPENETRATING SAMPLES: NSS ROUND RURAL, FIRST SUB-ROUND (JULY- SEPTEMBER 1958)

zone (number of sample villages)	sample	infant death proportion per 1000 live-births last year (average exposure 6 months)	conventional infant mortality per 1000 live births last year
(1)	(2)	(3)	(4)
1. north	1	134	173
	2	83	110
	(80) combined	111	143
2. central	1	151	209
	2	154	182
	(88) combined	153	197
3. east	1	113	111
	2	102	124
	(101) combined	107	118
4. south	1	77	114
	2	128	164
	(77) combined	105	142
5. west	1	127	169
	2	105	146
	(70) combined	116	158
6. all-India rural	1	126	166
	2	123	153
	(416) combined	125	159

CHAPTER FIVE

BIRTHS AND DEATHS BY PLACE OF OCCURRENCE AND TYPE OF ATTENDANCE

5.1. Information was collected on the place of birth and death and type of attendance—relative, *dhai*, physicians, etc. Table (5.1) gives the percentage distribution of births by the place of birth and type of attendance at the all-India rural level from the two interpenetrating samples, obtained from the two sub-rounds, of the NSS 14th round: the results of the first and second sub-rounds separately are shown in Appendix I. Results for all the sub-rounds will be shown in the fuller report. A high proportion of births (86.7 per cent) occurs naturally in the villages in which the households are normally resident; in these villages again the maximum proportion of births (81.7 per cent) occurs in the premises occupied by the household itself, 4.0 per cent on the mother's father's premises and only $\frac{1}{2}$ per cent in hospitals, maternity homes, etc. A considerably high proportion (13.3 per cent) of births occurs to householders outside villages in which they are normally resident—6.2 per cent in the mother's father's premises and 1.1 per cent in hospitals, maternity homes, etc. Thus for all births, 1.6 per cent occurs in hospitals, maternity homes, etc. and 10.2 per cent in the mother's father's premises

5.2. In the Census of India 1951, migration was reckoned from the place of birth. This, however, is vitiated by the fact that women in India often go to their father's place for delivery, especially for the first confinement. And if that place is located in a different area than that occupied normally by the household, a distorted picture of migration reckoned from the birth place would be obtained. No information on such temporary migration of the expectant mothers to their fathers' place was, however, available. From Table (5.1) it is seen that such births occurring in the mothers' fathers' premises outside the sample villages constitute 6.2 per cent and the total *dhais* outside the villages constitute 13.3 per cent of all births.

5.3. The distribution of births by type of attendance shows that 19.6 per cent were attended by physicians, 2.5 per cent by trained midwives or nurses, 26.0 per cent by *dhais* and 39.2 per cent by relatives.

5.4. Table (5.2) gives the corresponding percentage distribution of deaths by place of death and attendance type from the two interpenetrating samples at the all-India rural level, obtained from the first two sub-rounds: the results for the first and second sub-rounds separately are given in Appendix I. In the case of deaths, a much higher proportion (92.2 per cent) than for births occurred in the sample villages and within own premises (88.5 per cent). The percentage of deaths, outside the sample villages was only 7.8 per cent, but the percentage of deaths in the hospitals, etc. was slightly lower (1.2 per cent) than that for births, 0.4 per cent within the village and 0.8 outside. Of the deaths, about 17.2 per cent were attended by physicians, and about 8 per cent by *dhais* or nurses.

Estimates of Birth and Death Rates and Growth of Population

TABLE (5.1): PERCENTAGE DISTRIBUTION OF BIRTHS BY PLACE OF BIRTHS AND ATTENDANCE TYPE FROM TWO INTERPENETRATING SAMPLES: NSS 14TH ROUND, RURAL, FIRST AND SECOND SUB-ROUNDS COMBINED

place of birth	sample	attendance type						total
		no attendance	relative	dhai	mid-wife or nurse	physician	others	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>within the village :</i>								
1. own premises	1	2.44	33.17	21.35	0.57	15.14	7.33	80.00
	2	3.66	33.46	23.22	1.98	16.11	4.76	83.19
	combined	3.07	33.32	22.33	1.30	15.65	5.99	81.66
2. mother's father's premises	1	0.13	1.74	1.03	0.10	1.36	0.18	4.54
	2	0.08	1.48	0.95	0.11	0.76	0.13	3.51
	combined	0.11	1.60	0.99	0.11	1.05	0.15	4.01
3. other premises	1	0.11	0.34	0.14	—	0.11	0.02	0.72
	2	0.01	0.16	0.05	0.01	0.05	0.04	0.32
	combined	0.06	0.25	0.09	0.00	0.08	0.03	0.51
4. hospitals, maternity homes, etc.	1	—	—	0.07	0.54	0.08	—	0.69
	2	—	—	0.06	0.14	0.11	—	0.31
	combined	—	—	0.06	0.34	0.10	—	0.50
5. others	1	0.02	0.02	—	—	—	—	0.04
	2	—	—	0.01	0.01	—	—	0.02
	combined	0.01	0.01	0.01	0.00	—	—	0.03
<i>outside the village :</i>								
6. own premises	1	0.08	0.91	0.80	0.03	0.55	0.07	2.44
	2	0.05	1.51	0.71	0.07	0.45	0.06	2.85
	combined	0.07	1.22	0.75	0.05	0.49	0.07	2.65
7. mother's father's premises	1	0.24	2.64	1.45	0.18	1.59	0.69	6.79
	2	0.14	2.42	1.45	0.28	1.13	0.31	5.73
	combined	0.19	2.52	1.45	0.24	1.35	0.49	6.24
8. other	1	—	0.20	0.20	0.14	0.12	0.03	0.69
	2	0.01	0.18	0.14	0.23	0.30	0.00	0.86
	combined	0.00	0.19	0.17	0.18	0.21	0.02	0.77
9. hospitals, maternity homes, etc.	1	—	—	0.15	0.25	1.00	—	1.40
	2	—	—	0.15	0.32	0.30	—	0.77
	combined	—	—	0.15	0.29	0.63	—	1.07
10. others	1	2.60	0.03	—	—	0.02	0.04	2.69
	2	2.34	0.04	0.03	—	0.03	—	2.44
	combined	2.46	0.04	0.01	—	0.03	0.02	2.56
11. all	1	5.62	39.05	25.19	1.81	19.97	8.36	100
	2	6.29	39.25	26.77	3.15	19.24	5.30	100
	combined	5.97	39.15	26.01	2.51	19.59	6.77	100

National Sample Survey

TABLE (5.2): PERCENTAGE DISTRIBUTION OF DEATHS BY PLACE OF DEATH AND ATTENDANCE TYPE FROM TWO INTERPENETRATING SAMPLES: ALL-INDIA RURAL HOUSEHOLDS; NSS 14TH ROUND, FIRST AND SECOND SUB-ROUND COMBINED

place of death	sample	attendance type						total
		no attendance	relative	dhai	mid-wife- or nurse	physician	others	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>within the village :</i>								
1. own premises	1	16.20	47.33	5.63	0.90	12.65	5.87	88.58
	2	13.03	46.55	6.44	1.31	16.30	4.76	88.39
	combined	14.58	46.94	6.04	1.11	14.52	5.30	88.49
2. mother's father's premises	1	0.33	1.46	0.23	0.02	0.60	0.08	2.72
	2	0.18	1.48	0.37	0.04	0.29	0.12	2.48
	combined	0.25	1.47	0.30	0.03	0.44	0.10	2.59
3. other premises	1	0.06	0.29	0.04	—	0.08	0.04	0.51
	2	0.04	0.14	0.20	0.02	0.20	0.08	0.68
	combined	0.05	0.21	0.13	0.01	0.14	0.06	0.60
4. hospitals, maternity homes, etc.	1	—	—	0.02	0.08	0.49	—	0.59
	2	—	—	0.02	0.10	0.13	—	0.25
	combined	—	—	0.02	0.09	0.31	—	0.42
5. others	1	0.08	0.04	—	—	0.02	—	0.14
	2	0.08	0.04	—	—	—	0.02	0.14
	combined	0.08	0.04	—	—	0.01	0.01	0.14
<i>outside the village :</i>								
6. own premises	1	0.25	1.25	0.04	0.02	0.27	0.02	1.85
	2	0.23	0.74	1.12	0.04	0.43	0.06	1.62
	combined	0.24	0.99	0.08	0.03	0.35	0.04	1.73
7. mother's father's premises	1	0.62	1.87	0.14	—	0.35	0.14	3.12
	2	0.43	2.18	0.08	0.08	0.53	0.21	3.51
	combined	0.52	2.03	0.11	0.04	0.44	0.18	3.32
8. other premises	1	0.02	0.47	0.04	0.02	0.27	0.02	0.84
	2	0.12	0.60	0.10	0.04	0.41	0.04	1.31
	combined	0.07	0.54	0.07	0.03	0.34	0.03	1.08
9. hospitals, maternity homes, etc.	1	—	—	—	0.25	0.66	—	0.91
	2	—	—	—	0.10	0.66	—	0.76
	combined	—	—	—	0.17	0.66	—	0.83
10. others	1	0.62	0.10	—	—	—	0.02	0.74
	2	0.51	0.25	0.02	—	0.04	0.04	0.86
	combined	0.56	0.18	0.01	—	0.02	0.03	0.80
11. all	1	18.18	52.81	6.14	1.29	15.39	6.19	100
	2	14.62	51.98	7.35	1.73	18.99	5.33	100
	combined	16.35	52.40	6.76	1.51	17.23	5.75	100

CHAPTER SIX

POPULATION CHARACTERISTICS

6.1. The sex and age composition of the population is useful in giving a quantitative ceiling indicator of the potential man-power and the crude measure of the dependency load, not only for the current time but also for a coming decade or two. The sex-age composition of the population and other population characteristics obtained from the NSS 14th round are discussed in this chapter.

6.2. *Distribution of population in age groups*: Table (6.1) gives below the percentage distribution of population by sex in three broad age groups 0-14, 15-44 and 45-above in the rural zones, from the two interpenetrating samples for the NSS 14th round: the sex-ratios of the population in the three broad age groups are also shown in this table. The detailed tables for the six sub-rounds separately are given in Appendix I.

6.3. Taking the results of the NSS 14th round as a whole, 40.6 per cent of the population were under age 15, 44.3 per cent between 15-44 and 15.1 per cent aged 45-above in rural areas of India. Among the rural zones, the percentage of population in the young age group 0-14 for the north zone was the highest (43 per cent); in the south zone it was the lowest (39 per cent). The proportion of population in the middle, working age-range 15-44 was about 45 per cent in the east and the south zones but 43 per cent in the north. This pattern was broadly repeated for the distribution for the two sexes.

6.4. It will be recalled that from the third to the sixth sub-rounds, the brief schedule 12.2 was canvassed where the ages of the household members were not recorded separately but collected under three broad age-groups. It appears on examination of all possible detailed versus short schedule comparisons that for the age groups, particularly the two older groups 15-44 and 45-above, there is clear evidence of difference in the two schedule types. Under-estimation of the older group and over-estimation of the middle group in the short schedule is obvious. For the younger group, 0-14, within party (or within sub-sample) comparisons show that the short schedule gives under-estimates; 14 out of 16 possible comparisons support this¹.

6.5. Table (6.2) shows the percentage distribution of the population in the three broad age groups from Census 1951 and six NSS rounds covering the period 1953-59 for the rural sector. The disparity between the Census and the NSS age distributions has already been observed in NSS Report No. 14, "*Some characteristics of the economically active population*". The NSS age distribution showed a remarkably good consistency over the rounds, and within a round between the two interpenetrating sample estimates.

¹ P. C. Mahalanobis and D. B. Lahiri (1960): "Analysis of errors in censuses and surveys with special reference to experiences in India", *International Statistical Conference, Tokyo*.

TABLE (6.1): PERCENTAGE DISTRIBUTION OF POPULATION BY SEX AND SEX-RATIO (NUMBER OF MALES PER 100 FEMALES) IN AGE GROUPS IN THE RURAL ZONES FROM TWO INTERPENETRATING SAMPLES: NSS 14TH ROUND, ALL SUB-ROUNDS COMBINED

(number of sample villages)	sample	percentage distribution of population												sex-ratio			
		male				female				total				0-14	15-44	45-	all ages
		0-14	15-44	45-	all ages	0-14	15-44	45-	all ages	0-14	15-44	45-	all ages	(15)	(16)	(17)	(18)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1. north (540)	1	43.08	41.97	14.95	100	42.97	42.82	14.21	100	43.01	42.40	14.59	100	110.36	107.90	115.79	110.08
	2	41.52	43.06	15.42	100	42.87	43.59	13.54	100	42.08	43.31	14.61	100	109.27	111.46	128.41	112.82
	combined	42.35	42.48	15.17	100	42.92	42.17	13.91	100	42.57	42.84	14.59	100	109.85	108.56	121.48	111.35
2. central (564)	1	40.65	44.33	15.02	100	39.11	44.41	16.48	100	39.90	44.38	15.72	100	110.59	106.20	97.01	106.04
	2	40.41	44.25	15.34	100	39.51	44.68	15.81	100	39.98	44.46	15.56	100	109.88	106.39	104.20	107.42
	combined	40.53	44.29	15.18	100	39.31	44.55	16.14	100	39.94	44.42	15.64	100	110.23	106.29	100.54	106.91
3. east (612)	1	42.30	44.68	13.02	100	40.08	45.31	14.61	100	41.22	44.95	13.83	100	106.70	99.68	90.09	101.09
	2	41.53	44.98	13.49	100	40.19	44.90	14.91	100	40.87	44.94	14.19	100	106.42	103.21	93.24	103.02
	combined	41.90	44.83	13.27	100	40.13	45.10	14.77	100	41.03	44.95	14.02	100	106.56	101.51	91.74	102.09
4. south (468)	1	39.46	44.42	16.12	100	37.90	45.20	16.90	100	38.68	44.81	16.51	100	103.43	97.62	94.78	99.35
	2	39.88	43.64	16.48	100	38.34	44.95	16.71	100	39.10	44.30	16.60	100	102.79	95.95	97.47	98.83
	combined	39.68	44.01	16.31	100	38.13	45.07	16.80	100	38.90	44.55	16.55	100	103.10	96.75	96.17	99.08
5. west (432)	1	42.52	43.51	13.97	100	41.32	44.16	14.52	100	41.93	43.83	14.24	100	105.26	100.81	98.38	102.29
	2	42.37	43.07	14.56	100	41.25	43.64	15.11	100	41.80	43.38	14.82	100	105.30	101.19	98.79	102.53
	combined	42.45	43.29	14.26	100	41.29	43.90	14.81	100	41.86	43.61	14.53	100	105.28	101.00	98.59	102.41
6. all-India rural (2,616)	1	41.43	44.04	14.53	100	39.90	44.60	15.50	100	40.68	44.31	15.01	100	107.26	101.99	96.82	103.29
	2	41.03	44.03	14.94	100	40.04	44.52	15.44	100	40.54	44.28	15.18	100	106.65	102.88	100.72	104.06
	combined	41.23	44.03	14.74	100	39.97	44.56	15.47	100	40.61	44.29	15.10	100	106.95	102.44	98.79	103.68

Estimates of Birth and Death Rates and Growth of Population

TABLE (6.2): PERCENTAGE DISTRIBUTION OF POPULATION IN AGE GROUPS BY SEX,
IN THE RURAL SECTOR: CENSUS 1951 AND NSS ROUNDS, ALL-INDIA RURAL

survey	sample	male				female				total			
		0-14	15-44	45-	all ages	0-14	15-44	45-	all ages	0-14	14-55	45-	all ages
(0.1)	(0.2)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Census 1951 ^a	—	38.94	43.88	17.18	100	38.69	44.50	16.81	100	38.83	44.18	16.99	100
NSS 1953 ^b	1	41.81	44.31	13.88	100	41.47	44.72	13.64	100	41.64	44.59	13.77	100
	2	42.21	43.59	14.20	100	39.35	45.90	14.75	100	40.81	44.72	14.47	100
	C	42.01	43.94	14.05	100	40.41	45.39	14.20	100	41.22	44.66	14.12	100
NSS 1953-54 ^c	1	41.28	44.61	14.11	100	41.12	44.06	14.82	100	41.20	44.33	14.47	100
	2	41.97	43.20	14.83	100	40.51	44.40	15.09	100	41.25	43.90	14.95	100
	C	41.62	43.92	14.46	100	40.82	44.23	14.95	100	41.23	44.07	14.70	100
NSS 1955 ^d	C	40.40	45.24	14.36	100	39.92	44.88	15.20	100	40.17	45.06	14.77	100
NSS 1955-56 ^e	1	—	—	—	—	—	—	—	—	41.16	43.58	15.26	100
	2	—	—	—	—	—	—	—	—	41.35	43.87	14.78	100
	C	42.05	43.57	14.38	100	40.41	44.38	15.21	100	41.24	43.73	15.03	100
NSS 1956-57 ^f	1	42.33	43.14	14.53	100	40.61	44.27	15.12	100	41.48	43.68	14.84	100
	2	41.92	43.49	14.59	100	40.70	44.20	15.10	100	41.29	43.86	14.85	100
	C	42.13	43.30	14.57	100	40.66	44.23	15.11	100	41.40	43.75	14.85	100
NSS 1958-59 ^g	1	41.43	44.04	14.53	100	39.90	44.60	15.50	100	40.68	44.31	15.01	100
	2	41.03	44.03	14.94	100	40.04	44.52	15.44	100	40.54	44.28	15.18	100
	C	41.23	44.03	14.74	100	39.97	44.56	15.47	100	40.61	44.29	15.10	100

^aUnadjusted age distribution, excludes displaced persons; computed in NSS Report No. 14 from Census of India 1951, Paper No. 3, 1953, "Age Tables 1951 Census," Government of India.

^bRelates to NSS 6th round, based on 4,389 sample households; quoted from NSS Report No. 14, "Some Characteristics of the Economically Active Population," Government of India, 1958-59.

^cRelates to NSS 7th round, based on 8,235 sample households, quoted from NSS Report No. 14.

^dRelates to NSS 9th round, based on 8,037 sample households, calculated from NSS Report No. 16, "Sample Survey on Employment and Unemployment, May-November 1955," Government of India, 1959.

^eRelates to NSS 10th round, based on 9,635 sample households, calculated from NSS Draft Report No. 39, "Tables with notes on employment and unemployment survey, December 1955-May 1956," Indian Statistical Institute, 1959.

^fRelates to NSS 11th and 12th rounds, based on 15,112 sample households; calculated from NSS Draft No. 43/1, "Tables with notes on employment and unemployment, 11th and 12 rounds," Indian Statistical Institute, 1959.

^gRelates to NSS 14th round, based on 234, 344 sample households.

National Sample Survey

6.6. *Sex-ratio* : The sex-ratio of the population, defined as the number of males per 100 females, was about 104 in rural India as a whole, 107 for children under age 15, 102 for persons aged 15-44 and 99 for persons aged 45-above. The males outnumbered females by 11 per cent in the north zone but were less than the females by about 1 per cent in the south. The higher sex-ratio of the population in the north zone is shown in all the three age groups adopted, even for persons aged 45 or above. There was no obvious difference in regard to sex-ratio over the six sub-rounds.

6.7. *Household size and religion* : Table (6.3) gives for the five rural zones the average size of the households, the percentage distribution of population by religion and status of economic activity. The average size of the households was 5.14 at the all-India rural level (with sub-sample estimates of 5.14 and 5.13). The household size was the largest, 5.64, in the north zone and the smallest, 4.67, in the south zone. The Hindus were seen to constitute 87 per cent (with sub-sample estimates of 87 and 86 per cent) and Muslims 9 per cent (with sub-sample estimates of 9 and 8 per cent) of population at the all-India rural level. The proportion of the Hindus was the highest, 91 per cent, in the central and west zones and that of Muslims in the east zone, 13 per cent.

6.8. *Status of economic activity* : In schedule 12.1 in the first two sub-rounds, information was also collected on the principal activity status of the members of the household. The principal status was determined on the basis of the time spent; it was taken as the status which predominated, or if switched over to currently, expected to predominate for a considerable period of time as a regular nature : an example of the latter category was of an unemployed person who recently got a job in which he would continue as an employee would be termed an "employee". The status of economic activity classified the population into two broad groups (1) economically active and (2) economically inactive. The former group was divided into (a) gainfully employed and (b) unemployed. The gainfully employed were further divided into four groups of employees, employers, own account workers and unpaid household labour. An employee was one who worked for wage or salary in cash or kind under public or private institutions, individuals or groups of individuals; by convention an agricultural labourer was treated as an employee. An employer was a person who engaged one or more persons on wage or salary basis in cash or kind to help in carrying on his productive enterprise. A person who engages others for domestic services, was not treated as an employer. The status of a person who was his own employer and employee was own account. Normally, when a person's services are hired by a person or group or an institution, he is treated as an employee. But there are cases where the individual, group or institution who hires the person does not treat him as hired employee but as one who is serving more or less on a contractual basis. In such cases, the employed person will be treated as working on own account : artisans employed by householders for repairing or construction of durable goods, implements or even houses are a case in point. A person working in the productive enterprise of the household, which mainly uses household labour, without being paid in cash

TABLE (6.3) : AVERAGE HOUSEHOLD SIZE AND PERCENTAGE DISTRIBUTION OF POPULATION BY RELIGION AND STATUS OF ECONOMIC ACTIVITY FROM TWO INTERPENETRATING SAMPLES : NSS 14TH ROUND RURAL, ALL SUB-ROUNDS COMBINED

	zone (number of sample villages)	sample	average household size	percentage of population by					
				religion			status of economic activity ^a		
				Hinduism	Islam	others	employed	unemployed	inactive
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
1.	north Rajasthan, Punjab, Delhi, Himachal Pradesh, Jammu and Kashmir	1	5.60	80.56	6.49	12.95	47.06	0.03	52.91
		2	5.69	80.44	7.76	11.50	47.54	0.12	52.34
		combined	5.64	80.50	7.09	12.41	47.27	0.07	52.66
(540)									
2.	central Uttar Pradesh, Madhya Pradesh	1	5.12	90.95	8.77	0.28	45.17	0.07	54.76
		2	5.05	91.24	8.36	0.40	45.06	0.62	54.32
		combined	5.09	91.09	8.57	0.34	45.12	0.36	54.52
(564)									
3.	east Bihar, Orissa, West Bengal, Assam, Manipur, Tripura	1	5.32	82.88	15.10	2.02	37.44	0.19	62.37
		2	5.37	81.96	11.03	7.01	39.48	0.10	60.42
		combined	5.34	82.41	2.99	4.60	38.56	0.14	61.30
(612)									
4.	south Andhra Pradesh, Madras, Kerala	1	4.69	89.24	5.94	4.82	50.45	0.18	49.37
		2	4.64	84.20	5.38	10.42	49.36	0.31	50.33
		combined	4.67	86.62	5.65	7.73	49.92	0.24	49.84
(468)									
5.	West Bombay, Mysore	1	5.20	90.52	7.49	1.99	51.24	0.10	48.66
		2	5.15	91.86	4.85	3.29	53.21	0.04	46.75
		combined	5.17	91.18	6.17	2.65	52.29	0.07	47.64
(432)									
6.	all-India rural	1	5.14	87.31	9.42	3.27	45.66	0.12	54.22
		2	5.13	86.34	7.86	5.80	45.99	0.28	53.73
		combined	5.14	86.82	8.63	4.55	45.83	0.20	53.97
(2,616)									

^a Information on status of economic activity was collected only in the first two sub-rounds in Schedule 12.1.

or kind will be regarded as unpaid family enterprise worker. The contribution, even if small but regular, by household members in the productive enterprise of the household should be included. Persons economically inactive are mainly divided in to the following groups : students; houseworkers; rentiers and pensioners; beggars; too young; too old; permanently disabled; and others. At the all-India rural level, 45.8 per cent of the population were returned as gainfully employed, 0.2 per cent as unemployed, and the rest 54.0 per cent as being economically inactive. Among the rural zones, the highest proportion, 52.3 per cent, of the gainfully employed was returned in the west zone, and the lowest proportion in the east zone, 38.6 per cent.

6.9. Table (6.4) gives the percentage distribution of gainfully employed persons by activity status and sex from two interpenetrating samples, in NSS 14th round, first sub-round, at the all-India rural level. This Table was obtained from the tabulation of the sample frequencies and there is, therefore, a slight divergence with the estimated proportion of population gainfully employed and unemployed given in Table (6.3) above. In interpreting this table, the definition of the usual status of economic activity adopted in the population enquiry, with a reference period of (generally) the past year, in contrast to the definition of labour force concept with a reference of the preceding day, adopted in the employment enquiries from the NSS 10th round onwards, may be kept in view. At the all-India rural level, 60.2 per cent of males and 30.0 per cent of females were economically active; of the total population 45.4 per cent were economically active. The proportion of population returned as unemployed was very small; this could be expected with the definition adopted.

6.10. *Distribution of the gainfully employed in industries :* Table (6.5) gives the percentage distribution of the gainfully employed in industry groups by sex from two interpenetrating samples obtained from the NSS 14th round, first sub-round. Of the total gainfully employed, 86.1 per cent (of the gainfully employed males 85 per cent and of the gainfully employed females 89 per cent) were engaged in agricultural and related industries. The distribution of the industries according to the proportion of population employed, excluding industries not specified, was : field produce (production of cereal, pulses, etc.); manufacturing; other agricultural and related industries (forestry, fishery, livestock, etc.); services; trade and commerce; construction; transport, storage and communication; plantation crops; electricity, gas, water and sanitary services; and mining quarrying.

6.11. *Distribution of the gainfully employed by occupation :* Table (6.6) gives the percentage distribution of the gainfully employed by occupation and sex from the two interpenetrating samples, obtained from the NSS 14th round, first sub-round at the all-India rural level. Of the total gainfully employed, 84.9 per cent (of the gainfully employed males, 84 per cent and of the gainfully employed females 87 per cent) were engaged in agricultural occupations. The important occupation groups arranged in decreasing order of importance (according to the population employed) are : farmer (52.5) per cent; agricultural labour (23.3 per cent); craftsmen and production process workers (7.0 per cent); cultivators (6.7 per cent); professional, technical and related workers (2.5 per cent); other agricultural workers (2.5 per cent); services, sports and recreation workers (2.3 per cent).

TABLE (6.4): PERCENTAGE DISTRIBUTION OF THE SAMPLE POPULATION BY ACTIVITY STATUS AND SEX FROM TWO INTER-PENETRATING SAMPLES: NSS 14TH ROUND RURAL, FIRST SUB-ROUND (JULY-SEPTEMBER 1958)

activity status (1)	male			female			total		
	sample 1	sample 2	combined	sample 1	sample 2	combined	sample 1	sample 2	combined
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. employee	15.40	16.70	16.06	9.71	10.12	9.92	12.62	13.47	13.05
2. employer	0.79	0.92	0.85	0.15	0.25	0.20	0.48	0.59	0.53
3. own account worker	30.21	29.99	30.10	3.14	4.03	3.59	17.01	17.24	17.13
4. family workers	14.10	11.83	12.94	18.03	14.50	16.22	16.01	13.14	14.55
5. gainfully employed	60.50	59.44	59.95	31.03	28.90	29.93	46.12	44.44	45.26
6. unemployed	0.16	0.26	0.21	0.02	0.06	0.04	0.09	0.16	0.13
7. labour force	60.67	59.73	60.19	31.06	28.96	29.98	46.22	44.61	45.40
8. student	10.64	10.21	10.42	3.67	3.85	3.76	7.25	7.09	7.16
9. houseworkers	0.55	0.53	0.54	31.11	33.13	32.15	15.45	16.54	16.01
10. rentier, pensioner, etc.	0.18	0.19	0.19	0.33	0.22	0.27	0.25	0.20	0.23
11. beggars, etc.	0.11	0.12	0.12	0.10	0.13	0.12	0.10	0.13	0.12
12. too young	25.33	26.12	25.73	28.59	28.57	28.58	26.92	27.32	27.13
13. too old	1.62	1.97	1.80	4.05	4.06	4.05	2.81	3.00	2.90
14. disabled	0.33	0.34	0.33	0.35	0.27	0.31	0.34	0.31	0.32
15. rest	0.57	0.79	0.68	0.74	0.81	0.78	0.66	0.80	0.73
16. total	100	100	100	100	100	100	100	100	100

Estimates of Birth and Death Rates and Growth of Population

TABLE (6.5): PERCENTAGE DISTRIBUTION OF THE GAINFULLY EMPLOYED (SAMPLE POPULATION) BY INDUSTRY GROUP AND SEX FROM TWO INTERPENETRATING SAMPLES : NSS 14TH ROUND RURAL, FIRST SUB-ROUND (JULY-SEPTEMBER 1958)

industry group	male			female			total		
	sample 1	sample 2	combined	sample 1	sample 2	combined	sample 1	sample 2	combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. field produce	81.80	77.99	79.88	85.82	83.03	84.44	83.12	79.60	81.35
2. plantation crops	0.10	1.25	0.68	0.18	1.60	0.89	0.12	1.36	0.75
3. other agricultural and related industries	4.21	4.51	4.36	3.93	2.62	3.28	4.12	3.91	4.01
4. agricultural and related industries	86.12	83.75	84.93	89.94	87.27	88.61	87.37	84.87	86.11
5. mining and quarrying	0.03	0.09	0.06	—	0.03	0.02	0.02	0.07	0.05
6. manufacturing	6.06	6.20	6.13	5.82	7.30	6.56	5.98	6.55	6.27
7. construction	1.10	0.95	1.02	0.32	0.65	0.48	0.84	0.85	0.85
8. electricity, gas, water and sanitary services	0.04	0.16	0.10	0.05	0.19	0.12	0.05	0.17	0.11
9. trade and commerce	2.30	3.02	2.66	1.44	1.10	1.27	2.02	2.41	2.21
10. transport, storage and communication	0.78	0.64	0.71	0.02	0.01	0.02	0.53	0.44	0.48
11. services	3.30	4.50	3.91	2.19	3.11	2.64	2.94	4.06	3.50
12. others not specified	0.27	0.69	0.48	0.22	0.34	0.28	0.25	0.58	0.42
13. all industries	100	100	100	100	100	100	100	100	100

TABLE (6.6) : PERCENTAGE DISTRIBUTION OF THE GAINFULLY EMPLOYED (SAMPLE POPULATION) BY OCCUPATION GROUP AND SEX FROM TWO INTERPENETRATING SAMPLES : NSS 14TH ROUND, RURAL, FIRST SUB-ROUND (JULY-SEPTEMBER 1958)

occupation group (1)	male			female			total		
	sample 1 (2)	sample 2 (3)	combined (4)	sample 1 (5)	sample 2 (6)	combined (7)	sample 1 (8)	sample 2 (9)	combined (10)
1. professional, technical and related workers	1.80	3.48	2.65	1.24	3.12	2.17	1.62	3.37	2.49
2. administrative, executive workers	0.32	0.42	0.37	—	0.03	0.01	0.22	0.30	0.26
3. clerical and related workers	0.35	0.45	0.40	0.01	0.02	0.01	0.24	0.32	0.28
4. sales workers	2.32	3.21	2.77	1.61	1.45	1.53	2.08	2.62	2.37
5. farmer	57.67	50.34	53.97	53.88	44.84	49.40	56.43	48.58	52.49
6. cultivator	6.79	8.04	7.43	4.13	6.02	5.07	5.92	7.40	6.66
7. agricultural labourer	18.90	20.63	19.77	29.90	31.14	30.51	22.51	23.98	23.25
8. other agricultural workers	2.09	3.26	2.68	1.21	2.82	2.01	1.80	3.12	2.46
9. all agricultural workers	85.45	82.27	83.85	89.12	84.82	86.99	86.66	83.08	84.86
10. miners and related workers	0.09	0.06	0.07	0.04	0.02	0.03	0.07	0.05	0.06
11. transport and communication workers	0.59	0.63	0.61	0.01	0.01	0.01	0.40	0.43	0.42
12. craftsmen and production process workers	7.14	7.11	7.12	5.89	7.45	6.67	6.73	7.22	6.97
13. services, sport and recreation workers	1.94	2.37	2.16	2.08	3.08	2.58	1.98	2.61	2.29
14. all occupations	100	100	100	100	100	100	100	100	100

35

Estimates of Birth and Death Rates and Growth of Population

APPENDIX I

LIST AND PRESENTATION OF DETAILED TABLES

1.1: LIST OF DETAILED TABLES

In numbering the tables, a system of multiple codings has been followed. Of the numbers within brackets, the left-hand-most digit refers to the chapter, the middle one is a running number for a type under the chapter number (these two together referring to the corresponding table in the text), and the right-hand-most digit gives the sub-round number 1-6; for the results of all the six sub-rounds combined 7 has been used in the right-hand-most digit; "O" in the right-hand-most digit indicates census data.

Prefixes Z and S have been put outside the bracket to denote tables for the rural zones and the States respectively.

SUMMARY OF FINDINGS		PAGE
TABLE (2.3.0):	Area and population of reorganised States and zones: Census of India, 1951 ..	39
	Rates of birth, death and natural increase and rate of increase of population including migration	
S(3.1.7):	Rates per 1000 persons for births, deaths and difference of births and deaths in the different States, from two interpenetrating samples in the six sub-rounds: NSS 14th round rural	40
S(3.3.5):	Rate of increase (per cent per year) of rural population (including migration) obtained from the enumeration and re-enumeration of population in the same set of sample villages in the 1st sub-round and the 5th sub-round with the population enumerated in the first sub-round as base 100, by State and all-India, from two interpenetrating samples: NSS 14th round rural	46
S(3.3.6):	Rate of increase (per cent per year) of rural population (including migration) obtained from the enumeration and re-enumeration of population in the same set of sample villages in the 2nd sub-round and 6th sub-round with the population enumerated in the second sub-round as base 100, by State and all-India, from two interpenetrating samples: NSS 14th round rural	49
S(3.4.5):	Percentage of persons remaining in the same sample villages and moving from one sample village to another in the same State during the interval of enumeration and re-enumeration in the 1st and the 5th sub-rounds NSS 14th round from two interpenetrating samples	52
S(3.4.6):	Percentage of persons remaining in the same sample villages and moving from one sample village to another in the same State during the interval of enumeration and re-enumeration in the 2nd and the 6th sub-rounds from two interpenetrating samples: NSS 14th round	53

INFANT DEATH PROPORTION

TABLE S(4.1.7):	Number of infant deaths per 1000 live births in the different State in the six sub-rounds from the two interpenetrating samples: NSS 14th round rural ..	54
(4.3.7):	Index of infant death proportion of children born "year before last" (with average exposure of 18 months) as a ratio to the infant death proportion of children born last year" (with average exposure of 6 months) in the six sub-rounds from two interpenetrating samples: all-India rural households NSS 14th round ..	55
	Births and deaths by type of attendance and place of occurrence	
(5.1.1):	Percentage distribution of births by type of attendance and place of occurrence from two interpenetrating samples: all-India rural households, NSS 14th round rural, first sub-round	56

Estimates of Birth and Death Rates and Growth of Population

	PAGE
TABLE (5.1.2): Percentage distribution of births by type of attendance and place of occurrence from two interpenetrating samples: all-India rural households, NSS 14th round rural, second sub-round	57
(5.2.1): Percentage distribution of deaths by type of attendance and place of occurrence from two interpenetrating samples: all-India rural households, NSS 14th round first sub-round	58
(5.2.2): Percentage distribution of deaths by type of attendance and place of occurrence from two interpenetrating samples: all-India rural households, NSS 14th round rural, second sub-round	59
POPULATION CHARACTERISTICS	
TABLE Z(6.1.1): Sex-ratio in age groups and percentage distribution of population in age groups by sex in the rural zones from two interpenetrating samples: NSS 14th round, rural first sub-round	60
Z(6.1.2): Sex-ratio in age groups and percentage distribution of population in age groups by sex in the rural zones from two interpenetrating samples: 14th round rural, second sub-round	61
Z(6.1.3): Sex-ratio in age groups and percentage distribution of population in age groups by sex in the rural zones from two interpenetrating samples: NSS 14th round rural, third sub-round	62
Z(6.1.4): Sex-ratio in age groups and percentage distribution of population in age groups by sex in the rural zones from two interpenetrating samples: NSS 14th round rural, fourth sub-round	63
Z(6.1.5): Sex-ratio in age groups and percentage distribution of population in age groups by sex in the rural zones from two interpenetrating samples: NSS 14th round rural, fifth sub-round	64
Z(6.1.6): Sex-ratio in age groups and percentages distribution of population in age groups by sex in the rural zones from two interpenetrating samples: NSS 14th round rural, sixth sub-round	65
S(6.1.1): Average household size, sex-ratio and percentage distribution of population by age, status of economic activity and religion in the different States from two interpenetrating samples: NSS 14th round rural, first sub-round	66
S(6.1.2): Average household size, sex-ratio and percentage distribution of population by age, status of economic activity and religion in the different States from two interpenetrating samples: NSS 14th round rural, second sub-round	68
S(6.1.3): Average household size, sex-ratio and percentage distribution of population by age and religion in the different States from two interpenetrating samples: NSS 14th round rural, third sub-round	70
S(6.1.4): Average household size, sex-ratio and percentage distribution of population by age and religion in the different States from two interpenetrating samples: NSS 14th round rural, fourth sub-round	72
S(6.1.5): Average household size, sex-ratio and percentage distribution of population by age and religion in the different States from two interpenetrating samples: NSS 14th round rural, fifth sub-round	74
S(6.1.6): Average household size, sex-ratio and percentage distribution of population by age and religion in the different States from two interpenetrating samples: NSS 14th round rural, sixth sub-round	76

National Sample Survey

	PAGE
TABLE S(6.1.7) : Average household size, sex-ratio and percentage distribution of population by age, religion and Status of economic activity in different States from two interpenetrating samples : all-India rural households, NSS 14th round, all sub-rounds combined	78
Z(6.3.1) : Average household size and percentage distribution of population by religion and status of economic activity in the rural zones from two interpenetrating samples : NSS 14th round rural, first sub-round	80
Z(6.3.2) : Average household size and percentage distribution of population by religion and status of economic activity in the rural zones from two interpenetrating samples : NSS 14th round rural, second sub-round	81
Z(6.3.3) : Average household size and percentage distribution of population by religion in the rural zones from two interpenetrating samples : NSS 14th round rural, third sub-round	82
Z(6.3.4) : Average household size and percentage distribution of population by religion in the rural zones from two interpenetrating samples : NSS 14th round rural, fourth sub-round	83
Z(6.3.5) : Average household size and percentage distribution of population by religion in the rural zones from two interpenetrating samples : NSS 14th round rural, fifth sub-round	84
Z(6.3.6) : Average household size and percentage distribution of population by religion in the rural zones from two interpenetrating samples : NSS 14th round rural, sixth sub-round	85

Estimates of Birth and Death Rates and Growth of Population

1.2. PRESENTATION OF DETAILED TABLES

TABLE (2.3.0) : AREA AND POPULATION OF REORGANISED STATES AND ZONES : CENSUS OF INDIA 1951^a

zone/state	area in square miles (000)	villages ^b	towns	persons (000)		
				total	rural	urban
(1)	(2)	(3)	(4)	(5)	(6)	(7)
India	1,269.5	594,315	3,056	361,279	297,500	63,779
I. NORTH ZONE :	283.5	67,474	480	39,359	29,951	9,408
1. Rajasthan	132.1	31,704	227	15,971	13,015	2,955
2. Punjab	47.1	20,855	194	16,135	13,068	3,066
3. Delhi	0.57	304	10	1,744	307	1,437
4. Himachal Pradesh	10.9	8,384	11	1,109	1,064	45
5. Jammu and Kashmir	92.8	6,227	38	4,400	2,496	1,904
II. CENTRAL ZONE :	284.7	181,756	688	89,287	77,529	11,759
6. Uttar Pradesh	113.4	111,722	486	63,216	54,590	8,626
7. Madhya Pradesh	171.3	70,034	202	26,072	22,939	3,133
III. EAST ZONE :	259.0	185,220	297	89,992	80,031	9,962
8. Bihar	67.1	67,970	108	38,784	36,158	2,626
9. Orissa	60.2	48,398	39	14,646	14,052	594
10. West Bengal	33.9	38,471	120	26,302	20,021	6,282
11. Assam	85.1	25,327	28	9,044	8,629	414
12. Manipur	8.6	1,601	1	578	575	3
13. Tripura	4.0	3,453	1	639	596	43
IV. SOUTH ZONE :	170.8	49,398	676	74,784	60,250	14,534
14. Andhra Pradesh	105.7	26,450	293	31,260	26,822	5,438
15. Madras	50.2	18,351	295	29,975	22,660	7,315
16. Kerala	14.9	4,597	88	13,549	11,769	1,780
V. WEST ZONE :	265.5	80,157	914	67,666	49,560	18,106
17. Bombay	190.7	54,279	625	48,265	34,615	13,650
18. Mysore	74.9	26,878	289	19,401	14,945	4,456
OTHERS :	6.0	310	1	190	179	11
19. Andaman and Nicobar Islands	3.2	201 ^c	—	31	23	8
20. Laccadive, Minicoy, Amindivi Islands	0.042	10	—	21	21	—
21. Sikkim	2.7	99	1	138	135	3

^aCensus of India, Paper No. 1, 1957.

^bExcluding uninhabited villages

^cIncluding towns as well.

National Sample Survey

TABLE S(3.1.7): RATES PER 1000 PERSONS FOR BIRTHS, DEATHS AND DIFFERENCE OF BIRTHS AND DEATHS AND IN THE DIFFERENT STATES FROM TWO INTER-PENETRATING SAMPLES IN THE SIX SUB-ROUNDS :
NSS 14TH ROUND RURAL

state (number of sample villages)	sample	rate per 1000 persons						
		birth						
		1st sub- round	2nd sub- round	3rd sub- round	4th sub- round	5th sub- round	6th sub- round	all sub- rounds
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Rajasthan	1	47.42	41.46	38.92	54.58	40.18	43.09	44.94
	2	41.70	40.92	38.22	41.30	43.34	38.54	40.83
	(120) C	44.50	41.25	38.53	49.05	41.82	40.69	43.00
2. Punjab, Delhi and H.P.	1	39.75	48.85	45.77	45.03	34.55	36.38	41.41
	2	44.76	36.89	40.02	51.16	40.80	37.13	41.26
	(96) C	41.89	43.80	43.24	48.95	37.27	36.69	41.34
3. Jammu and Kashmir	1	26.19	24.97	19.72	15.25	25.07	15.46	21.17
	2	23.94	18.84	22.73	25.23	20.00	15.82	21.25
	(324) C	25.23	22.37	21.16	21.31	22.64	15.64	21.21
4. Uttar Pradesh	1	45.64	46.29	43.02	47.77	42.65	45.47	54.21
	2	45.60	53.28	38.67	44.67	39.88	43.91	44.87
	(312) C	45.62	50.69	41.31	46.39	41.02	44.49	45.03
5. Madhya Pradesh	1	44.15	44.45	41.48	40.30	37.84	40.00	41.49
	2	43.92	45.15	38.30	48.75	39.78	36.27	41.95
	(252) C	44.07	45.05	40.02	44.12	38.71	38.29	41.69
6. Bihar	1	32.33	34.74	36.95	40.64	37.95	35.86	36.65
	2	31.43	33.25	30.78	33.10	34.45	22.82	31.04
	(228) C	31.84	33.81	33.93	36.98	35.99	28.15	33.59
7. Orissa	1	38.42	36.74	37.42	43.67	27.96	28.49	34.72
	2	31.97	36.93	34.39	37.68	41.13	39.74	37.64
	(120) C	35.48	36.83	36.14	39.45	33.29	36.32	36.30
8. West Bengal	1	30.67	27.19	25.65	29.87	34.38	32.05	30.12
	2	30.72	31.18	24.28	35.27	30.06	34.82	31.57
	(168) C	30.70	29.46	25.18	32.36	32.91	33.26	30.76

Estimates of Birth and Death Rates and Growth of Population

TABLE S(3.1.7) (Contd.): RATES PER 1000 PERSONS FOR BIRTHS, DEATHS AND DIFFERENCE OF BIRTHS AND DEATHS IN THE DIFFERENT STATES FROM TWO INTER-PENETRATING SAMPLES IN THE SIX SUB-ROUNDS :
NSS 14TH ROUND RURAL

state (number of sample villages)	sample	rate per 1000 persons						
		death						
		1st sub- round	2nd sub- round	3rd sub- round	4th sub- round	5th sub- round	6th sub- round	all sub- rounds
(1)	(2)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1. Rajasthan	1	23.59	18.12	16.41	20.29	15.49	16.33	18.46
	2	24.79	16.32	17.02	18.63	16.52	17.38	18.26
	(120) C	24.21	17.44	16.75	19.60	16.02	16.88	18.36
2. Punjab, Delhi and H.P.	1	11.62	7.95	15.51	14.59	13.52	11.84	11.92
	2	15.60	17.87	15.11	16.74	13.60	9.51	14.53
	(96) C	13.32	12.14	15.33	15.97	13.55	10.71	13.11
3. Jammu Kashmir	1	10.65	14.74	13.42	10.29	13.03	10.36	11.65
	2	7.96	7.80	11.27	15.23	14.61	9.93	11.03
	(324) C	9.34	9.63	12.39	13.29	13.79	10.14	11.31
4. Uttar Pradesh	1	31.48	33.15	33.20	30.91	26.35	26.61	30.75
	2	27.78	33.88	29.70	31.88	21.92	27.50	28.93
	(312) C	29.64	33.61	31.82	31.34	23.74	27.17	29.79
5. Madhya Pradesh	1	19.50	30.18	22.89	20.67	29.66	15.46	22.51
	2	18.31	26.00	21.68	26.70	30.32	14.16	22.95
	(252) C	19.08	28.18	22.33	23.41	29.96	14.86	22.71
6. Bihar	1	16.19	21.72	17.34	36.25	21.69	17.54	22.32
	2	13.49	15.50	20.47	19.46	20.33	14.90	17.30
	(228) C	14.70	17.84	18.87	28.09	20.93	15.98	19.58
7. Orissa	1	15.29	25.51	16.43	20.84	19.00	16.39	19.70
	2	18.37	16.03	14.66	19.19	23.22	14.71	17.20
	(120) C	16.69	20.91	15.69	19.68	20.70	15.22	18.35
8. West Bengal	1	9.36	7.81	9.89	8.74	19.39	7.02	10.95
	2	11.20	12.32	7.27	8.26	8.44	9.28	9.56
	(168) C	10.33	10.38	8.98	8.52	15.66	8.00	10.33

National Sample Survey

TABLE S(3.1.7) (Contd.): RATES PER 1000 PERSONS FOR BIRTHS, DEATHS AND
DIFFERENCE OF BIRTHS AND DEATHS IN THE DIFFERENT STATES FROM
TWO INTERPENETRATING SAMPLES IN THE SIX SUB-ROUNDS:
NSS 14TH ROUND RURAL

state (number of sample villages)	sample	rate per 1000 persons						
		growth = birth—death						
		1st sub- round	2nd sub- round	3rd sub- round	4th sub- round	5th sub- round	6th sub- round	all sub- rounds
(1)	(2)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
1. Rajasthan	1	23.83	23.34	22.51	34.29	24.69	26.76	26.48
	2	16.91	24.60	21.20	22.67	26.82	21.16	22.57
	(120) C	20.29	23.81	21.78	29.45	25.80	23.81	24.64
2. Punjab, Delhi and H.P.	1	28.13	40.90	30.26	30.44	21.03	24.54	29.49
	2	29.16	19.02	24.91	34.42	27.20	27.98	26.73
	(96) C	28.57	31.66	27.91	32.98	23.72	25.98	28.23
3. Jammu and Kashmir	1	15.54	10.23	6.30	4.96	12.04	5.10	9.52
	2	15.98	11.04	11.46	10.00	5.39	5.89	10.22
	(324) C	15.89	12.74	8.77	8.02	8.85	5.50	9.90
4. Uttar Pradesh	1	14.16	13.14	9.82	16.86	16.30	18.86	14.46
	2	17.82	19.40	8.97	12.79	17.96	16.40	15.94
	(312) C	15.98	17.08	9.49	15.05	17.28	17.32	15.24
5. Madhya Pradesh	1	24.65	14.27	18.59	19.63	8.18	24.54	18.98
	2	25.61	19.15	16.62	22.05	9.46	22.11	19.00
	(252) C	24.99	16.87	17.69	20.71	8.75	23.43	18.98
6. Bihar	1	16.14	13.02	19.61	4.39	16.26	18.32	14.33
	2	17.94	17.75	10.31	13.64	14.12	7.92	13.74
	(228) C	17.14	15.97	15.06	8.89	15.06	12.17	14.01
7. Orissa	1	23.13	11.23	20.99	22.83	8.96	12.10	15.02
	2	13.60	20.90	19.73	18.49	17.91	25.03	20.44
	(120) C	18.79	15.92	20.45	19.77	12.59	21.10	17.95
8. West Bengal	1	21.31	19.38	15.76	21.13	14.99	25.03	19.17
	2	19.52	18.86	17.01	27.01	21.62	25.54	22.01
	(168) C	20.37	19.08	16.20	23.84	17.25	25.26	20.43

Estimates of Birth and Death Rates and Growth of Population

TABLE S(3.1.7) (Contd.): RATES PER 1000 PERSONS FOR BIRTHS, DEATHS AND
DIFFERENCE OF BIRTH AND DEATH IN THE DIFFERENT STATES FROM
TWO INTERPENETRATING SAMPLES IN THE SIX SUB-ROUNDS :
NSS 14TH ROUND, RURAL

State (number of sample villages)	sample	rate per 1000 persons						
		birth						
		1st sub- round	2nd sub- round	3rd sub- round	4th sub- round	5th sub- round	6th sub- round	all sub- rounds
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9. Assam	1	26.20	35.61	36.12	38.40	35.19	50.80	37.58
	2	41.21	42.90	32.86	37.95	39.50	44.34	40.29
	(96) C	35.23	38.84	34.74	38.14	37.90	47.22	39.07
1p. Andhra Pradesh	1	33.97	31.92	29.43	30.52	30.11	32.71	29.15
	2	35.01	35.80	37.33	36.04	31.42	31.79	34.44
	(216) C	34.64	33.44	33.20	33.40	30.87	32.30	31.83
11. Madras	1	32.83	34.58	36.88	34.20	35.25	35.14	34.94
	2	36.14	33.62	27.99	32.26	36.92	40.18	34.19
	(180) C	34.21	34.17	32.03	32.90	35.98	38.51	34.55
12. Kerala	1	29.76	44.04	35.65	48.35	35.95	40.19	45.30
	2	35.08	41.28	33.90	31.44	31.92	34.00	34.81
	(72) C	32.59	42.41	34.56	40.33	33.48	37.56	39.61
13. Bombay	1	37.84	40.40	38.75	36.35	37.70	37.50	38.15
	2	38.65	38.15	40.71	35.09	37.48	42.25	38.35
	(312) C	38.22	39.06	39.54	35.66	37.59	39.79	38.25
14. Mysore	1	39.30	37.49	34.13	45.63	34.54	42.16	39.92
	2	43.55	37.77	37.21	40.15	43.19	41.87	40.79
	(120) C	41.49	37.63	35.44	43.19	40.00	42.13	40.35
15. all-India rural	1	38.37	38.76	37.49	41.63	36.33	38.13	38.50
	2	38.56	40.45	35.00	38.65	37.33	37.65	38.02
	(2,616) C	38.47	39.66	36.36	40.13	36.85	37.87	38.26

National Sample Survey

TABLE S(3.1.7) (*Contd.*): RATES PER 1000 PERSONS FOR BIRTHS, DEATHS AND DIFFERENCE OF BIRTH AND DEATH IN THE DIFFERENT STATES FROM TWO INTER-PENETRATING SAMPLES IN THE SIX SUB-ROUNDS : NSS 14TH ROUND, RURAL

state (number of sample village)	sample	rate per 1000 persons						
		death						all sub- rounds
		1st sub- round	2nd sub- round	3rd sub- round	4th sub- round	5th sub- round	6th sub- round	
(1)	(2)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
9. Assam	1	4.83	12.70	9.49	11.63	14.88	13.74	11.55
	2	12.96	15.54	7.97	13.52	12.84	10.35	12.52
	(96) C	9.72	13.96	8.85	12.73	13.60	11.86	12.09
10. Andhra Pradesh	1	14.11	12.52	15.51	14.88	11.48	15.54	12.50
	2	22.16	17.13	13.18	14.44	11.84	15.23	15.84
	(216) C	19.32	14.33	14.39	14.65	11.69	15.40	14.19
11. Madras	1	11.52	18.60	12.75	17.85	13.66	12.37	14.14
	2	13.95	9.38	15.20	12.85	13.35	15.87	13.81
	(180) C	12.54	14.62	14.09	14.48	13.53	14.71	13.97
12. Kerala	1	20.86	12.76	9.73	12.13	12.38	10.14	12.96
	2	10.65	12.14	10.33	9.57	8.81	9.68	10.33
	(72) C	13.45	12.39	10.10	10.91	10.19	9.94	11.53
13. Bombay	1	18.65	18.90	20.50	17.55	25.36	16.67	19.81
	2	18.69	16.24	20.09	17.27	15.42	19.81	17.63
	(312) C	18.67	17.32	20.33	17.39	20.32	18.19	18.72
14. Mysore	1	16.26	14.83	12.55	12.06	20.76	18.08	14.82
	2	19.33	17.99	15.45	14.60	17.31	11.17	16.22
	(120) C	17.84	16.39	13.66	13.19	18.58	14.50	15.52
15. all-India rural	1	18.98	19.50	19.82	21.57	20.04	16.28	19.47
	2	19.62	19.89	18.81	19.08	17.24	17.22	18.58
	(2,616) C	19.05	19.70	19.36	20.32	18.60	16.79	19.02

Estimates of Birth and Death Rates and Growth of Population

TABLE S(3.1.7) (Contd.): RATES PER 1000 PERSONS FOR BIRTHS, DEATHS AND DIFFERENCE OF BIRTH AND DEATH IN THE DIFFERENT STATES FROM TWO INTER-PENETRATING SAMPLES IN THE SIX SUB-ROUNDS: NSS 14TH ROUND, RURAL

state number of sample villages)	sample	rate per 1000 persons						
		growth						
		1st sub- round	2nd sub- round	3rd sub- round	4th sub- round	5th sub- round	6th sub- round	all sub- rounds
(1)	(2)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
9. Assam	1	21.37	22.91	26.63	26.77	20.31	37.06	26.03
	2	28.25	27.36	24.89	24.43	26.66	33.99	27.77
	(96) C	25.51	24.88	25.89	25.41	24.30	35.36	26.98
10. Andhra Pradesh	1	19.86	19.40	13.92	15.64	18.63	17.17	16.65
	2	12.85	18.67	24.15	21.60	19.58	16.56	18.60
	(216) C	15.32	19.11	18.81	18.75	19.18	16.90	17.64
11. Madras	1	21.31	15.98	24.13	16.35	21.59	22.77	20.80
	2	22.19	24.24	12.79	19.41	23.57	24.31	20.38
	(180) C	21.67	19.55	17.94	18.42	22.45	23.80	20.58
12. Kerala	1	8.90	31.28	25.92	36.22	23.57	30.05	32.34
	2	24.43	29.14	23.57	21.87	23.11	24.32	24.48
	(72) C	17.14	30.02	24.46	29.42	23.29	27.62	28.08
13. Bombay	1	19.19	21.50	18.25	18.80	12.34	20.83	18.34
	2	19.96	21.91	20.62	17.82	22.06	22.44	20.72
	(312) C	19.55	21.74	19.21	18.27	17.27	21.60	19.53
14. Mysore	1	23.04	22.66	21.58	33.57	13.78	24.08	25.10
	2	24.22	19.78	21.76	25.55	25.88	30.70	24.57
	(120) C	23.65	21.24	21.78	30.00	21.42	27.63	24.83
15. all-India rural	1	19.39	19.26	17.67	20.06	16.29	21.85	19.03
	2	19.44	20.56	16.19	19.57	20.09	20.43	19.44
	(2,616) C	19.42	19.96	17.00	19.81	18.25	21.08	19.24

TABLE S(3.3.5): RATE OF INCREASE (PER CENT PER YEAR) OF RURAL POPULATION (INCLUDING MIGRATION) OBTAINED FROM THE ENUMERATION AND RE-ENUMERATION OF POPULATION IN THE SAME SET OF SAMPLE VILLAGES IN THE FIRST (JULY-SEPTEMBER 1958) AND THE FIFTH (MARCH-APRIL 1959) SUB-ROUNDS WITH THE POPULATION ENUMERATED IN THE FIRST SUB-ROUND AS BASE 100, BY STATE AND ALL-INDIA FROM TWO INTERPENETRATING SAMPLES:
NSS 14TH ROUND RURAL

state (number of sample villages)	sample	base popula- tion	by death	decrease				gross decrease	by births	increase				gross increase	current popula- tion
				by emigration to						by immigration from					
				urban area within state	other states	rural area (other states)	outside India			urban area within state	other states	rural area (other states)	outside India		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1. Rajasthan	1	100.00	1.79	—	—	0.12	—	1.91	3.26	—	—	0.39	—	3.65	101.74
	2	100.00	1.57	0.16	1.89	0.13	—	3.75	3.53	0.06	0.30	0.26	—	4.15	100.40
	(20)	combined	100.00	1.68	0.08	1.04	0.12	—	2.92	4.40	0.03	0.16	0.32	—	3.91
2. Punjab	1	100.00	0.98	0.59	0.21	—	—	1.78	4.20	0.51	—	—	—	4.71	102.93
	2	100.00	0.88	0.38	0.16	0.11	—	1.53	4.12	0.09	0.23	—	—	4.44	102.91
	(16)	combined	100.00	0.94	0.47	0.18	0.06	—	1.65	4.16	0.32	0.10	—	—	4.58
3. Jammu and Kashmir	1	100.00	1.24	—	—	—	—	1.24	2.24	—	—	—	0.04	2.28	101.04
	2	100.00	2.01	—	—	—	—	2.01	2.18	—	—	—	0.09	2.27	100.26
	(54)	combined	100.00	1.71	—	—	—	1.71	2.21	—	—	—	0.07	2.28	100.57
4. Uttar Pradesh	1	100.00	4.68	1.00	1.05	0.08	—	6.81	5.99	0.29	0.61	0.19	—	7.08	100.27
	2	100.00	2.96	0.26	0.73	0.21	—	3.46	3.44	0.21	0.55	0.06	—	4.26	100.80
	(52)	combined	100.00	3.18	0.54	0.85	0.17	—	4.74	4.41	0.24	0.56	0.11	—	5.32
5. Madhya Pradesh	1	100.00	1.51	0.17	—	0.09	—	1.77	3.84	0.10	0.06	0.18	—	4.18	102.41
	2	100.00	2.04	0.03	0.05	0.10	—	2.22	3.33	0.25	0.26	0.02	—	3.86	101.64
	(42)	combined	100.00	1.70	0.12	0.02	0.10	—	1.94	3.66	0.16	0.14	0.11	—	4.07

TABLE S(3.3.5) (Contd.): RATE OF INCREASE (PER CENT PER YEAR) OF RURAL POPULATION (INCLUDING MIGRATION) OBTAINED FROM THE ENUMERATION AND RE-ENUMERATION OF POPULATION IN THE SAME SET OF SAMPLE VILLAGES IN THE FIRST (JULY-SEPTEMBER 1958) AND THE FIFTH (MARCH-APRIL 1959) SUB-ROUNDS WITH THE POPULATION ENUMERATED IN THE FIRST SUB-ROUND AS BASE 100, BY STATE AND ALL-INDIA FROM TWO INTER-PENETRATING SAMPLES: NSS 14TH ROUND RURAL

state (number of sample villages)	sample	base popula- tion	decrease					increase					current popula- tion		
			by death	by emigration to		gross decrease	by births	by immigration from			gross increase				
				urban area within state	other states			rural area (other states)	outside India	urban area within state		other states		rural areas (other states)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
6. Bihar	1	100.00	1.79	0.66	0.41	0.10	0.04	3.00	3.84	0.11	0.33	0.20	—	4.48	101.48
	2	100.00	2.13	0.11	0.58	0.02	0.02	2.86	3.13	0.05	0.07	0.15	0.02	3.42	100.56
	(38)	combined	100.00	1.99	0.35	0.49	0.05	0.03	2.91	3.42	0.07	0.18	0.17	0.01	3.85
7. Orissa	1	100.00	1.57	—	—	0.23	—	1.80	2.96	0.05	—	—	—	3.01	101.21
	2	100.00	0.88	—	—	0.09	—	0.97	3.61	0.16	0.05	0.12	—	3.94	102.97
	(20)	combined	100.00	1.25	—	—	0.17	—	1.42	3.26	0.09	0.02	0.05	—	3.42
8. West Bengal	1	100.00	0.77	0.04	—	—	0.04	0.85	4.49	—	—	—	0.24	4.73	103.88
	2	100.00	1.06	0.02	0.02	0.15	—	1.25	3.14	0.19	—	—	—	3.33	102.08
	(28)	combined	100.00	0.92	0.03	0.01	0.10	0.01	1.07	3.77	0.09	—	—	0.12	3.98
9. Assam	1	100.00	1.05	0.71	—	0.08	—	1.84	2.39	—	—	—	—	2.39	100.55
	2	100.00	0.78	0.09	—	0.16	0.42	1.45	4.06	—	0.08	0.31	0.08	4.53	103.08
	(16)	combined	100.00	0.88	0.42	—	0.13	0.19	1.62	3.45	—	0.05	0.16	0.05	3.71
10. Andhra Pradesh	1	100.00	3.40	0.54	0.02	1.22	—	5.18	4.77	0.08	0.03	0.08	—	4.96	99.78
	2	100.00	1.44	0.10	0.01	—	—	1.55	2.94	0.02	0.01	—	—	2.97	101.42
	(36)	combined	100.00	1.88	0.19	0.01	0.29	—	2.37	3.35	0.03	0.01	0.02	—	3.41

TABLE S(3.3.5) (Contd.): RATE OF INCREASE (PER CENT PER YEAR) OF RURAL POPULATION (INCLUDING MIGRATION) OBTAINED FROM THE ENUMERATION AND RE-ENUMERATION OF POPULATION IN THE SAME SET OF SAMPLE VILLAGES IN THE FIRST (JULY-SEPTEMBER 1958) AND THE FIFTH (MARCH-APRIL 1959) SUB-ROUNDS WITH THE POPULATION ENUMERATED IN THE FIRST SUB-ROUND AS BASE 100, BY STATE AND ALL-INDIA FROM TWO INTER-PENETRATING SAMPLES : NSS 14TH ROUND RURAL

state (number of sample villages)	sample	base popula- tion	decrease					increase					gross increase	current popula- tion	
			by death	by emigration to			gross decrease	by births	by immigration from						
				urban areas within state	other states	rural areas (other states)			outside India	urban areas within state	other states	rural areas (other states)			outside India
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
11. Madras	1	100.00	2.66	3.02	0.14	0.05	0.57	6.44	8.02	1.17	—	0.03	0.81	10.03	103.59
	2	100.00	1.37	0.79	—	0.31	0.12	2.59	2.89	0.40	0.05	0.14	0.06	3.54	100.95
	(30)	combined	100.00	1.85	1.60	0.05	0.22	0.28	4.00	4.77	0.68	0.03	0.11	0.32	5.91
12. Kerala	1	100.00	2.53	—	0.60	0.03	0.03	3.19	2.37	0.02	—	0.04	—	2.43	99.24
	2	100.00	1.01	—	0.33	—	—	1.34	4.47	0.15	0.48	0.05	—	5.15	103.81
	(12)	combined	100.00	2.00	—	0.53	0.02	0.02	2.57	3.15	0.07	0.13	0.04	—	3.39
13. Bombay	1	100.00	1.70	0.81	—	0.01	—	2.52	3.87	0.46	0.02	0.03	—	4.08	101.56
	2	100.00	1.84	0.55	0.04	0.06	—	2.49	4.03	0.26	0.11	0.05	0.01	4.46	101.97
	(52)	combined	100.00	1.77	0.69	0.01	0.04	—	2.51	3.79	0.36	0.06	0.03	0.01	4.25
14. Mysore	1	100.00	1.33	0.12	0.02	—	—	1.47	3.89	0.24	—	—	—	4.13	102.66
	2	100.00	1.13	0.12	0.01	0.82	—	2.08	3.01	0.49	0.15	0.21	—	3.86	101.78
	(20)	combined	100.00	1.22	0.12	0.01	0.41	—	1.76	3.41	0.27	0.08	0.11	—	3.86
15. all-India rural	1	100.00	2.18	—	0.89	—	0.03	3.10	4.23	0.38	—	—	0.05	4.66	101.56
	2	100.00	1.67	—	0.59	—	0.02	2.28	3.39	0.36	—	—	0.01	3.76	101.48
	(436)	combined	100.00	1.90	—	0.71	—	2.63	3.76	0.36	—	—	0.03	4.15	101.52

TABLE S(3.3.6): RATE OF INCREASE (PER CENT PER YEAR) OF RURAL POPULATION (INCLUDING MIGRATION) OBTAINED FROM THE ENUMERATION AND RE-ENUMERATION OF POPULATION IN THE SAME SET OF SAMPLE VILLAGES IN THE SECOND (SEPTEMBER-NOVEMBER 1958) AND THE SIXTH (MAY-JULY 1959) SUB-ROUNDS WITH THE POPULATION ENUMERATED IN THE SECOND SUB-ROUND AS BASE 100 BY STATE AND ALL INDIA, FROM TWO INTERPENETRATING SAMPLES: NSS 14TH ROUND RURAL

state (number of sample villages)	sample	base popula- tion	decrease					increase					gross increase	current popula- tion	
			by death	by emigration to			gross decrease	by birth	by immigration from						
				urban areas within state	other states	rural areas (other states)			outside India	urban areas within state	other states	rural areas (other states)			outside India
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1. Rajasthan	1	100.00	2.08	0.11	4.63	0.18	—	7.00	4.01	0.04	0.95	0.04	—	5.04	98.04
	2	100.00	1.11	0.47	0.81	0.12	0.05	2.56	3.07	0.10	0.03	0.14	—	3.34	100.79
	(20)	combined	100.00	1.72	0.22	3.30	0.16	0.01	5.41	3.66	0.06	0.62	0.08	—	4.42
2. Punjab	1	100.00	2.76	—	0.51	—	0.40	3.67	5.74	0.10	—	0.34	—	6.18	102.51
	2	100.00	1.29	0.11	0.49	0.49	—	2.38	2.61	—	0.08	0.02	—	2.71	100.33
	(16)	combined	100.00	1.92	0.06	0.50	0.28	0.17	2.93	3.94	0.04	0.04	0.15	—	4.17
3. Jammu and Kashmir	1	100.00	2.18	0.14	—	—	—	2.32	2.67	0.30	0.05	—	—	3.02	100.70
	2	100.00	1.15	—	0.05	—	—	1.20	2.00	—	—	0.03	0.02	2.05	100.85
	(54)	combined	100.00	1.56	0.06	0.03	—	—	1.65	2.26	0.12	0.02	0.02	0.01	2.43
4. Uttar Pradesh	1	100.00	2.15	0.07	0.64	0.38	0.19	3.43	3.31	0.39	0.34	0.11	0.22	4.37	100.94
	2	100.00	2.03	0.15	0.13	0.04	0.03	2.38	3.31	0.12	0.30	0.04	0.00	3.77	101.39
	(52)	combined	100.00	2.08	0.12	0.33	0.16	0.09	2.78	3.31	0.22	0.31	0.10	0.09	4.03
5. Madhya Pradesh	1	100.00	1.33	0.10	—	0.04	0.03	1.50	3.30	0.76	0.07	—	—	4.13	102.63
	2	100.00	1.49	0.11	0.07	0.08	—	1.75	3.31	0.32	0.24	0.13	—	4.00	102.25
	(42)	combined	100.00	1.42	0.10	0.04	0.06	0.01	1.63	3.31	0.53	0.16	0.07	—	4.07

TABLE S(3.3.6) (Contd.): RATE OF INCREASE (PER CENT PER YEAR) OF RURAL POPULATION (INCLUDING MIGRATION) OBTAINED FROM THE ENUMERATION AND RE-ENUMERATION OF POPULATION IN THE SAME SET OF SAMPLE VILLAGES IN THE SECOND (SEPTEMBER-NOVEMBER 1958) AND THE SIXTH (MAY-JULY 1959) SUB-ROUNDS WITH THE POPULATION ENUMERATED IN THE SECOND SUB-ROUND AS BASE 100 BY STATE AND ALL INDIA- FROM TWO INTER-PENETRATING SAMPLES: NSS 14TH ROUND RURAL

state (number of sample villages)	sample	base popula- tion	by death	decrease				gross decrease	by birth	increase				gross increase	current popula- tion
				by emigration to			by immigration from								
				urban areas within state	other states	rural areas (other states)	outside India			urban areas within state	other states	rural areas (other states)	outside India		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
6. Bihar	1	100.00	1.42	0.65	0.68	0.15	—	2.90	2.91	0.09	0.51	0.29	—	3.80	100.60
	2	100.00	1.58	0.10	0.05	0.39	0.03	2.15	3.17	—	0.09	0.20	—	3.46	101.33
	(38)	combined	100.00	1.52	0.34	0.33	0.30	0.01	2.50	3.07	0.03	0.25	0.23	—	3.58
7. Orissa	1	100.00	2.17	0.72	1.54	—	—	4.43	2.77	0.50	0.56	0.18	—	4.01	99.58
	2	100.00	1.82	0.07	0.46	0.17	—	2.52	2.77	0.16	0.12	—	—	3.05	100.53
	(20)	combined	100.00	2.00	0.41	1.02	0.08	—	3.51	2.77	0.34	0.35	0.09	—	3.55
8. West Bengal	1	100.00	0.65	—	—	—	0.05	0.70	3.28	0.08	0.02	—	0.13	3.51	102.81
	2	100.00	0.57	0.03	—	0.16	0.02	0.78	2.13	—	—	—	—	2.13	101.35
	(28)	combined	100.00	0.60	0.01	—	0.09	0.04	0.74	2.56	0.02	0.01	—	0.05	2.64
9. Assam	1	100.00	1.05	2.05	—	—	—	3.10	2.91	—	—	—	—	2.91	99.81
	2	100.00	1.81	—	—	—	—	1.81	3.60	0.12	—	—	—	3.72	101.91
	(16)	combined	100.00	1.26	1.10	—	—	—	2.36	3.09	0.02	—	—	—	3.11
10. Andhra Pradesh	1	100.00	1.71	1.01	0.36	0.08	—	3.16	2.55	0.23	0.02	0.01	0.08	2.89	99.73
	2	100.00	1.32	0.50	—	0.01	—	1.83	1.92	0.01	0.04	—	—	1.97	100.14
	(36)	combined	100.00	1.55	0.81	0.23	0.06	—	2.65	2.30	0.15	0.02	0.00	0.05	2.52

TABLE S(3.3.6) (Contd.): RATE OF INCREASE (PER CENT PER YEAR) OF RURAL POPULATION (INCLUDING MIGRATION) OBTAINED FROM THE ENUMERATION AND RE-ENUMERATION OF POPULATION IN THE SAME SET OF SAMPLE VILLAGES IN THE SECOND (SEPTEMBER-NOVEMBER 1958) AND THE SIXTH (MAY-JULY 1959) SUB-ROUNDS WITH THE POPULATION ENUMERATED IN THE SECOND SUB-ROUND AS BASE 100 BY STATE AND ALL INDIA, FROM TWO INTER-PENETRATING SAMPLES: NSS 14TH ROUND RURAL

state (number of sample villages)	sample	base popula- tion	by death	decrease				increase				current popula- tion			
				by emigratin to			gross decrease	by immigration from							
				urban areas within state	other states	rural areas (other states)		outside India	urban areas within state	rural areas (other states)	outside India		gross Increase		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
11. Madras	1	100.00	1.54	1.22	0.39	—	0.04	3.19	2.91	1.15	0.33	0.07	0.32	4.78	101.59
	2	100.00	1.67	0.92	—	—	0.05	2.64	2.53	1.13	0.01	—	0.03	3.70	101.06
	(30)	combined	100.00	1.60	1.09	0.21	—	0.05	2.95	2.75	1.15	0.18	0.03	0.18	4.29
12. Kerala	1	100.00	1.06	—	1.22	0.35	0.18	2.81	4.83	—	0.16	0.07	—	5.06	102.25
	2	100.00	0.54	0.80	0.23	—	0.11	1.68	3.23	0.37	0.04	—	—	3.64	101.96
	(12)	combined	100.00	0.75	0.49	0.63	0.15	0.13	2.15	3.89	0.23	0.09	0.02	—	4.23
13. Bombay	1	100.00	1.68	0.84	0.04	0.04	—	2.60	5.09	0.74	0.04	0.41	—	6.28	103.68
	2	100.00	1.10	0.33	—	0.01	—	1.44	2.72	0.33	—	0.19	0.04	3.28	101.84
	(52)	combined	100.00	1.31	0.51	0.02	0.04	—	1.88	3.58	0.48	0.01	0.27	0.02	4.36
14. Mysore	1	100.00	1.18	0.20	—	—	—	1.38	3.59	0.20	—	0.02	—	3.81	102.48
	2	100.00	1.87	0.02	0.12	—	—	2.01	3.67	0.95	0.04	0.17	—	4.83	102.82
	(20)	combined	100.00	1.51	0.12	0.06	—	—	1.69	3.63	0.57	0.02	0.09	—	4.31
15. all-India rural	1	100.00	1.68	—	1.41	—	0.06	3.15	3.45	—	0.65	—	0.08	4.18	101.03
	2	100.00	1.46	—	0.40	—	0.02	1.88	2.91	—	0.34	—	0.01	3.26	101.38
	(436)	combined	100.00	1.56	—	0.87	—	0.04	2.47	3.16	—	0.48	—	0.04	3.68

National Sample Survey

TABLE S(3.4.5): PERCENTAGE OF POPULATION REMAINING IN THE SAME SAMPLE VILLAGE AND MOVING FROM ONE VILLAGE TO ANOTHER IN THE SAME STATE DURING THE INTERVAL OF ENUMERATION AND RE-ENUMERATION IN THE FIRST AND THE FIFTH SUB-ROUNDS FROM TWO INTER-PENETRATING SAMPLES: NSS 14TH ROUND RURAL

state	number of sample villages	percentage of population					
		remaining in the same village			moving from one village to another in the state		
		sample 1	sample 2	combined	sample 1	sample 2	combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Rajasthan	20	95.75	93.06	94.34	2.34	3.19	2.74
2. Punjab	16	96.96	96.36	96.69	1.26	2.11	1.66
3. Jammu and Kashmir	54	87.91	94.87	92.15	10.85	3.12	6.14
4. Uttar Pradesh	52	91.28	95.20	93.70	1.91	1.34	1.56
5. Madhya Pradesh	42	96.15	94.86	95.68	2.08	2.92	2.38
6. Bihar	38	93.86	95.20	94.66	3.14	1.94	2.43
7. Orissa	20	94.54	96.63	95.48	3.66	2.40	3.10
8. West Bengal	28	96.62	96.63	96.63	2.53	2.12	2.30
9. Assam	16	96.44	94.86	95.46	1.72	3.69	2.92
10. Andhra Pradesh	36	91.47	95.69	94.79	3.35	2.76	2.84
11. Madras	30	83.21	94.23	90.18	10.35	3.18	5.82
12. Kerala	12	91.25	92.58	91.67	5.56	6.08	5.76
13. Bombay	52	95.13	94.47	94.82	2.35	3.04	2.67
14. Mysore	20	94.95	94.30	94.62	3.58	3.62	3.62
15. all-India (rural)	436	93.74	95.02	94.47	3.16	2.70	2.90

Estimates of Birth and Death Rates and Growth of Population

TABLE S(3.4.6) : PERCENTAGE OF PERSONS REMAINING IN THE SAME SAMPLE VILLAGES AND MOVING FROM ONE VILLAGE TO ANOTHER IN THE SAME STATE DURING THE INTERVAL OF ENUMERATION AND REENUMERATION IN THE SECOND AND SIXTH SUB-ROUNDS FROM TWO INTERPENETRATING SAMPLES :
NSS 14TH ROUND RURAL

state	number of sample villages	percentage of persons					
		remaining in the same village			moving from one village to another in the state		
		sample 1	sample 2	combined	sample 1	sample 2	combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Rajasthan	20	90.38	93.70	91.59	2.62	3.74	3.00
2. Punjab	16	92.31	93.76	93.15	4.02	3.86	3.92
3. Jammu and Kashmir	54	95.14	97.20	96.37	2.54	1.60	1.98
4. Uttar Pradesh	52	94.79	95.98	95.54	1.78	1.64	1.68
5. Madhya Pradesh	42	94.82	95.38	95.21	3.68	2.87	3.16
6. Bihar	38	94.10	93.25	93.52	3.00	4.60	3.98
7. Orissa	20	91.82	94.24	92.99	3.75	3.24	3.50
8. West Bengal	28	97.56	97.73	97.66	1.74	1.49	1.60
9. Assam	16	92.30	89.95	91.82	4.60	8.24	5.82
10. Andhra Pradesh	36	91.01	95.23	92.67	5.83	2.94	4.68
11. Madras	30	92.77	91.33	92.14	4.04	6.03	4.91
12. Kerala	12	88.37	93.92	91.65	8.82	4.40	6.20
13. Bombay	52	90.82	95.55	93.81	6.58	3.01	4.31
14. Mysore	20	94.96	93.45	94.23	3.66	4.54	4.08
15. all-India (rural)	436	92.86	94.82	93.92	3.99	3.30	3.61

National Sample Survey

TABLE S(4.1.7) : NUMBER OF INFANT DEATHS PER 1000 LIVE BIRTHS IN THE DIFFERENT STATES FROM TWO INTERPENETRATING SAMPLES IN THE SIX SUB-ROUNDS :
NSS 14TH ROUND RURAL

state (number of sample villages)	sample	sub-round						all sub- rounds combined
		I	II	III	IV	V	VI	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Rajasthan (120)	1	149	122	69	70	58	56	95
	2	111	46	46	100	30	93	69
	combined	131	93	56	94	43	75	83
2. Punjab (96)	1	109	42	118	129	91	113	91
	2	60	93	95	104	87	45	82
	combined	87	60	109	112	89	84	87
3. Jammu and Kashmir (324)	1	130	58	73	125	115	116	104
	2	53	68	75	54	63	24	56
	combined	84	63	74	74	93	69	77
4. Uttar Pradesh (312)	1	201	192	199	154	117	142	172
	2	173	220	176	157	95	163	169
	combined	187	211	191	155	104	155	171
5. Madhya Pradesh (252)	1	69	166	110	98	141	99	108
	2	83	102	97	111	137	123	108
	combined	74	132	105	105	139	109	108
6. Bihar (228)	1	163	164	181	85	110	89	133
	2	102	120	160	99	150	102	123
	combined	130	137	172	91	131	95	128
7. Orissa (120)	1	87	131	94	164	146	159	128
	2	112	162	131	137	110	65	114
	combined	97	146	109	146	128	87	120
8. West Bengal (168)	1	32	60	73	89	78	56	69
	2	85	95	63	59	65	46	69
	combined	60	81	70	74	74	52	69
9. Assam (96)	1	76	116	22	54	150	85	86
	2	110	10	129	112	65	75	80
	combined	100	64	65	88	94	80	83
10. Andhra Pradesh (216)	1	90	91	72	85	66	89	83
	2	127	129	86	62	48	84	91
	combined	114	107	80	72	55	87	87
11. Madras (180)	1	71	123	47	110	105	83	87
	2	137	55	103	58	97	103	94
	combined	100	94	74	76	102	97	91
12. Kerala (72)	1	63	98	63	54	65	70	68
	2	114	66	31	35	26	57	55
	combined	92	80	43	47	42	65	61
13. Bombay (312)	1	119	105	103	123	104	104	109
	2	88	107	81	78	74	94	88
	combined	105	106	94	99	89	99	98
14. Mysore (120)	1	144	81	72	52	129	99	88
	2	130	140	77	91	84	60	101
	combined	136	110	74	68	98	79	94
15. all-India rural (2,616)	1	126	124	124	106	104	100	115
	2	123	134	111	102	87	104	111
	combined	125	130	119	104	95	102	113

Estimates of Birth and Death Rates and Growth of Population

TABLE (4.3.7): INDEX OF INFANT DEATH PROPORTION OF CHILDREN BORN "YEAR BEFORE LAST" (WITH AVERAGE EXPOSURE OF 18 MONTHS) AS A RATIO TO THE INFANT DEATH PROPORTION OF CHILDREN BORN "LAST YEAR" (WITH AVERAGE EXPOSURE OF 6 MONTHS) IN THE SIX SUB-ROUNDS FROM TWO INTERPENETRATING SAMPLES: ALL-INDIA RURAL HOUSEHOLDS, NSS 14TH ROUND

sub-round : period	sample 1	sample 2	combined
(1)	(2)	(3)	(4)
1. I : July-September 1958	120.0	128.7	124.3
2. II : September-November 1958	128.9	105.2	116.8
3. III : November-January 1959	127.3	63.7	143.1
4. IV : January-March 1959	145.7	153.5	149.3
5. V : March-May 1959	119.3	152.6	135.0
6. VI : May-July 1959	135.2	162.7	150.4
7. I-VI : July 1958-July 1959	129.0	142.5	135.4
8. actual infant death proportion "last year"/1000	114.2	107.8	111.2

National Sample Survey

TABLE (5.1.1): PERCENTAGE DISTRIBUTION OF BIRTHS BY TYPE OF ATTENDANCE
AND PLACE OF OCCURRENCE FROM TWO INTERPENETRATING SAMPLES: ALL-
INDIA RURAL HOUSEHOLDS: NSS 14TH ROUND, FIRST SUB-ROUND
(JULY-SEPTEMBER 1958)

place of birth	sample	attendance type						total
		no attendance	relative	dhai	midwife or nurse	physician	others	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>within the village :</i>								
1. own premises	1	2.48	31.21	39.17	0.76	0.49	8.16	82.27
	2	3.97	24.46	43.31	3.64	0.82	5.68	81.88
	combined	3.25	27.73	41.30	2.25	0.66	6.88	82.07
2. mother's father's premises	1	0.11	1.11	1.85	0.14	0.27	0.21	3.69
	2	0.11	1.39	1.69	0.21	0.09	0.21	3.70
	combined	0.11	1.26	1.77	0.17	0.18	0.21	3.70
3. other premises	1	0.14	0.48	0.22	—	0.03	0.02	0.89
	2	0.02	0.17	0.09	0.02	—	0.02	0.32
	combined	0.08	0.32	0.15	0.01	0.02	0.01	0.59
4. hospitals, maternity homes, etc.	1	—	—	0.14	0.04	0.14	—	0.32
	2	—	—	0.02	0.12	0.19	—	0.33
	combined	—	—	0.08	0.08	0.17	—	0.33
5. others	1	—	0.03	—	—	—	—	0.03
	2	—	—	0.03	—	—	—	0.03
	combined	—	0.01	0.02	—	—	—	0.03
<i>outside the village :</i>								
6. own premises	1	0.10	0.78	1.43	0.06	0.02	0.09	2.48
	2	0.09	1.71	1.32	0.07	0.03	0.09	3.31
	combined	0.09	1.26	1.38	0.06	0.03	0.09	2.91
7. mother's father's premises	1	0.21	2.78	2.31	0.29	0.05	0.46	6.10
	2	0.17	2.89	2.44	0.48	0.03	0.40	6.41
	combined	0.19	2.84	2.38	0.39	0.03	0.43	6.26
8. other premises	1	—	0.21	0.25	0.16	0.16	0.02	0.80
	2	—	0.19	0.13	0.29	0.48	—	1.09
	combined	—	0.20	0.19	0.23	0.32	0.01	0.95
9. hospitals, maternity homes, etc.	1	—	—	0.03	0.19	0.78	—	1.00
	2	—	—	0.06	0.09	0.59	—	0.74
	combined	—	—	0.04	0.14	0.68	—	0.86
10. others	1	2.37	0.02	—	—	—	0.03	2.42
	2	2.09	0.04	0.06	—	—	—	2.19
	combined	2.22	0.03	0.03	—	—	0.02	2.30
11. all	1	5.41	36.62	45.40	1.64	1.94	8.99	100
	2	6.41	30.85	49.15	4.92	2.23	6.40	100
	combined	5.94	33.65	47.34	3.33	2.09	7.65	100

Estimates of Birth and Death Rates and Growth of Population

TABLE (5.1.2): PERCENTAGE DISTRIBUTION OF BIRTHS BY TYPE OF ATTENDANCE
FROM TWO INTERPENETRATING SAMPLES: ALL-INDIA RURAL HOUSEHOLDS:
NSS 14TH ROUND, SECOND SUB-ROUND (SEPTEMBER-NOVEMBER 1958)

place of birth	sample	attendance type						total
		no attendance	relative	dhai	midwife or nurse	physician	others	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>within the village :</i>								
1. own premises	1	2.40	35.22	2.70	0.37	30.48	6.45	77.62
	2	3.32	42.54	2.98	0.30	31.53	3.84	84.51
	combined	2.88	39.06	2.85	0.33	31.03	5.08	81.23
2. mother's father's premises	1	0.15	2.40	0.18	0.05	2.50	0.15	5.43
	2	0.06	1.57	0.20	0.02	1.43	0.04	3.32
	combined	0.10	1.97	0.19	0.03	1.94	0.10	4.33
3. other premises	1	0.07	0.20	0.05	—	0.20	0.03	0.55
	2	—	0.15	—	—	0.11	0.06	0.32
	combined	0.03	0.17	0.02	—	0.15	0.05	0.42
4. hospitals, maternity homes, etc.	1	—	—	0.13	0.93	0.02	—	1.08
	2	—	—	0.12	0.15	0.03	—	0.30
	combined	—	—	0.13	0.52	0.02	—	0.67
5. others	1	0.03	—	—	—	—	—	0.03
	2	—	—	—	0.02	—	—	0.02
	combined	0.01	—	—	0.01	—	—	0.02
<i>outside the village</i>								
6. own premises	1	0.07	1.05	0.13	—	1.10	0.05	2.40
	2	0.02	1.31	0.09	0.06	0.88	0.03	2.39
	combined	0.04	1.19	0.11	0.03	0.98	0.04	2.39
7. mother's father's premises	1	0.28	2.48	0.55	0.07	3.20	0.94	7.52
	2	0.12	1.93	0.44	0.09	2.24	0.21	5.03
	combined	0.20	2.20	0.49	0.08	2.70	0.55	6.22
8. other premises	1	—	0.20	0.13	0.12	0.08	0.05	0.58
	2	0.01	0.17	0.15	0.17	0.10	0.02	0.62
	combined	0.01	0.18	0.14	0.14	0.10	0.03	0.60
9. hospitals, maternity homes, etc.	1	—	—	0.29	0.31	1.22	—	1.82
	2	—	—	0.25	0.55	—	—	0.80
	combined	—	—	0.27	0.43	0.58	—	1.28
10. others	1	2.84	0.05	—	—	0.05	0.03	2.97
	2	2.60	0.03	—	—	0.06	—	2.69
	combined	2.72	0.04	—	—	0.06	0.02	2.84
11. all	1	5.84	41.60	4.16	1.85	38.85	7.70	100
	2	6.13	47.70	4.23	1.36	36.38	4.20	100
	combined	5.99	44.61	4.20	1.57	37.56	5.87	100

National Sample Survey

TABLE (5.2.1): PERCENTAGE DISTRIBUTION OF DEATHS BY TYPE OF ATTENDANCE
AND PLACE OF OCCURRENCE FROM TWO INTERPENETRATING SAMPLES: ALL-
INDIA RURAL, HOUSEHOLDS: NSS 14TH ROUND, FIRST SUB-ROUND
(JULY-SEPTEMBER 1958)

place of death	sample	attendance type						total
		no attendance	relative	dhai	midwife or nurse	physician	others	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>within the village :</i>								
1. own	1	13.79	52.29	7.51	0.52	9.97	5.47	89.55
	2	13.30	47.39	5.07	1.12	15.14	5.63	87.65
	combined	13.54	49.83	6.29	0.82	12.57	5.55	88.60
2. mother's father's premises	1	0.28	1.05	0.24	—	0.40	0.04	2.01
	2	0.08	1.80	0.60	—	—	0.12	2.60
	combined	0.18	1.42	0.42	—	0.20	0.08	2.30
3. other premise	1	0.12	0.32	0.08	—	0.04	0.04	0.60
	2	0.08	0.12	0.08	0.04	0.20	0.12	0.64
	combined	0.10	0.22	0.08	0.02	0.12	0.08	0.62
4. hospitals, maternity homes, etc.	1	—	—	0.04	0.12	0.45	—	0.61
	2	—	—	0.04	0.08	0.08	—	0.20
	combined	—	—	0.04	0.10	0.26	—	0.40
5. others	1	0.08	0.04	—	—	—	—	0.12
	2	0.12	0.04	—	—	—	0.04	0.20
	combined	0.10	0.04	—	—	—	0.02	0.16
<i>outside the village :</i>								
6. own premises	1	0.24	1.21	—	—	0.32	—	1.77
	2	0.24	1.04	0.20	0.08	0.60	—	2.16
	combined	0.24	1.12	0.10	0.04	0.46	—	1.96
7. mother's father's premises	1	0.48	1.93	0.29	—	0.20	0.08	2.98
	2	0.28	2.55	0.12	—	0.56	0.20	3.71
	combined	0.38	2.25	0.20	—	0.38	0.14	3.35
8. other premises	1	—	0.44	0.08	—	0.28	—	0.80
	2	0.08	0.56	0.12	0.08	0.24	0.04	1.12
	combined	0.04	0.50	0.10	0.04	0.26	0.02	0.96
9. hospitals, maternity homes, etc.	1	—	—	0.24	0.04	0.68	—	0.96
	2	—	—	0.04	0.04	0.60	—	0.68
	combined	—	—	0.14	0.04	0.64	—	0.82
10. others	1	0.48	0.08	—	—	—	0.04	0.60
	2	0.60	0.32	—	—	0.08	0.04	1.04
	combined	0.55	0.20	—	—	0.04	0.04	0.83
11. all	1	15.47	57.36	8.44	0.68	12.34	5.67	100
	2	14.78	53.82	6.27	1.44	17.50	6.19	100
	combined	15.13	55.58	7.33	1.06	14.93	5.93	100

Estimates of Birth and Death Rates and Growth of Population

TABLE (5.2.2.): PERCENTAGE DISTRIBUTION OF DEATHS BY TYPE OF ATTENDANCE
AND PLACE OF OCCURRENCE TWO INTERPENETRATING SAMPLES: ALL-
INDIA RURALNSS HOUSEHOLDS: 14TH ROUND, SECOND SUB-ROUND
(SEPTEMBER-NOVEMBER 1958)

place of death	sample	attendance type						total
		no attendance	relative	dhai	midwife or nurses	physician	others	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>within the village :</i>								
1. own premises	1	18.72	42.15	3.65	1.30	15.45	6.30	87.57
	2	12.76	45.76	7.74	1.49	17.42	3.93	98.10
	combined	15.60	44.05	5.79	1.40	16.48	5.05	88.37
2. mother's father's premises	1	0.38	1.89	0.21	0.04	0.80	0.12	3.44
	2	0.27	1.18	0.15	0.08	0.57	0.11	2.36
	combined	0.32	1.51	0.18	0.06	0.68	0.12	2.87
3. other premises	1	—	0.25	—	—	0.13	0.04	0.42
	2	—	0.15	0.34	—	0.19	0.04	0.72
	combined	—	0.20	0.18	—	0.16	0.04	0.58
4. hospitals, maternity homes, etc.	1	—	—	0.04	—	0.55	—	0.59
	2	—	—	0.04	0.07	0.19	—	0.30
	combined	—	—	0.04	0.04	0.36	—	0.44
5. others	1	0.08	0.05	—	—	0.04	—	0.17
	2	0.04	0.04	—	—	—	—	0.08
	combined	0.06	0.04	—	—	0.02	—	0.12
<i>outside the village :</i>								
6. own premises	1	0.25	1.30	0.09	0.04	0.21	0.04	1.93
	2	0.23	0.46	0.04	—	0.27	0.11	1.11
	combined	0.24	0.86	0.06	0.02	0.24	0.08	1.50
7. mother's father's premises	1	0.76	1.81	—	—	0.50	0.21	3.28
	2	0.57	1.83	0.04	0.15	0.50	0.23	3.32
	combined	0.66	1.82	0.02	0.08	0.50	0.22	3.30
8. other premises	1	0.04	0.50	—	0.04	0.25	0.05	0.88
	2	0.15	0.65	0.08	—	0.57	0.04	1.49
	combined	0.10	0.58	0.04	0.02	0.42	0.04	1.20
9. hospital, maternity homes, etc.	1	—	—	0.08	0.21	0.63	—	0.84
	2	—	—	0.04	0.13	0.72	—	0.84
	combined	—	—	0.06	0.16	0.68	—	0.84
10. others	1	0.76	0.12	—	—	—	—	p.88
	2	0.42	0.19	0.03	—	—	0.04	0.68
	combined	0.58	0.16	0.02	—	—	0.02	0.78
11. all	1	20.99	48.07	4.07	1.55	18.56	6.76	100.00
	2	14.40	50.26	8.50	1.87	20.43	4.50	100.00
	combined	17.56	49.22	6.39	1.72	19.54	5.57	100.00

TABLE Z(6.1.1): SEX-RATIO IN AGE GROUPS AND PERCENTAGE DISTRIBUTION OF POPULATION IN AGE GROUPS BY SEX IN THE RURAL ZONES FROM TWO INTERPENETRATING SAMPLES : NSS 14TH ROUND RURAL, FIRST SUB-ROUND (JULY-SEPTEMBER1958)

zone (number of sample villages)	sample	sex ratio ^a				percentage distribution of population											
		0-14	15-44	45-	all ages	total				males				females			
						0-14	15-44	45-	all ages	0-14	15-44	45-	all ages	0-14	15-44	45-	all ages
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
i. north (90)	1	109.88	112.03	118.69	112.05	42.60	42.80	14.60	100	42.35	42.57	15.08	100	43.19	42.57	14.24	100
	2	116.11	110.15	122.45	114.30	40.63	44.32	15.05	100	41.33	43.66	15.01	100	40.69	45.30	14.01	100
	C	112.66	111.14	120.41	113.09	41.63	43.55	14.82	100	41.88	43.07	15.05	100	42.04	43.83	14.13	100
2. central (94)	1	107.75	107.31	97.86	105.84	40.59	42.62	16.79	100	40.94	42.91	16.15	100	40.21	42.32	17.47	100
	2	112.17	108.26	109.19	109.97	40.13	42.46	17.41	100	40.51	42.14	17.35	100	39.71	42.82	17.48	100
	C	109.75	107.76	103.02	107.72	40.37	42.55	17.08	100	40.74	42.55	16.71	100	39.99	42.54	17.47	100
3. east (102)	1	104.61	100.94	95.31	101.49	41.04	43.04	15.92	100	41.49	43.16	15.35	100	40.26	43.40	16.34	100
	2	105.53	103.87	94.79	103.05	41.74	42.46	15.80	100	42.23	42.62	15.15	100	41.42	42.28	16.48	100
	C	105.12	102.53	95.02	102.35	41.42	42.72	15.86	100	41.90	42.86	15.24	100	40.80	42.78	16.42	100
4. south (78)	1	105.57	95.60	104.23	100.85	38.48	43.78	17.74	100	39.36	42.61	18.03	100	37.60	44.95	17.45	100
	2	98.73	96.24	96.07	97.18	39.35	42.81	17.84	100	39.66	42.60	17.74	100	39.04	43.02	17.94	100
	C	101.83	95.94	99.78	98.88	39.95	43.27	17.78	100	39.52	42.61	17.87	100	38.38	43.91	17.71	100
5. west (72)	1	106.21	99.44	111.71	104.15	41.94	42.00	16.06	100	42.34	41.05	16.61	100	41.52	43.00	15.48	100
	2	102.24	101.52	102.31	100.63	40.71	43.11	16.18	100	41.06	42.54	16.40	100	40.41	43.46	16.13	100
	C	104.29	98.98	107.00	102.42	41.33	42.55	16.12	100	41.72	41.77	16.51	100	40.98	43.22	15.80	100
6. all-India rural (436)	1	106.54	102.47	102.33	104.08	40.70	42.84	16.46	100	41.14	42.54	16.32	100	40.19	43.21	16.60	100
	2	105.95	102.84	101.86	103.92	40.54	42.79	16.67	100	40.95	42.54	16.51	100	40.16	42.99	16.85	100
	C	106.25	102.66	102.09	104.00	40.62	42.82	16.56	100	41.04	42.54	16.42	100	40.18	43.10	16.72	100

^amales per 100 females

TABLE Z(6.1.2): SEX-RATIO IN AGE GROUPS AND PERCENTAGE DISTRIBUTION OF POPULATION AND AGE BY SEX IN THE RURAL ZONES FROM TWO INTERPENETRATING SAMPLES: NSS 14TH ROUND RURAL, SECOND SUB-ROUND (SEPTEMBER-NOVEMBER 1958)

zone (number of sample villages)	sample	sex-ratio ^a				percentage distribution of population											
		0-14	15-44	45-	all ages	total				male				female			
						0-14	15-44	45-	all ages	0-14	15-44	45-	all ages	0-14	15-44	45-	all ages
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1. north (90)	1	111.80	102.84	114.68	108.49	43.53	40.69	15.79	100	44.14	39.64	16.22	100	42.84	41.82	15.34	100
	2	110.99	107.69	133.39	133.01	42.01	41.35	16.64	100	41.66	40.42	17.92	100	42.42	42.40	15.18	100
	C	111.47	104.82	122.14	110.30	42.91	40.96	16.13	100	43.12	39.96	16.92	100	42.67	42.05	15.28	100
2. central (94)	1	113.46	103.55	100.48	106.88	40.31	42.63	17.06	100	41.47	41.98	16.55	100	39.07	43.42	17.61	100
	2	104.66	108.10	110.45	107.30	41.34	42.60	16.06	100	40.90	42.78	16.32	100	41.83	42.36	15.81	100
	C	108.03	106.26	106.22	106.97	40.93	42.61	16.46	100	41.13	42.46	16.41	100	40.73	42.74	16.53	100
3. east (102)	1	102.49	94.41	87.94	96.57	41.63	41.99	16.38	100	42.89	41.50	15.61	100	40.41	42.45	17.14	100
	2	106.75	99.28	95.55	101.64	40.91	43.10	15.99	100	41.90	42.60	15.50	100	39.90	43.61	16.49	100
	C	104.82	97.12	92.05	99.36	41.23	42.60	16.17	100	42.34	42.12	15.54	100	40.13	43.09	16.78	100
4. south (78)	1	98.29	94.39	94.23	95.81	37.70	44.60	17.70	100	38.18	44.26	17.56	100	37.22	44.93	17.85	100
	2	106.15	99.12	92.22	100.57	39.39	43.39	17.22	100	40.45	43.08	16.47	100	38.32	43.72	17.96	100
	C	101.75	96.41	93.35	97.87	38.43	44.08	17.49	100	39.19	43.74	17.07	100	37.70	44.40	17.90	100
5. west (72)	1	103.38	107.99	102.79	105.24	42.81	42.74	14.45	100	42.43	43.28	14.29	100	43.20	42.17	14.63	100
	2	102.49	100.52	99.46	101.17	41.73	42.71	15.56	100	42.00	42.58	15.42	100	41.46	42.85	15.69	100
	C	102.88	103.69	100.82	102.91	42.19	42.73	15.08	100	42.19	42.88	14.93	100	42.20	42.56	15.24	100
6. all-India (436)	1	105.29	99.44	97.75	101.50	40.90	42.65	16.45	100	41.64	42.22	16.14	100	40.14	43.10	16.76	100
	2	105.68	102.60	102.74	103.87	41.03	42.77	16.20	100	41.38	42.51	16.11	100	40.67	43.04	16.29	100
	C	105.50	101.09	100.33	102.75	40.97	42.72	16.31	100	41.50	42.37	16.13	100	40.42	43.06	16.52	100

^amales per 100 females

TABLE Z(6.1.3): SEX-RATIO IN AGE GROUPS AND PERCENTAGE DISTRIBUTION OF POPULATION IN AGE GROUPS BY SEX IN THE RURAL ZONES FROM TWO INTERPENETRATING SAMPLES : NSS 14TH ROUND RURAL, THIRD SUB-ROUND (NOVEMBER 1958 JANUARY 1959)

zone (number of sample villages)	sample	sex ratio ^a				percentage distribution of population											
		0-14	15-44	45-	all ages	total				male				female			
						0-14	15-44	45-	all ages	0-14	15-44	45-	all ages	0-14	15-44	45-	all ages
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1. north (90)	1	109.94	112.48	119.54	112.30	43.98	40.20	13.82	100	43.53	42.23	14.24	100	44.47	42.16	13.37	100
	2	106.28	109.97	133.16	111.29	42.00	44.19	13.81	100	41.08	43.94	14.98	100	43.07	44.47	12.51	100
	C	108.12	111.18	126.22	111.79	42.98	43.20	13.82	100	42.30	43.09	14.61	100	43.74	43.33	12.93	100
2. central (94)	1	107.49	104.25	93.54	103.81	39.44	45.54	15.02	100	40.12	45.63	14.25	100	38.75	45.44	15.82	100
	2	111.79	109.49	100.22	109.22	40.24	46.13	13.63	100	40.68	46.25	13.06	100	39.75	46.01	14.24	100
	C	109.26	106.52	96.09	106.00	39.78	45.78	14.44	100	40.36	45.89	13.75	100	39.15	45.67	15.18	100
3. east (102)	1	106.48	102.89	104.02	104.49	40.78	46.27	12.95	100	41.15	45.93	12.92	100	40.38	46.64	12.98	100
	2	109.70	103.02	94.10	104.20	39.22	46.18	14.60	100	40.21	45.92	13.87	100	38.20	46.45	15.25	100
	C	107.86	102.95	99.24	104.36	40.09	46.23	13.68	100	40.74	45.92	13.34	100	39.42	46.55	14.03	100
4. south (78)	1	104.28	95.08	90.12	97.69	38.72	45.12	16.16	100	40.00	44.50	15.50	100	37.48	45.72	16.80	100
	2	101.45	92.77	101.78	97.51	39.70	44.82	15.48	100	40.49	43.69	15.82	100	38.92	45.92	15.16	100
	C	102.74	93.84	96.04	97.60	39.24	44.96	15.80	100	40.26	44.07	15.67	100	38.25	45.83	15.92	100
5. west (72)	1	105.75	96.93	93.25	100.01	42.08	44.16	13.76	100	43.26	43.46	13.28	100	40.91	44.85	14.24	100
	2	105.13	101.38	97.40	102.31	41.13	44.38	14.49	100	41.68	44.18	14.14	100	40.56	44.58	14.86	100
	C	105.50	98.72	94.97	100.94	41.70	44.24	14.06	100	42.61	43.76	13.63	100	40.77	44.74	14.49	100
6. all-India rural (436)	1	106.47	101.20	96.62	102.61	40.45	45.16	14.39	100	41.18	44.86	13.96	100	39.70	45.48	14.82	100
	2	106.93	102.11	100.93	103.84	40.13	45.36	14.51	100	40.70	44.99	14.31	100	39.53	45.74	14.73	100
	C	106.67	101.61	98.56	103.17	40.31	45.25	14.44	100	40.97	44.91	14.12	100	39.62	45.60	14.78	100

^amales per 100 females

TABLE Z(6.1.4): SEX-RATIO IN AGE GROUPS AND PERCENTAGE DISTRIBUTION OF POPULATION IN AGE GROUPS BY SEX IN THE RURAL ZONES FROM TWO INTERPENETRATING SAMPLES: NSS 14TH ROUND RURAL, FOURTH SUB-ROUND (JANUARY MARCH 1959)

zone (number of sample villages)	sample	sex-ratio ^a				percentage distribution of population											
		0-14	15-44	45-	all ages	total				male				female			
						0-14	15-44	45-	all ages	0-14	15-44	45-	all ages	0-14	15-44	45-	all ages
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1. north (90)	1	113.53	108.05	103.83	109.65	41.32	44.31	14.37	100	42.00	44.01	13.99	100	40.57	44.66	14.77	100
	2	109.53	111.16	131.20	113.08	42.60	43.19	14.21	100	41.95	42.85	15.20	100	43.32	43.58	13.10	100
	C	111.51	109.55	116.36	111.32	41.94	43.77	14.29	100	41.98	43.43	14.59	100	41.91	44.13	13.96	100
2. central (94)	1	113.66	107.05	99.32	108.37	39.42	45.43	15.15	100	40.33	45.15	14.52	100	38.45	45.11	15.84	100
	2	112.83	106.74	99.34	107.95	39.75	45.28	14.97	100	40.60	45.03	14.37	100	38.84	45.54	15.62	100
	C	113.29	106.91	99.33	108.18	39.58	45.35	15.07	100	40.45	45.10	14.45	100	38.63	45.63	15.74	100
3. east (102)	1	111.77	99.52	81.39	101.85	41.53	45.97	12.50	100	43.45	45.44	11.11	100	39.60	46.50	13.90	100
	2	105.17	109.84	93.75	105.83	40.91	46.84	12.25	100	40.79	47.68	11.53	100	41.04	45.94	13.02	100
	C	108.31	104.80	87.56	103.90	41.22	46.42	12.36	100	42.06	46.61	11.33	100	40.34	46.21	13.45	100
4. south (78)	1	108.29	100.75	98.94	104.58	39.85	44.83	15.32	100	41.08	44.01	14.91	100	38.56	45.68	15.76	100
	2	103.24	92.26	100.01	97.72	39.33	44.31	16.36	100	40.42	43.02	16.56	100	38.25	45.57	16.18	100
	C	106.77	95.92	99.56	100.67	39.55	44.54	15.91	100	40.71	43.47	15.82	100	38.39	45.62	15.99	100
5. west (72)	1	102.81	102.53	93.82	101.47	41.74	45.35	12.91	100	42.02	45.47	12.41	100	41.47	45.10	13.43	100
	2	106.99	104.12	105.90	105.59	42.80	43.21	13.99	100	43.07	42.92	14.01	100	42.51	43.52	13.97	100
	C	104.93	103.31	100.01	103.54	42.28	44.25	13.47	100	42.56	44.21	13.23	100	41.99	44.31	13.70	100
6. all-India rural (436)	1	110.85	103.33	94.08	104.94	40.65	45.36	13.99	100	41.74	45.02	13.24	100	39.52	45.72	14.76	100
	2	107.42	104.91	101.75	105.47	40.83	45.01	14.16	100	41.19	44.89	13.92	100	40.44	45.13	14.43	100
	C	109.11	104.12	97.87	105.20	40.74	45.19	14.07	100	41.46	44.96	13.58	100	39.98	45.43	14.59	100

^amales per 100 females

TABLE Z(6.1.5): SEX-RATIO IN AGE GROUPS AND PERCENTAGE DISTRIBUTION OF POPULATION IN AGE GROUPS BY SEX IN THE RURAL ZONES FROM TWO INTERPENETRATING SAMPLES : NSS 14TH ROUND, RURAL, FIFTH SUB-ROUND (MARCH-MAY 1959)

zone (number of sample villages)	sample	sex-ratio ^a				percentage distribution of population											
		0-14	15-44	45-	all ages	total				male				female			
						0-14	15-44	45-	all ages	0-14	15-44	45-	all ages	0-14	15-44	45-	all ages
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1. north (90)	1	106.40	105.14	123.83	108.36	43.41	41.25	15.34	100	43.03	40.65	16.32	100	43.83	41.90	14.27	100
	2	111.02	112.96	122.56	112.24	42.97	42.85	14.18	100	42.24	42.98	14.78	100	43.76	42.71	13.53	100
	C	107.34	108.91	123.24	110.21	43.19	42.03	14.78	100	42.65	41.78	15.57	100	43.79	42.29	13.92	100
2. central (94)	1	110.72	107.06	97.67	107.05	40.75	44.23	15.02	100	41.42	44.23	14.35	100	40.05	44.22	15.73	100
	2	107.67	106.18	98.74	105.59	39.76	44.97	15.27	100	40.14	45.10	14.76	100	39.36	44.85	15.79	100
	C	109.06	106.58	98.26	106.25	40.21	44.64	15.15	100	40.72	44.70	14.58	100	39.67	44.56	15.77	100
3. east (102)	1	110.77	102.04	82.39	102.62	40.77	46.19	13.04	100	42.32	46.05	11.63	100	39.20	46.32	14.48	100
	2	105.54	100.86	88.68	100.98	40.68	45.86	13.46	100	41.58	45.83	12.59	100	39.78	45.88	14.34	100
	C	108.20	101.47	85.43	101.82	40.74	46.02	13.24	100	41.96	45.95	12.09	100	39.48	46.11	14.41	100
4. south (78)	1	99.26	102.27	86.05	98.21	38.73	44.50	16.77	100	38.94	45.40	15.66	100	38.53	43.60	17.87	100
	2	104.55	98.53	100.31	101.10	38.25	44.95	16.80	100	38.89	44.37	16.74	100	37.60	45.53	16.87	100
	C	101.98	100.29	93.26	99.71	38.48	44.73	16.79	100	38.91	44.86	16.23	100	38.05	44.60	17.35	100
5. west (72)	1	108.76	96.34	97.68	101.39	40.44	45.00	14.56	100	41.85	43.87	14.28	100	39.01	46.16	14.83	100
	2	108.24	100.53	93.57	102.56	41.69	43.33	14.98	100	42.79	42.91	14.30	100	40.55	43.77	15.63	100
	C	108.48	98.51	95.44	102.01	41.11	44.11	14.78	100	42.35	43.36	14.29	100	39.83	44.89	15.28	100
6. all-India rural (436)	1	107.47	102.59	93.57	103.13	40.62	44.60	14.78	100	41.44	44.48	14.08	100	39.77	44.72	15.51	100
	2	106.65	102.81	97.98	103.59	40.33	44.70	14.97	100	40.91	44.52	14.57	100	39.74	44.86	15.40	100
	C	107.04	102.70	95.84	103.37	40.46	44.66	14.88	100	41.17	44.50	14.33	100	39.75	44.79	15.46	100

^a males per 100 females

TABLE Z(6.1.6): SEX-RATIO IN AGE GROUPS AND PERCENTAGE DISTRIBUTION OF POPULATION IN AGE GROUPS BY SEX IN THE RURAL ZONES FROM TWO INTERPENETRATING SAMPLES: NSS 14TH ROUND RURAL, SIXTH SUB-ROUND (MAY-JULY 1959)

zone (number of sample villages)	sample	sex-ratio ^a				percentage distribution of population											
		0-14	15-44	45-	all ages	total				male				female			
						0-14	15-44	45-	all ages	0-14	15-44	45-	all ages	0-14	15-44	45-	all ages
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1. north (90)	1	110.35	111.52	116.45	111.63	43.10	44.04	12.86	100	42.87	44.01	13.12	100	43.37	44.06	12.57	100
	2	106.34	116.13	126.06	113.22	41.84	44.57	13.59	100	40.61	45.10	14.29	100	43.24	43.97	12.79	100
	C	108.46	113.69	121.20	112.38	42.51	44.29	13.20	100	41.80	44.53	13.67	100	43.31	44.01	12.68	100
2. central (94)	1	112.22	108.11	93.20	107.19	39.09	45.36	15.55	100	39.95	45.54	14.51	100	38.16	45.15	16.69	100
	2	110.59	100.59	104.46	105.20	38.50	45.81	15.69	100	39.61	44.75	15.64	100	37.34	46.91	15.75	100
	C	111.85	103.53	99.58	106.03	38.75	45.62	15.63	100	39.75	45.09	15.16	100	37.68	46.18	16.14	100
3. east (102)	1	102.70	97.45	91.64	98.82	41.53	45.65	12.82	100	42.34	45.33	12.33	100	40.74	45.97	13.29	100
	2	106.57	101.94	91.53	102.36	41.46	45.27	13.27	100	42.29	45.18	12.53	100	40.62	45.37	14.01	100
	C	104.90	99.99	91.58	100.83	41.49	45.43	13.08	100	42.31	45.25	12.44	100	40.67	45.63	13.70	100
4. south (78)	1	105.31	99.73	99.43	101.83	39.13	46.13	14.74	100	39.78	45.66	14.56	100	38.46	46.62	14.92	100
	2	103.46	97.73	93.79	99.24	38.53	45.30	16.17	100	39.34	44.96	15.70	100	37.74	45.65	16.61	100
	C	104.32	98.66	96.24	100.43	38.82	45.68	15.50	100	39.54	45.29	15.17	100	38.07	46.10	15.83	100
5. west (72)	1	105.13	103.71	90.30	102.33	42.51	43.62	13.87	100	43.07	43.92	13.01	100	41.93	43.32	14.75	100
	2	108.14	102.93	92.13	102.94	42.82	43.85	13.33	100	43.72	43.68	12.60	100	41.90	44.02	14.08	100
	C	106.08	101.83	91.18	102.63	42.66	43.73	13.61	100	43.39	43.80	12.81	100	41.92	43.66	14.42	100
6. all-India rural (435)	1	106.81	103.17	96.10	103.60	40.83	45.13	14.04	100	41.43	45.04	13.53	100	40.19	45.23	14.58	100
	2	107.39	101.95	98.67	103.61	40.29	45.18	14.53	100	41.00	44.81	14.19	100	39.56	45.54	14.90	100
	C	107.12	102.50	97.51	103.61	40.53	45.16	14.31	100	41.20	44.91	13.89	100	39.84	45.40	14.76	100

^a males per 100 females

TABLE S(6.1.1): AVERAGE HOUSEHOLD SIZE, SEX-RATIO AND PERCENTAGE DISTRIBUTION OF POPULATION BY AGE, STATUS OF ECONOMIC ACTIVITY AND RELIGION IN THE DIFFERENT STATES FROM TWO INTERPENETRATING SAMPLES: NSS 14TH ROUND RURAL, FIRST SUB-ROUND (JULY-SEPTEMBER 1958)

state (number of sample villages)	sample	average house- hold size	sex- ratio ^a	percentage of population									
				age group				status of economic activity			religion		
				0-14	15-44	45-	all ages	employed	unem- ployed	in- active	Hindu- ism	Islam	Others
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1. Rajasthan (20)	1	5.54	108.82	42.44	43.52	14.04	100	58.69	—	41.31	96.58	3.19	0.23
	2	5.47	115.29	40.90	43.73	15.37	100	54.05	0.03	45.92	91.61	5.44	2.95
	C	5.51	112.06	41.65	43.63	14.72	100	56.32	0.02	43.66	94.05	4.33	1.62
2. Punjab, Delhi, and H.P. (16)	1	5.65	116.02	44.51	39.88	15.61	100	40.44	0.06	59.50	31.39	14.94	53.67
	2	4.06	112.59	42.35	42.01	15.64	100	43.58	0.10	56.32	86.17	0.10	13.73
	C	5.56	114.54	43.58	40.79	15.63	100	41.78	0.08	58.14	54.76	8.61	36.63
3. Jammu and Kashmir (54)	1	5.51	121.18	36.83	49.18	13.99	100	35.71	0.11	64.18	27.97	63.70	8.33
	2	5.46	110.67	36.45	50.78	12.77	100	45.67	0.29	54.04	17.15	80.46	2.61
	C	5.49	112.72	36.79	49.68	13.53	100	41.50	0.18	58.32	22.81	74.42	2.77
4. Uttar Pradesh (52)	1	3.11	107.39	40.47	41.38	18.15	100	40.41	0.10	59.49	93.12	6.88	—
	2	4.98	110.98	39.78	42.02	18.20	100	39.61	0.10	60.29	90.19	9.49	0.32
	C	5.03	109.17	40.12	41.71	18.17	100	40.01	0.10	59.89	91.66	8.18	0.16
5. Madhya Pradesh (42)	1	5.03	103.41	40.78	44.59	14.63	100	53.70	0.05	46.25	99.68	0.23	0.09
	2	5.23	107.80	41.52	43.78	14.70	100	49.53	0.11	50.08	92.31	4.19	3.50
	C	5.10	104.94	41.04	44.31	14.65	100	52.23	0.07	47.70	97.06	1.64	1.30
6. Bihar (38)	1	5.62	100.07	41.52	41.65	16.83	100	40.53	0.08	59.39	82.47	15.71	1.82
	2	5.52	102.60	42.49	41.16	16.35	100	39.13	0.07	60.80	88.57	9.82	1.61
	C	5.57	101.46	42.06	41.38	16.56	100	39.30	0.07	60.63	85.82	12.46	1.72
7. Orissa (20)	1	4.78	101.06	39.11	44.21	16.68	100	55.64	0.04	44.32	100.00	—	—
	2	4.83	98.28	39.06	44.31	16.63	100	51.44	0.11	48.45	85.67	—	13.43
	C	4.80	99.79	39.08	44.28	16.64	100	53.73	0.07	46.20	93.91	—	6.09
8. West Bengal (28)	1	5.23	106.49	40.13	45.55	14.32	100	32.02	0.22	67.76	91.92	8.08	—
	2	5.24	104.97	41.16	43.40	15.44	100	33.84	0.18	65.98	50.24	46.27	3.49
	C	5.23	105.68	40.68	44.41	14.91	100	32.98	0.20	66.82	69.89	23.26	1.85

^a males per 100 females

TABLE S(6.1.1) (Contd.): AVERAGE HOUSEHOLD SIZE, SEX-RATIO AND PERCENTAGE DISTRIBUTION OF POPULATION BY AGE, STATUS OF ECONOMIC ACTIVITY AND RELIGION IN THE DIFFERENT STATES FROM TWO INTERPENETRATING SAMPLES: NSS 14TH ROUND RURAL, FIRST SUB-ROUND (JULY-SEPTEMBER 1958)

state (number of sample villages)	sample	average house- hold size	sex- ratio ^a	percentage of population									
				age group				status of economic activity			religion		
				0-14	15-44	45-	all ages	em- ployed	unem- ployed	in- active	Hindu- ism	Islam	others
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
9. Assam (16)	1	5.16	100.34	43.07	42.99	13.94	100	41.05	—	58.95	73.79	20.48	5.73
	2	5.44	105.69	41.95	44.09	13.96	100	33.33	0.11	66.56	96.36	3.64	—
	C	5.31	103.32	42.39	43.66	13.95	100	36.41	0.07	63.52	87.40	10.33	2.27
10. Andhra Pradesh (36)	1	4.59	105.65	39.47	43.72	16.81	100	53.59	—	46.41	91.63	3.59	2.78
	2	4.71	99.60	39.90	52.27	17.83	100	52.32	0.73	46.95	93.63	5.76	0.61
	C	4.66	101.70	39.75	42.78	17.47	100	52.77	0.47	46.76	92.91	5.71	1.38
11. Madras (30)	1	4.43	98.32	36.79	45.11	18.07	100	48.12	0.15	51.73	88.35	10.08	1.57
	2	4.22	99.32	35.57	45.61	18.82	100	43.37	0.04	50.59	98.70	0.45	0.85
	C	4.33	98.74	36.28	45.34	18.38	100	48.64	0.11	51.25	92.67	6.06	1.27
12. Kerala (12)	1	5.67	98.32	41.41	39.83	18.76	100	41.85	0.30	57.85	72.12	3.83	24.05
	2	4.80	85.85	44.70	39.29	16.01	100	34.70	0.56	64.74	66.10	19.32	14.58
	C	5.13	91.31	43.16	39.54	17.30	100	38.06	0.44	61.50	68.92	12.05	19.03
13. Bombay (52)	1	5.09	104.84	41.62	42.75	15.63	100	47.99	0.11	51.90	93.73	3.70	2.57
	2	5.09	98.67	41.93	42.05	16.02	100	52.63	0.01	47.36	92.85	2.80	4.35
	C	5.09	101.88	41.76	42.42	15.82	100	50.18	0.07	49.75	93.31	3.27	3.42
14. Mysore (20)	1	5.28	102.21	42.71	40.08	17.21	100	57.21	—	42.79	92.41	7.42	0.17
	2	4.87	104.15	38.65	44.66	16.69	100	51.37	0.02	48.61	95.76	4.20	0.04
	C	5.03	103.20	40.62	42.44	16.94	100	54.19	0.01	45.80	94.15	5.75	0.10
15. all-India rural (436)	1	5.07	104.12	40.70	42.84	16.46	100	46.52	0.09	53.39	89.02	7.54	3.44
	2	5.01	103.97	40.54	42.79	16.67	100	44.83	0.17	55.00	87.99	9.31	2.70
	C	5.04	104.05	40.62	42.82	16.56	100	45.66	0.13	54.21	88.50	8.44	3.06

^a males per 100 females

TABLE S(6.1.2): AVERAGE HOUSEHOLD SIZE, SEX-RATIO AND PERCENTAGE DISTRIBUTION OF POPULATION BY AGE, STATUS OF ECONOMIC ACTIVITY AND RELIGION IN THE DIFFERENT STATES FROM TWO INTERPENETRATING SAMPLES: NSS 14TH ROUND RURAL, SECOND SUB-ROUND (SEPTEMBER-NOVEMBER 1958)

state (number of sample villages)	sample	average house- hold size	sex- ratio ^a	percentage of population									
				age group				status of economic activity			religion		
				9-14	15-44	45-	all ages	em- ployed	unem- ployed	in- active	Hindu- ism	Islam	others
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1. Rajasthan	I	5.40	104.11	42.41	41.46	16.13	100	52.94	—	47.06	97.01	2.45	0.54
	2	5.18	111.95	42.84	41.82	15.34	100	52.00	—	48.00	92.83	3.12	4.05
	C	5.31	107.01	42.57	41.60	15.83	100	52.58	—	47.42	95.44	2.70	1.86
(20)													
2. Punjab, Delhi and H.P.	I	5.83	114.21	45.48	39.00	15.52	100	36.57	0.09	63.34	76.38	0.15	23.47
	2	5.34	113.02	41.69	39.68	18.63	100	40.58	0.37	59.05	72.53	0.10	27.37
	C	5.57	113.71	43.89	39.28	16.83	100	38.26	0.21	61.53	74.76	0.13	25.11
(16)													
3. Jammu and Kashmir	I	5.64	116.21	38.56	47.64	13.80	100	35.06	—	64.94	33.19	66.63	0.18
	2	6.00	120.66	37.62	48.51	13.87	100	36.82	0.02	63.16	45.65	50.92	3.43
	C	5.84	118.77	38.01	48.15	13.84	100	36.09	0.01	63.90	40.50	57.41	2.09
(54)													
4. Uttar Pradesh	I	5.24	108.04	40.36	42.24	17.40	100	40.98	0.06	58.96	91.98	7.77	0.25
	2	5.30	108.88	41.59	41.91	16.50	100	44.59	1.39	54.02	90.37	9.63	—
	C	5.27	108.57	41.14	42.03	16.83	100	43.25	0.90	55.85	90.97	8.94	0.09
(52)													
5. Madhya Pradesh	I	4.95	104.47	40.19	43.46	16.35	100	52.51	0.02	47.47	93.53	2.54	3.93
	2	4.71	101.23	40.54	44.81	14.65	100	57.74	0.01	42.25	95.26	3.20	1.54
	C	4.82	102.75	40.38	44.16	15.46	100	55.27	0.01	44.72	94.45	2.88	2.67
(42)													
6. Bihar	I	5.67	93.35	42.98	41.03	15.99	100	34.59	0.13	65.28	85.92	13.53	0.55
	2	5.40	101.24	42.57	42.22	15.21	100	42.63	0.05	57.32	83.98	8.29	7.73
	C	5.50	98.20	42.73	41.77	15.50	100	39.60	0.08	60.32	84.71	10.26	5.03
(38)													
7. Orissa	I	4.52	91.08	38.41	41.95	19.64	100	37.22	0.77	62.01	100.00	—	—
	2	4.62	98.59	39.29	41.99	18.72	100	38.21	0.23	61.56	99.92	—	0.08
	C	4.57	94.65	38.84	41.97	19.19	100	37.70	0.51	61.79	99.96	—	0.04
(20)													
8. West Bengal	I	5.30	106.46	41.04	43.54	15.42	100	30.77	0.12	69.11	78.67	17.58	3.75
	2	5.45	104.04	37.49	45.57	16.94	100	34.47	0.13	65.40	75.16	17.48	7.36
	C	5.38	104.08	39.02	44.69	16.29	100	32.88	0.13	66.99	76.68	17.52	5.80
(28)													

^amales per 100 females

TABLE S(6.1.2) (Contd.): AVERAGE HOUSEHOLD SIZE, SEX-RATIO AND PERCENTAGE DISTRIBUTION OF POPULATION BY AGE, STATUS OF ECONOMIC ACTIVITY AND RELIGION IN THE DIFFERENT STATE FROM TWO INTERPENETRATING SAMPLES : NSS 14TH ROUND RURAL, SECOND SUB-ROUND (SEPTEMBER NOVEMBER 1958)

state (number of sample villages)	sample	house- hold size	sex ratio ^a	age group				percentage of population status of economic activity			religion		
				0-14	15-44	45-	all ages	em- ployed	unem- ployed	in- active	Hindu- ism	Islam	others
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
9. Assam (16)	1	5.53	100.53	44.75	42.07	13.18	100	33.01	—	66.99	44.80	55.20	—
	2	4.98	104.27	44.04	43.80	12.16	100	46.69	—	53.31	21.83	12.20	65.97
	C	5.26	102.17	44.44	42.83	12.73	100	39.07	—	60.93	34.63	36.16	29.21
10. Andhra Pradesh (36)	1	4.48	98.45	37.06	45.66	17.28	100	52.92	0.22	46.86	94.40	3.34	2.26
	2	4.66	100.21	39.43	43.37	17.20	100	53.71	0.08	46.21	95.41	0.51	4.08
	C	4.56	99.06	37.99	44.76	17.25	100	53.22	0.17	46.61	94.80	2.23	2.97
11. Madras (30)	1	4.15	93.40	36.44	44.35	19.21	100	56.24	0.07	43.69	92.32	6.20	1.48
	2	4.38	102.34	37.63	45.13	17.24	100	55.52	0.07	44.41	96.02	2.37	1.61
	C	4.26	97.16	36.95	44.69	18.36	100	55.93	0.07	44.00	93.92	4.54	1.54
12. Kerala (12)	1	5.52	91.37	44.06	40.61	15.33	100	32.38	0.65	66.97	40.40	46.24	13.36
	2	5.63	98.68	41.97	40.82	17.21	100	36.69	0.21	63.10	75.90	2.62	21.48
	C	5.57	95.62	42.82	40.74	16.44	100	34.93	0.39	64.68	61.39	20.45	18.16
13. Bombay (52)	1	5.00	105.29	42.52	43.34	14.14	100	50.31	0.10	49.59	92.59	5.29	2.12
	2	5.08	102.39	42.18	42.32	15.50	100	54.72	0.03	45.25	94.33	3.80	1.87
	C	5.05	103.56	42.32	42.73	14.95	100	52.93	0.06	47.01	93.63	4.40	1.97
14. Mysore (20)	1	5.24	105.12	43.42	41.43	15.15	100	55.10	0.16	44.74	94.36	4.17	1.47
	2	5.01	97.33	40.27	43.98	15.75	100	53.48	0.14	46.38	92.98	4.92	2.10
	C	5.14	101.18	41.86	42.69	15.45	100	54.30	0.15	45.55	93.68	4.54	1.78
15. all-India rural (436)	1	4.97	101.50	40.90	42.65	16.46	100	44.84	0.16	55.00	87.58	9.30	3.12
	2	5.11	103.86	41.03	42.77	16.20	100	47.01	0.37	52.62	87.25	6.36	6.39
	C	5.04	102.74	40.97	42.72	16.31	100	45.98	0.27	53.75	87.40	7.75	4.85

^amales per 100 females

TABLE S(6.1.3) : AVERAGE HOUSEHOLD SIZE, SEX-RATIO AND PERCENTAGE DISTRIBUTION OF POPULATION BY AGE AND RELIGION IN THE DIFFERENT STATES FROM TWO INTERPENETRATING SAMPLES : NSS 14TH ROUND RURAL, THIRD SUB-ROUND (NOVEMBER 1958-JANUARY 1959)

state (number of sample villages)	sample	average house- hold size	sex- ratio ^a	percentage of population						
				age group				religion		
				0-14	15-44	45-	all ages	Hinduism	Islam	others
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1. Rajasthan (20)	1	5.67	113.94	43.26	42.71	14.03	100	87.28	12.73	—
	2	6.45	109.84	41.53	45.36	13.11	100	99.46	—	0.54
	C	6.01	111.62	42.29	44.19	13.52	100	94.08	5.62	0.30
2. Punjab, Delhi and H.P. (16)	1	6.15	110.02	46.12	39.87	14.01	100	57.28	0.16	42.56
	2	6.11	111.55	43.87	40.52	15.61	100	74.32	—	25.68
	C	6.13	110.69	45.13	40.16	14.71	100	64.78	0.09	35.13
3. Jammu and Kashmir (54)	1	5.59	115.71	37.08	50.99	11.93	100	39.47	60.11	0.42
	2	5.54	120.21	37.38	51.58	11.04	100	28.81	70.73	0.46
	C	5.57	117.85	37.22	51.28	11.50	100	34.35	65.21	0.44
4. Uttar Pradesh (52)	1	5.29	103.64	39.24	45.19	15.57	100	91.26	8.69	0.04
	2	5.29	111.06	40.20	45.38	14.42	100	90.36	8.87	0.77
	C	5.29	106.49	39.62	45.27	15.11	100	90.91	8.76	0.33
5. Madhya Pradesh (42)	1	5.20	104.30	40.01	46.52	13.47	100	99.60	0.35	0.05
	2	5.14	105.38	40.33	47.76	11.91	100	98.22	0.23	1.55
	C	5.17	104.80	40.16	47.09	12.75	100	98.96	0.30	0.74
6. Bihar (38)	1	5.29	103.40	40.43	45.87	13.70	100	93.37	6.42	0.20
	2	5.58	102.66	39.75	44.80	15.45	100	85.40	9.10	5.49
	C	5.42	103.04	40.10	45.34	14.56	100	89.47	7.74	2.79
7. Orissa (20)	1	5.18	100.01	41.53	47.21	11.26	100	99.43	0.57	—
	2	4.55	100.91	37.57	44.25	18.18	100	83.60	2.71	13.69
	C	4.87	100.39	39.86	45.96	14.18	100	92.76	1.47	5.77
8. West Bengal (28)	1	5.11	106.34	39.91	47.32	12.77	100	74.10	25.90	—
	2	5.31	105.81	38.77	48.39	12.84	100	82.62	16.15	1.23
	C	5.18	106.16	39.52	47.69	12.79	100	77.06	22.52	0.42

^amales per 100 females

TABLE S(6.1.3) (Contd.) : AVERAGE HOUSEHOLD SIZE, SEX-RATIO AND PERCENTAGE DISTRIBUTION OF POPULATION BY AGE AND RELIGION IN THE DIFFERENT STATES FROM TWO INTERPENETRATING SAMPLES : NSS 14TH ROUND RURAL, THIRD SUB-ROUND (NOVEMBER 1958-JANUARY 1959)

state (number of sample villages)	sample	average household size	sex- ratio ^a	percentage of population						
				age group				religion		
				0-14	15-44	45--	all ages	Hinduism	Islam	others
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
9. Assam (16)	I	6.39	110.72	44.59	43.89	11.52	100	66.52	22.18	11.30
	2	4.37	116.76	38.60	53.50	7.90	100	53.83	14.06	32.10
	C	5.32	113.24	42.06	47.96	9.98	100	61.15	18.74	20.11
10. Andhra Pradesh (36)	I	4.71	102.97	37.80	47.44	14.76	100	93.32	2.38	4.29
	2	4.65	105.53	40.29	46.09	13.62	100	91.76	3.12	5.12
	C	4.68	104.19	38.99	46.80	14.21	100	92.57	2.74	4.69
11. Madras (30)	I	4.40	93.85	38.04	44.10	17.86	100	94.82	2.01	3.17
	2	4.30	95.21	38.65	44.98	16.37	100	63.39	2.80	33.80
	C	4.36	94.59	38.37	44.58	17.05	100	77.70	2.44	19.86
12. Kerala (12)	I	5.49	95.62	44.19	41.43	14.38	100	51.39	6.34	42.27
	2	5.42	90.34	41.41	42.16	16.43	100	42.63	23.47	33.90
	C	5.46	92.29	42.45	41.89	15.66	100	45.92	17.03	37.05
13. Bombay (52)	I	5.20	98.96	42.04	43.84	14.12	100	86.74	12.06	1.20
	2	5.17	101.82	41.24	44.11	14.65	100	91.66	5.73	2.60
	C	5.19	100.10	41.72	43.95	14.33	100	88.71	9.53	1.76
14. Mysore (20)	I	5.43	104.23	42.25	45.39	12.36	100	85.51	12.88	1.61
	2	5.18	104.02	40.74	45.30	13.96	100	97.03	2.06	0.92
	C	5.32	104.14	41.60	45.35	13.05	100	90.48	8.21	1.31
15. all-India rural (436)	I	5.16	102.61	40.45	45.16	14.39	100	87.63	8.84	3.53
	2	5.15	103.84	40.13	45.36	14.51	100	83.03	7.10	9.87
	C	5.16	103.17	40.31	45.25	14.44	100	85.55	8.05	6.40

^amales per 100 females

TABLE S(6.1.4): AVERAGE HOUSEHOLD SIZE, SEX-RATIO AND PERCENTAGE DISTRIBUTION OF POPULATION BY AGE AND RELIGION IN THE DIFFERENT STATES FROM TWO INTERPENETRATING SAMPLES: NSS 14TH ROUND RURAL, FOURTH SUB-ROUND (JANUARY-MARCH 1959)

state (number of sample villages)	sample	average household size	sex- ratio ^a	percentage of population						
				age group				religion		
				0-14	15-44	45-	all ages	Hinduism	Islam	others
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1. Rajasthan (20)	1	5.31	109.36	40.82	44.89	14.29	100	97.28	2.49	0.23
	2	5.45	112.73	43.58	42.38	14.04	100	97.20	0.29	2.51
	C	5.37	110.75	41.97	43.85	14.18	100	97.25	1.57	1.18
2. Punjab, Delhi and H.P. (16)	1	5.59	108.62	44.10	41.16	14.74	100	60.93	0.32	38.75
	2	5.82	113.04	42.06	42.40	15.54	100	91.59	1.66	6.75
	C	5.72	111.42	42.80	41.95	15.25	100	80.52	1.18	18.30
3. Jammu and Kashmir (54)	1	5.36	116.68	38.60	47.26	14.14	100	66.27	33.73	—
	2	5.84	115.19	38.96	50.66	10.38	100	43.94	56.06	—
	C	5.63	115.77	38.82	49.32	11.86	100	52.72	47.28	—
4. Uttar Pradesh (52)	1	5.21	109.16	39.76	44.64	15.60	100	76.60	23.31	0.09
	2	5.19	109.35	39.45	45.04	15.51	100	88.23	11.77	—
	C	5.20	109.24	39.62	44.82	15.56	100	81.76	18.19	0.05
5. Madhya Pradesh (42)	1	4.97	106.46	38.63	47.32	14.05	100	98.54	1.24	0.22
	2	4.62	104.70	40.48	45.82	13.70	100	97.96	1.62	0.42
	C	4.80	105.66	39.47	46.64	13.89	100	98.28	1.41	0.31
6. Bihar (38)	1	5.76	99.86	41.49	45.05	13.46	100	92.99	6.36	0.65
	2	5.78	102.16	42.08	44.88	13.04	100	79.20	15.80	5.00
	C	5.77	100.97	41.77	44.98	13.25	100	86.29	10.95	2.76
7. Orissa (20)	1	4.71	94.43	39.15	47.59	13.26	100	100.00	—	—
	2	4.63	99.96	37.57	46.48	15.95	100	99.18	0.82	—
	C	4.65	98.29	38.04	46.80	15.16	100	99.42	0.58	—
8. West Bengal (28)	1	5.44	105.73	41.41	46.54	12.05	100	77.19	20.02	2.79
	2	5.33	113.54	39.53	51.84	8.63	100	86.05	11.62	2.33
	C	5.39	109.26	40.54	48.99	10.47	100	81.28	16.14	2.58

^amales per 100 females

TABLE S(6.1.4) (Contd.): AVERAGE HOUSEHOLD SIZE, SEX-RATIO AND PERCENTAGE DISTRIBUTION OF POPULATION BY AGE AND RELIGION, IN THE DIFFERENT STATES FROM TWO INTERPENETRATING SAMPLES: NSS 14TH ROUND RURAL, FOURTH SUB-ROUND (JANUARY-MARCH 1959)

state (number of sample villages)	sample	average household size	sex- ratio ^a	percentage of population						
				age group				religion		
				0-14	15-44	45-	all ages	Hinduism	Islam	others
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
9. Assam (16)	1	6.18	103.96	43.51	46.82	9.67	100	52.11	40.42	7.47
	2	6.02	109.49	43.61	44.09	12.30	100	65.26	33.71	1.03
	C	6.09	107.14	43.57	45.23	11.20	100	59.76	36.51	3.73
10. Andhra Pradesh (36)	1	4.55	108.12	38.71	47.08	14.21	100	94.67	3.50	1.83
	2	4.57	105.77	40.43	44.85	14.72	100	97.98	1.77	0.25
	C	4.56	106.89	39.61	45.91	14.48	100	96.40	2.60	1.00
11. Madras (30)	1	4.49	100.07	38.14	45.63	16.23	100	96.16	0.19	3.65
	2	4.48	95.81	37.58	44.87	17.55	100	89.67	4.54	5.79
	C	4.48	97.18	37.77	45.11	17.12	100	91.79	3.12	5.09
12. Kerala (12)	1	5.55	103.55	42.79	41.10	16.11	100	86.78	11.79	1.43
	2	5.50	88.87	40.71	42.40	16.89	100	55.18	8.23	36.59
	C	5.53	96.31	41.81	41.71	16.48	100	71.78	10.10	18.12
13. Bombay (52)	1	5.38	101.21	42.36	44.10	13.54	100	88.08	9.50	2.42
	2	5.15	108.60	42.25	43.96	13.79	100	90.10	3.33	6.57
	C	5.28	105.21	42.30	44.02	13.68	100	89.20	6.10	4.70
14. Mysore (20)	1	5.42	101.79	41.00	46.84	12.16	100	94.80	5.11	0.09
	2	5.71	100.22	43.82	41.81	14.37	100	93.82	4.34	1.84
	C	5.57	101.09	42.25	44.61	13.14	100	94.37	4.76	0.87
15. all-India rural (436)	1	5.21	104.94	40.65	45.36	13.99	100	86.30	11.76	1.94
	2	5.21	105.47	40.83	45.01	14.16	100	87.25	8.75	4.00
	C	5.21	105.20	40.74	45.19	14.07	100	86.78	10.25	2.97

^amales per 100 females

TABLE S(6.1.5): AVERAGE HOUSEHOLD SIZE, SEX-RATIO AND PERCENTAGE DISTRIBUTION OF POPULATION BY AGE AND RELIGION, IN THE DIFFERENT STATES FROM TWO INTERPENETRATING SAMPLES: NSS 14TH ROUND RURAL, FIFTH SUB-ROUND (MARCH-MAY 1959)

state (number of sample villages)	sample	average household size	sex- ratio ^a	percentage of population						
				age group				religion		
				0-14	15-44	45-	all ages	Hinduism	Islam	others
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1. Rajasthan (20)	1	5.23	105.01	43.67	40.79	15.54	100	99.82	0.18	—
	2	5.63	109.61	43.14	42.82	14.04	100	93.42	0.53	6.05
	C	5.46	107.36	43.40	41.84	14.76	100	96.51	0.36	3.13
2. Punjab, Delhi and Himachal Pradesh (16)	1	5.97	111.07	43.73	40.30	15.97	100	58.05	2.30	39.65
	2	5.66	115.54	43.72	41.11	15.17	100	53.69	—	46.31
	C	5.82	112.99	43.73	40.65	15.62	100	56.15	1.30	42.55
3. Jammu and Kashmir (54)	1	5.31	115.85	39.66	50.24	10.10	100	42.93	52.01	5.06
	2	5.68	117.25	37.62	52.01	10.37	100	20.65	78.30	1.05
	C	5.46	116.52	38.68	51.09	10.23	100	32.25	64.62	3.13
4. Uttar Pradesh (52)	1	5.32	107.40	41.05	43.36	15.59	100	85.50	14.50	—
	2	5.01	105.66	40.10	44.04	15.86	100	91.60	8.40	—
	C	5.14	106.37	40.49	43.76	15.75	100	89.09	10.91	—
5. Madhya Pradesh (42)	1	4.63	106.46	40.25	45.70	14.05	100	98.74	0.38	0.88
	2	4.82	105.40	38.77	47.72	13.51	100	99.73	0.23	0.04
	C	4.72	105.98	39.58	46.61	13.81	100	99.19	0.31	0.50
6. Bihar (38)	1	5.27	98.10	39.96	46.23	13.81	100	93.92	5.02	1.06
	2	5.80	104.08	39.98	44.41	15.61	100	93.80	5.75	0.45
	C	5.56	101.40	39.97	45.22	14.81	100	93.85	5.43	0.72
7. Orissa (20)	1	4.69	98.28	35.70	46.62	17.68	100	100.00	—	—
	2	4.56	93.76	36.32	45.31	18.37	100	99.30	0.04	0.66
	C	4.63	96.43	35.95	46.09	17.96	100	99.71	0.02	0.27
8. West Bengal (28)	1	5.59	104.81	42.24	45.88	11.88	100	48.06	49.47	2.47
	2	5.66	112.83	40.71	48.28	11.01	100	90.62	9.38	—
	C	5.62	107.47	41.72	46.70	11.58	100	62.56	35.81	1.63

^amales per 100 females

TABLE S(6.1.5) (Contd.): AVERAGE HOUSEHOLD SIZE, SEX-RATIO AND PERCENTAGE DISTRIBUTION OF POPULATION BY AGE AND RELIGION IN THE DIFFERENT STATES FROM TWO INTERPENETRATING SAMPLES : NSS 14TH ROUND RURAL, FIFTH SUB-ROUND (MARCH-MAY 1959)

state (number of sample villages)	sample	average household size	sex- ratio ^a	percentage of population						
				age group				religion		
				0-14	15-44	45-	all ages	Hinduism	Islam	others
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
9. Assam (16)	1	5.59	115.79	46.21	46.26	7.53	100	90.10	8.12	1.78
	2	5.65	90.23	44.59	46.90	8.51	100	10.93	19.12	69.95
	C	5.62	98.98	45.19	46.66	8.15	100	40.32	15.04	44.64
10. Andhra Pradesh (36)	1	4.72	101.93	40.81	44.07	15.12	100	89.31	9.76	0.93
	2	4.58	103.09	38.74	45.20	16.06	100	87.20	6.01	6.79
	C	4.65	102.61	39.59	44.74	15.67	100	88.07	7.55	4.38
11. Madras (30)	1	4.71	95.87	36.53	45.46	18.01	100	98.26	0.70	1.04
	2	4.39	98.31	36.32	45.81	17.87	100	91.66	2.77	5.57
	C	4.56	96.92	36.44	45.61	17.95	100	95.39	1.60	3.01
12. Kerala (12)	1	4.98	96.01	42.76	40.48	16.76	100	73.27	5.51	21.22
	2	5.59	101.34	42.03	41.25	15.72	100	59.13	13.20	27.67
	C	5.79	99.24	42.30	40.96	16.74	100	64.61	10.22	25.17
13. Bombay (52)	1	5.19	100.65	40.02	45.09	14.89	100	84.42	13.07	2.51
	2	5.10	101.01	41.52	43.64	14.84	100	92.20	6.56	1.24
	C	5.14	100.83	40.78	44.35	14.87	100	88.37	9.76	1.87
14. Mysore (20)	1	5.19	105.26	42.59	44.59	12.82	100	92.21	6.91	0.88
	2	5.27	107.49	42.18	42.41	15.41	100	96.44	2.69	0.87
	C	5.24	106.66	42.33	43.22	14.45	100	94.88	4.25	0.87
15. all-India rural (436)	1	5.14	103.13	40.62	44.60	14.78	100	84.98	11.42	3.60
	2	5.15	103.59	40.33	44.70	14.97	100	84.93	6.63	8.44
	C	5.15	103.37	40.46	44.66	14.88	100	84.95	8.96	6.09

^amales per 100 females

TABLE S(6.1.6): AVERAGE HOUSEHOLD SIZE SEX-RATIO AND PERCENTAGE DISTRIBUTION OF POPULATION BY AGE AND RELIGION IN THE DIFFERENT STATES FROM TWO INTERPENETRATING SAMPLES : NSS 14TH ROUND RURAL, SIXTH SUB-ROUND (MAY-JULY 1959)

state (number of sample villages)	sample	average household size	sex- ratio ^a	percentage of population						
				age group				religion		
				0-14	15-44	45--	all ages	Hinduism	Islam	others
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1. Rajasthan (20)	1	5.00	107.02	42.35	42.93	14.72	100	96.92	0.44	2.64
	2	5.63	112.26	42.40	44.94	12.66	100	98.23	1.67	—
	C	5.33	109.74	42.37	43.99	13.64	100	97.67	1.08	1.25
2. Punjab, Delhi and Himachal Pradesh (16)	1	5.85	114.59	44.52	43.48	12.00	100	87.71	—	12.29
	2	5.40	112.47	41.95	42.98	15.07	100	63.38	2.64	33.98
	C	5.65	113.70	43.44	43.27	13.29	100	77.48	1.11	21.41
3. Jammu and Kashmir (54)	1	6.22	113.74	37.20	52.63	10.17	100	32.69	67.16	0.15
	2	6.07	121.66	38.71	50.11	11.18	100	20.95	78.83	0.22
	C	6.16	117.69	37.97	51.35	10.68	100	26.74	73.08	0.18
4. Uttar Pradesh (52)	1	5.27	109.65	38.44	44.49	17.07	100	88.34	11.50	0.16
	2	5.09	105.22	38.58	44.99	16.43	100	84.42	15.58	—
	C	5.16	106.85	38.53	44.80	16.67	100	85.88	14.06	0.06
5. Madhya Pradesh (42)	1	5.08	103.21	40.17	46.80	13.03	100	97.46	2.54	—
	2	4.93	105.11	38.24	48.49	13.27	100	99.82	0.11	0.07
	C	5.01	104.08	39.28	47.58	13.14	100	98.55	1.42	0.03
6. Bihar (38)	1	5.69	95.00	39.27	46.05	14.68	100	09.70	9.30	—
	2	5.60	103.16	41.86	43.91	14.23	100	92.74	7.26	—
	C	5.64	99.74	40.80	44.78	14.42	100	91.91	8.09	—
8. Orissa (20)	1	4.75	100.66	40.18	47.67	12.15	100	99.60	0.40	—
	2	4.70	101.08	38.90	45.72	15.38	100	98.62	1.38	—
	C	4.72	100.96	39.29	46.31	14.40	100	98.92	1.08	—
8. West Bengal (28)	1	4.99	100.83	42.80	43.73	13.47	100	72.40	27.60	—
	2	5.22	103.66	40.43	48.35	11.22	100	78.32	15.65	6.03
	C	5.10	102.05	41.77	45.74	12.49	100	74.98	22.40	2.62

^amales per 100 females

TABLE S(6.1.6) (Contd.): AVERAGE HOUSEHOLD SIZE, SEX-RATIO AND PERCENTAGE DISTRIBUTION OF POPULATION BY AGE AND RELIGION IN THE DIFFERENT STATES FROM TWO INTERPENETRATING SAMPLES : NSS 14TH ROUND RURAL, SIXTH SUB-ROUND (MAY-JULY 1959)

state (number of sample villages)	sample	average household size	sex- ratio ^a	percentage of population						
				age group				religion		
				0-14	15-44	45-	all ages	Hinduism	Islam	others
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
9. Assam (16)	1	4.85	102.14	45.60	46.34	8.06	100	66.83	1.97	31.20
	2	5.09	101.13	46.22	44.53	9.25	100	86.47	13.17	0.36
	C	4.99	101.58	45.94	45.33	8.73	100	77.71	8.18	14.11
10. Andhra Pradesh (36)	1	4.73	104.93	38.49	46.96	14.55	100	95.63	2.68	1.69
	2	4.48	100.79	38.34	46.70	14.96	100	92.05	6.96	0.99
	C	4.60	103.06	38.43	46.84	14.73	100	94.03	4.59	1.38
11. Madras (30)	1	4.40	100.22	38.54	46.49	14.97	100	88.72	2.89	8.39
	2	4.51	101.23	38.42	44.84	16.74	100	93.16	2.34	4.50
	C	4.47	100.89	38.46	45.39	16.15	100	91.68	2.52	5.80
12. Kerala (12)	1	5.86	95.52	42.08	43.00	14.92	100	67.03	18.66	14.31
	2	5.80	85.92	39.71	42.84	17.45	100	53.09	27.99	18.92
	C	5.83	91.31	41.07	42.94	15.99	100	61.09	22.64	16.27
13. Bombay (52)	1	5.46	101.03	42.22	43.23	14.55	100	93.22	1.73	5.05
	2	5.32	101.59	42.71	44.02	13.27	100	90.45	3.83	5.71
	C	5.38	101.30	42.46	43.61	13.93	100	91.89	2.74	5.37
14. Mysore (20)	1	5.37	106.64	43.44	44.88	11.68	100	97.86	2.14	—
	2	5.37	106.78	43.12	43.39	13.48	100	69.11	19.89	11.00
	C	5.37	106.71	43.28	44.11	12.61	100	82.97	11.34	5.69
15. all-India rural (436)	1	5.28	103.60	40.83	45.13	14.04	100	88.49	7.34	4.17
	2	5.16	103.61	40.29	45.18	14.53	100	87.29	9.06	3.65
	C	5.22	103.61	40.53	45.16	14.31	100	87.82	8.28	3.90

^amales per 100 females

TABLE S(6.1.7) : AVERAGE HOUSEHOLD SIZE, SEX-RATIO AND PERCENTAGE DISTRIBUTION OF POPULATION BY AGE, RELIGION AND STATUS OF ECONOMIC ACTIVITY IN DIFFERENT STATES FROM TWO INTERPENETRATING SAMPLES : NSS 14TH ROUND, ALL SUB-ROUNDS COMBINED

state (number of sample villages)	sample	average house- hold size	sex- ratio ^a	percentage of population							status of economic activity		
				age group				religion			em- ployed	unem- ployed	in- active
				0-14	15-44	45-	total	Hindu- ism	Islam	others			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1. all India (436)	1	5.14	103.30	40.68	44.31	15.01	100.00	87.31	9.42	3.27	54.81	—	45.19
	2	5.13	104.70	40.54	44.28	15.18	100.00	86.34	7.86	5.80	52.93	0.02	47.05
	C	5.14	103.69	40.61	44.29	15.10	100.00	86.82	8.63	4.55	54.00	0.01	45.99
2. Rajasthan (20)	1	5.35	107.28	42.34	42.70	14.96	100.00	97.47	2.99	0.54	37.77	0.06	62.17
	2	5.63	107.62	42.50	43.39	14.11	100.00	95.39	1.73	2.88	41.52	0.01	58.47
	C	5.49	107.49	42.41	43.03	14.56	100.00	95.96	2.40	1.64	39.36	0.04	60.60
3. Punjab, Delhi and Himachal Pradesh (26)	1	5.87	112.83	44.79	40.69	14.52	100.00	66.65	2.17	31.18	34.51	0.04	65.45
	2	5.62	113.13	42.53	41.41	16.06	100.00	72.03	0.86	27.11	42.09	0.18	57.73
	C	5.75	112.97	43.76	31.02	15.22	100.00	69.10	1.57	29.33	39.12	0.12	60.76
4. Jammu and Kashmir (54)	1	5.63	115.61	38.04	49.75	12.21	100.00	40.63	57.81	1.56	40.65	0.09	59.26
	2	5.77	117.01	37.86	50.56	11.58	100.00	28.30	70.32	1.38	42.30	0.80	56.90
	C	5.70	116.38	37.95	50.19	11.86	100.00	33.87	64.67	1.46	41.59	0.49	57.92
5. Uttar Pradesh (52)	1	5.24	107.26	39.84	43.70	16.46	100.00	87.41	12.15	0.08	53.28	0.04	46.68
	2	5.13	108.40	39.98	43.77	16.25	100.00	89.10	10.74	0.16	54.41	0.05	45.54
	C	5.18	107.86	39.91	43.74	16.35	100.00	88.30	11.58	0.12	53.75	0.04	46.21
6. Madhya Pradesh (42)	1	4.98	104.66	40.01	45.76	14.23	100.00	98.21	1.10	0.69	37.85	0.10	62.05
	2	4.88	104.64	39.54	46.85	13.61	100.00	97.51	1.50	0.99	40.58	0.07	59.35
	C	4.93	104.65	39.80	46.25	13.95	100.00	97.91	1.27	0.82	39.45	0.09	60.46
7. Bihar (38)	1	5.52	98.88	40.97	44.40	14.63	100.00	90.19	9.11	0.70	43.53	0.52	55.95
	2	5.61	102.57	41.49	43.51	15.00	100.00	86.97	9.41	3.62	42.39	0.19	57.42
	C	5.57	100.88	41.25	43.92	14.83	100.00	88.44	9.27	2.29	42.99	0.36	56.65
8. Orissa (20)	1	4.72	96.84	38.72	45.31	15.97	100.00	99.86	0.14	—	31.33	0.16	68.51
	2	4.64	99.14	38.34	44.72	16.94	100.00	96.57	2.16	1.27	34.21	0.15	65.64
	C	4.68	98.08	38.52	44.98	16.50	100.00	98.09	1.23	0.68	32.92	0.16	66.92

^amales per 100 females

TABLE S(6.1.7) (Contd.): AVERAGE HOUSEHOLD SIZE, SEX-RATIO AND PERCENTAGE DISTRIBUTION OF POPULATION BY AGE, RELIGION AND STATUS OF ECONOMIC ACTIVITY IN DIFFERENT STATES IN THE SIX SUB-ROUNDS FROM TWO INTER-PENETRATING SAMPLES : NSS 14TH ROUND RURAL, ALL SUB-ROUNDS COMBINED

state (number of sample villages)	sample	average house- hold size	sex- ratio ^a	percentage of population							status of economic activity		
				age group				religion			em- ployed	unem- ployed	in- active
				0-14	15-44	45-	total	Hinduism	Islam	oths			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
9. West Bengal (28)	1	5.27	105.05	41.34	45.65	13.01	100.00	71.23	27.17	1.60	36.26	—	63.74
	2	5.36	107.72	39.55	47.88	12.57	100.00	77.78	18.62	3.60	39.17	0.06	60.77
	C	5.31	106.22	40.55	46.64	12.81	100.00	74.13	23.39	2.48	37.78	0.03	62.19
10. Assam (26)	1	5.57	105.10	44.67	44.77	10.56	100.00	64.40	26.04	9.56	53.14	0.15	46.71
	2	5.32	102.48	43.70	45.50	10.80	100.00	55.44	17.16	27.40	52.92	0.45	46.63
	C	5.44	103.65	44.13	45.17	10.70	100.00	59.47	21.15	19.38	53.03	0.30	46.67
11. Andhra Pradesh (36)	1	4.63	102.96	38.51	45.90	15.59	100.00	93.35	4.32	2.33	52.06	0.11	47.83
	2	4.61	102.31	39.50	44.61	15.89	100.00	92.64	4.21	3.15	52.45	0.06	47.49
	C	4.62	102.63	39.01	45.25	15.74	100.00	92.99	4.27	2.74	52.23	0.09	47.68
12. Madras (30)	1	4.43	96.23	37.25	45.03	17.72	100.00	93.36	3.93	2.71	37.13	0.47	62.40
	2	4.39	98.34	37.57	45.16	17.27	100.00	86.21	2.63	11.16	35.82	0.37	63.81
	C	4.41	97.33	37.42	45.10	17.48	100.00	89.62	3.25	7.13	36.39	0.41	63.20
13. Kerala (12)	1	5.67	97.39	42.87	41.12	16.01	100.00	66.87	15.74	17.39	49.07	0.11	50.82
	2	5.45	91.73	41.79	41.46	16.75	100.00	58.45	14.87	26.68	53.86	0.02	46.12
	C	5.56	94.28	42.28	41.31	16.41	100.00	62.31	15.27	22.42	53.50	0.06	46.44
14. Bombay (52)	1	5.22	101.64	41.77	43.74	14.49	100.00	89.52	7.95	2.53	56.25	0.08	43.67
	2	5.12	102.38	41.96	43.30	14.74	100.00	92.07	4.36	3.67	52.31	0.07	47.62
	C	5.17	102.06	41.87	43.52	14.61	100.00	90.79	6.16	3.05	54.21	0.08	45.71
15. Mysore (20)	1	5.35	103.74	42.34	44.06	13.60	100.00	93.06	6.31	0.63	45.69	0.12	54.19
	2	5.25	102.84	41.45	43.47	15.08	100.00	91.67	5.90	2.43	46.01	0.13	53.86
	C	5.30	103.29	41.89	43.77	14.34	100.00	92.36	6.11	1.53	45.85	0.13	54.02

^amales per 100 females

TABLE Z(6.3.1): AVERAGE HOUSEHOLD SIZE AND PERCENTAGE DISTRIBUTION OF POPULATION BY RELIGION AND STATUS OF ECONOMIC ACTIVITY FROM TWO INTERPENETRATING SAMPLES: NSS 14TH ROUND RURAL, FIRST SUB-ROUND

zone (number of sample villages)	sample	average household size	percentage of population by						
			religion			status of economic activity			
			Hinduism	Islam	others	employed	unemployed	inactive	
(1)	(2)	(2)	(4)	(5)	(6)	(7)	(8)	(9)	
1. north : (90)	Rajasthan, Punjab, Delhi, Himachal Pradesh, Jammu and Kashmir	1	5.32	66.00	13.63	20.37	49.74	0.03	50.23
		2	5.46	78.85	15.30	5.85	49.90	0.07	50.03
		C	5.38	72.33	14.45	13.22	49.82	0.05	50.13
2. central : (94)	Uttar Pradesh, Madhya Pradesh	1	5.07	95.66	4.31	0.03	48.55	0.8	54.37
		2	5.04	90.86	8.20	0.94	42.00	0.10	57.90
		C	5.06	93.45	6.10	0.45	43.92	0.09	55.99
3. east : (102)	Bihar, Orissa, West Bengal, Assam, Manipur, Tripura	1	5.32	86.16	12.19	1.65	41.30	0.09	58.61
		2	5.36	82.11	14.83	3.06	38.55	0.10	61.35
		C	5.34	83.97	13.61	2.42	39.81	0.10	60.90
4. south : (78)	Andhra Pradesh, Madras, Kerala	1	4.63	86.86	7.49	5.65	49.04	0.12	50.84
		2	4.55	90.77	6.31	2.92	48.61	0.49	50.90
		C	4.59	88.95	8.86	4.19	48.81	0.32	50.87
5. west : (72)	Bombay, Mysore	1	5.16	93.41	4.74	1.85	50.78	0.08	49.14
		2	4.91	93.11	3.72	3.17	51.84	0.02	48.14
		C	5.02	93.25	4.24	2.51	51.13	0.05	48.64
6. all-India rural (436)		1	5.07	89.02	7.54	3.44	46.52	0.09	53.39
		2	5.01	87.99	9.31	2.70	44.83	0.17	55.00
		C	5.04	88.50	8.44	3.06	45.66	0.13	54.21

TABLE Z(6.3.2) : AVERAGE HOUSEHOLD SIZE AND PERCENTAGE DISTRIBUTION OF POPULATION BY RELIGION AND STATUS OF ECONOMIC ACTIVITY IN THE RURAL ZONES FROM TWO INTERPENETRATING SAMPLES : NSS 14TH ROUND RURAL, SECOND SUB-ROUND

	zone (number of sample villages)	sample	average household size	percentage of population by					
				religion			status of economic activity		
				Hinduism	Islam	others	employed	unemployed	inactive
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
1. north :	Rajasthan, Punjab, Delhi, Himachal Pradesh, Jammu and Kashmir	1	5.59	86.36	3.83	9.81	45.67	0.03	54.30
		2	5.63	80.51	5.52	13.97	45.82	0.16	54.02
		(90) C	5.61	83.98	4.52	11.50	45.73	0.09	54.18
2. central :	Uttar Pradesh, Madhya Pradesh	1	5.11	92.48	6.10	1.42	44.61	0.05	55.34
		2	5.06	91.51	8.13	0.36	47.64	1.07	51.29
		(94) C	5.09	91.89	7.32	0.79	46.44	0.66	52.90
3. east :	Bihar, Orissa, West Bengal, Assam, Manipur, Tripura	1	5.26	81.41	17.58	1.01	34.14	0.28	65.58
		2	5.23	78.72	9.11	12.17	40.23	0.10	59.67
		(102) C	5.24	79.91	12.87	7.22	37.52	0.18	62.30
4. south :	Andhra Pradesh, Madras, Kerala	1	4.48	87.11	9.54	3.35	51.51	0.22	48.37
		2	4.69	91.22	1.61	7.17	50.32	0.11	49.57
		(78) C	4.57	88.92	6.06	5.02	50.99	0.17	48.84
5. west :	Bombay, Mysore	1	4.80	93.14	4.95	1.91	51.74	0.12	48.14
		2	5.07	94.01	4.07	1.92	54.39	0.0	45.56
		(72) C	4.94	93.64	4.44	1.92	53.24	0.08	46.68
6. all-India rural		1	4.97	87.58	9.30	3.12	44.84	0.16	55.00
		2	5.11	87.25	6.36	6.39	47.01	0.37	52.62
		(436) C	5.04	87.40	7.75	3.85	45.98	0.27	53.75

TABLE Z(6.3.3) : AVERAGE HOUSEHOLD SIZE AND PERCENTAGE DISTRIBUTION OF POPULATION BY RELIGION IN THE RURAL ZONES FROM TWO INTERPENETRATING SAMPLES : NSS 14TH ROUND RURAL, THIRD SUB-ROUND

	zone (number of sample villages)	sample	average household size	percentage of population by religion		
				Hinduism	Islam	others
	(1)	(2)	(3)	(4)	(5)	(6)
1. north :	Rajasthan, Punjab, Delhi, Himachal Pradesh, Jammu and Kashmir	1	5.72	69.23	11.50	19.27
		2	5.85	84.61	6.01	9.38
		C	5.78	76.99	8.73	4.28
(90)						
2. central :	Uttar Pradesh, Madhya Pradesh	1	5.12	93.85	6.51	0.04
		2	5.23	92.84	6.14	1.02
		C	5.17	93.19	6.37	0.44
(94)						
3. east :	Bihar, Orissa, West Bengal, Assam, Manipur, Tripura	1	5.29	86.03	12.86	1.11
		2	5.23	82.00	10.23	7.77
		C	5.27	84.26	11.70	4.04
(102)						
4. south :	Andhra Pradesh, Madras Kerala	1	4.70	88.67	2.71	8.62
		2	4.62	68.81	6.73	24.46
		C	4.66	78.08	3.86	17.06
(78)						
5. west :	Bombay, Mysore	1	5.25	86.49	12.23	1.28
		2	5.18	92.87	4.91	2.22
		C	5.22	89.09	9.24	1.67
(72)						
6. all-India rural		1	5.16	87.63	8.84	3.53
		2	5.15	83.03	7.10	9.87
		C	5.16	85.55	8.05	6.40
(436)						

TABLE Z(6.3.4): AVERAGE HOUSEHOLD SIZE AND PERCENTAGE DISTRIBUTION OF POPULATION BY RELIGION IN THE RURAL ZONES FROM TWO INTERPENETRATING SAMPLES: NSS 14TH ROUND RURAL, FOURTH SUB-ROUND

	zone (number of sample villages)	sample	average household size	percentage of population by religion		
				Hinduism	Islam	others
	(1)	(2)	(3)	(4)	(5)	(6)
1. north :	Rajasthan, Punjab, Delhi, Himachal Pradesh, Jammu and Kashmir	1	5.37	88.34	3.98	7.68
		2	5.72	90.03	6.21	3.76
		C	5.56	89.17	5.08	5.75
(90)						
2. central :	Uttar Pradesh, Madhya Pradesh	1	5.12	82.92	16.95	0.13
		2	4.96	91.15	8.71	0.14
		C	5.04	86.58	13.29	0.13
(94)						
3. east :	Bihar, Orissa, West Bengal, Manipur, Tripura	1	5.62	83.26	14.59	2.15
		2	5.52	82.04	15.15	2.81
		C	5.56	82.62	14.89	2.49
(102)						
4. south :	Andhra Pradesh, Madras, Kerala	1	4.70	92.56	5.27	2.17
		2	4.66	85.06	4.34	10.60
		C	4.68	88.35	4.75	6.90
(78)						
5. west :	Bombay, Mysore	1	5.39	91.14	7.50	1.36
		2	5.37	91.41	3.68	4.91
		C	5.38	91.26	5.57	3.17
(72)						
6. all-India rural		1	5.21	86.30	11.76	1.94
		2	5.21	87.25	8.75	4.00
		C	5.21	86.78	10.25	2.97
(436)						

TABLE Z(6.3.5) : AVERAGE HOUSEHOLD SIZE AND PERCENTAGE DISTRIBUTION OF POPULATION BY RELIGION IN THE RURAL ZONES FROM TWO INTERPENETRATING SAMPLES : NSS 14TH ROUND RURAL, FIFTH SUB-ROUND

	zone (number of sample villages)	sample	average household size	percentage of population by religion		
				Hinduism	Islam	others
	(1)	(2)	(3)	(4)	(5)	(6)
1. north :	Rajasthan, Punjab, Delhi, Himachal Pradesh, Jammu and Kashmir	1	5.43	77.48	4.81	17.71
		2	5.66	73.94	5.83	20.23
		C	5.54	75.77	5.31	18.92
(90)						
2. central :	Uttar Pradesh, Madhya Pradesh	1	4.98	90.42	9.26	0.32
		2	4.94	93.66	6.33	0.01
		C	4.96	92.20	7.65	0.15
(94)						
3. east :	Bihar, Orissa, West Bengal, Manipur, Tripura	1	5.31	78.03	20.51	1.46
		2	5.57	75.10	8.74	16.16
		C	5.44	76.61	14.80	8.59
(102)						
4. south :	Andhra Pradesh, Madras, Kerala	1	4.89	92.66	4.65	2.69
		2	4.64	85.43	5.69	8.88
		C	4.77	88.87	5.19	5.94
(78)						
5. west :	Bombay, Mysore	1	5.19	85.69	12.07	2.24
		2	5.14	93.25	5.60	1.15
		C	5.16	89.72	8.62	1.66
(27)						
6. all-India rural		1	5.14	84.98	11.42	3.60
		2	5.15	84.93	6.63	8.44
		C	5.15	84.95	8.96	6.09
(436)						

TABLE (Z 6.3.6): AVERAGE HOUSEHOLD SIZE AND PERCENTAGE DISTRIBUTION OF POPULATION BY RELIGION IN THE RURAL ZONES FROM TWO INTERPENETRATING SAMPLES: NSS 14TH ROUND RURAL, SIXTH SUB-ROUND

	zone (number of sample villages)	sample	average household size	percentage of population by religion		
				Hinduism	Islam	others
	(1)	(2)	(3)	(4)	(5)	(6)
1. north :	Rajasthan, Punjab, Delhi, Himachal Pradesh, Jammu and Kashmir	1	5.80	86.58	5.74	7.68
		2	5.84	75.39	9.53	15.08
		C	5.87	81.32	7.52	11.16
(90)						
2. central :	Uttar Pradesh, Madhya Pradesh	1	5.18	91.77	8.13	0.10
		2	5.03	88.00	11.98	0.02
		C	5.10	89.59	10.36	0.05
(94)						
3. east :	Bihar, Orissa, West Bengal, Asam, Manipur, Tripura	1	5.17	82.63	12.22	5.15
		2	5.23	90.88	8.01	1.11
		C	5.21	87.35	9.82	2.83
(102)						
4. south :	Andhra, Pradesh, Madras, Kerala	1	4.78	88.60	5.52	5.88
		2	4.67	88.27	6.92	4.81
		C	4.72	88.43	6.26	5.31
(78)						
5. west :	Bombay, Mysore	1	5.44	94.33	1.82	3.85
		2	5.33	84.98	7.96	7.06
		C	5.38	89.75	4.82	5.43
(72)						
6. all-India rural		1	5.28	88.49	7.34	4.17
		2	5.16	87.29	9.06	3.65
		C	5.22	87.82	8.28	3.90
(436)						

APPENDIX 2

NOTES ON SAMPLE DESIGN AND ERRORS OF ESTIMATE

SAMPLE DESIGN

A2.1. The design for the population data was generally stratified uni-stage. Rural India was divided into 218 strata (composed of contiguous tehsils or groups of tehsils), each stratum containing approximately equal population as in Census 1951. The total period of survey of one year was divided into six sub-rounds each of two months' duration. A total of 2,616 sample villages was covered in the 14th round, with 436 sample villages in each sub-round. In each stratum, two investigators collected the information independently, each surveying a sub-sample of six villages, that is, one village each in a sub-round. Thus, within a stratum, investigator (party) and sub-sample had one-to-one correspondence, so that each sub-sample was physically identifiable. The allocation of the total sample of 2,616 villages to the (reorganised) States was made on the basis of various factors, including the total Census 1951 population; and the allocation were rounded to multiples of 12. In each stratum, the sample villages were selected systematically with a random start after arranging the tehsils in a "serpentine" order (as explained in NSS Report No. 5). To equalise the work-load between the investigators, in certain cases, hamlets (or hamlet groups) were selected from the sample villages.

A2.2. Strata with large areas were divided into two or more investigation zones so that normally an investigator would work within an area of from 2,000 to 5,000 square miles, that is, from about 50 to 70 miles square; and two such zones were selected with probability proportional to the number of villages in them and with replacement. It will be seen that in such a scheme the sample villages may be considered to have been selected directly from the total sample villages in the stratum, that is, as in uni-stage stratified sampling without, however, going through the intermediate stage of investigation zones.

A2.3. The estimates of rates and ratios given in the tables were obtained from the simple unbiased estimates of the numerator and the denominator by applying the proper multiplying factors. Whether the use of ratio estimates with 1951 Census population would give "better" (in some sense) estimates is under examination.

A2.4. *Estimates of aggregates and ratios:* Let y_{hijk} be the aggregate of Y characteristic in the j th sample village ($j=1, 2$) of the i th stratum in the h th population zone (or State) in the k th sub-round¹; and V_{hi} total number of villages in the hi -th stratum. Then the simple unbiased estimate of the aggregate of Y in

¹In villages where one hamlet (or hamlet group) is selected at random out of the G_{hij} hamlets (or hamlet groups) and/refer to hamlet (group) aggregates of Y , then Y_{hij} will be the estimated village aggregates given by, $Y_{hij} = G_{hij} Y_{hijk}$

Estimates of Birth and Death Rates and Growth of Population

the h th population zone (or State) and for all-India rural for sample j are given respectively by :

$$\text{for the } k\text{th sub-round : } y_{h \times j k} = \sum_i V_{hi} y_{hijk} ; y_{\times \times j k} = \sum_h Y_{h \times j k}$$

$$\text{for all sub-rounds combined : } y_{h \times j \times} = \sum_k y_{h \times j k} / 6 ; y_{\times \times j \times} = \sum_h y_{h \times j \times}$$

The ratios of two simple unbiased estimates of aggregates Y and X are given, at the h -th population zone (or State) and all-India level respectively, for sample j by :

$$\text{for the } k\text{-th sub-round : } r_{h \times j k} = y_{h \times j k} / x_{h \times j k} ; r_{\times \times j k} = y_{\times \times j k} / x_{\times j k}$$

$$\text{for all sub-rounds combined : } r_{h \times j \times} = y_{h \times j \times} / x_{h \times k j \times} ; r_{\times \times j \times} = y_{\times \times j \times} / x_{\times \times j \times}$$

where x_{hijk} , $x_{h \times j k}$, etc., are similarly defined as for the y 's. Also, similar definitions hold for the estimates for the two samples combined.

A2.5. The two sub-sample estimates given in the tables would at once provide 50 per cent margin of uncertainty for each characteristic under study.

ERRORS OF ESTIMATE

A2.6. The estimates, errors² of estimates and percentage errors of birth, death and growth rates, percentage of population gainfully employed, unemployed and in labour force, the percentages in age groups 0-14, 15-44, 45-above and the household size for all-India rural are presented in Table (A2.1) from the first sub-round of the NSS 14th round. For calculation of these results, out of the data for 416 villages utilised in NSS Draft Number 36/1, data for 12 villages were not utilised as these did not have the corresponding sub-sample village figures, that is, only those strata for which data for both the sample villages were available : the estimates given in Table (1) therefore differ slightly from those given in NSS Draft Number 36/1.

A2.7. It will be recalled that the sample design for 14th round rural was generally stratified uni-stage with villages completely enumerated. Two sample villages, which constitute the two independent samples, were selected at random from each stratum for complete enumeration of human population, births and deaths by two investigators in each of the six sub-rounds; thus within a stratum, investigator (party) and sub-sample would have one-to-one correspondence. The errors of the "combined" estimates were built up from the differences between the two independent estimates in each stratum.

A2.8. Formulas for estimates of universe values and their errors are presented below for one sub-round :

Let y_{hij} be the aggregate of Y characteristic in the j -th sample village ($j=1, 2$) of the i -th stratum in the h -th population zone (or State) in all-India (rural),

²These are not standard error in the sense of sampling, but included "party" differences and may perhaps be called "margin of uncertainty". A scheme has been prepared on the lines of Mahalanobis (*JRSS*, 1946) to obtain sampling errors as such, by the method of analysis of variance and results for one State presented later.

National Sample Survey

and V_{hi} be the total number of villages in the hi -th stratum. The simple unbiased estimates of aggregate of Y for the h -th State and at all-India (rural) level for sample j and combined samples are given respectively by :

$$(i) \text{ } h\text{-th State : } y_{h,j} = \sum_i V_{hi} y_{hi,j} ; \quad \text{and } y_h = \sum_j y_{h,j}$$

$$(ii) \text{ all-India : } y_j = \sum_h \sum_i V_{hi} y_{hi,j} ; \quad \text{and } y = \sum_j y_j$$

The ratios of two simple unbiased estimates of aggregates of Y and X for h -th State and at all-India level for sample j and combined samples are given respectively by,

$$(i) \text{ } h\text{-th State : } r_{h,j} = y_{h,j}/x_{h,j} ; \quad \text{and } r_h = y_h/x_h$$

$$(ii) \text{ all India : } r_j = y_j/x_j ; \quad \text{and } r = y/x$$

The estimated value of variances and covariances of simple unbiased estimates of aggregates for h -th State and all-India level are given below :

(i) Variance of y

$$(a) \text{ } h\text{-th State : } s_{y_h}^2 = \frac{1}{4} \sum_i V_{hi}^2 (y_{hi1} - y_{hi2})^2$$

$$(b) \text{ all India : } s_y^2 = \frac{1}{4} \sum_h \sum_i V_{hi}^2 (y_{hi1} - y_{hi2})^2$$

(ii) Variance of x

$$(a) \text{ } h\text{-th State : } s_{x_h}^2 = \frac{1}{4} \sum_i V_{hi}^2 (x_{hi1} - x_{hi2})^2$$

$$(b) \text{ all India : } s_x^2 = \frac{1}{4} \sum_h \sum_i V_{hi}^2 (x_{hi1} - x_{hi2})^2$$

(iii) Covariance of y and x

$$(a) \text{ } h\text{-th State : } s_{y_h x_h} = \frac{1}{4} \sum_i V_{hi}^2 (y_{hi1} - y_{hi2}) (x_{hi1} - x_{hi2})$$

$$(b) \text{ all India : } s_{yx} = \frac{1}{4} \sum_h \sum_i V_{hi}^2 (y_{hi1} - y_{hi2}) (x_{hi1} - x_{hi2})$$

The estimated variance of ratio of two unbiased estimates of aggregates is given by

$$(i) \text{ } h\text{-th State : } s_r^2 = \frac{1}{x_h^2} (s_{y_h}^2 + r_h^2 s_{x_h}^2 - 2 r_h s_{y_h x_h})$$

$$(ii) \text{ all India : } s_r^2 = \frac{1}{x^2} (s_y^2 + r^2 s_x^2 - 2 r s_{yx})$$

Estimates of Birth and Death Rates and Growth of Population

TABLE (A2.1): ESTIMATES AND ERRORS OF ESTIMATES OF POPULATION CHARACTERISTICS: ALL-INDIA RURAL NSS 14TH ROUND, FIRST SUB-ROUND, (JULY-SEPTEMBER 1958)

characteristics	estimate	error	percentage error
(1)	(2)	(3)	(4)
1. birth-rate/1000 persons	38.61	0.74	1.92
2. death-rate/1000 persons	18.97	0.73	3.85
3. growth rate (per cent)	1.96	0.08	4.08
4. percentage unemployed	0.13	0.05	38.46
5. percentage gainfully employed	45.55	0.71	1.56
6. percentage in labour force	45.68	0.70	1.53
7. percentage in age-group :			
(a) 0-14	40.63	0.43	1.06
(b) 15-44	42.70	0.24	0.56
(c) 45-above	16.67	0.18	1.08
8. household size	5.06	0.04	0.79
(number of sample villages)		(404)	
(number of sample households)		(36,365)	

A2.9. *Analysis of variance of birth and death rates for Kerala State*: The errors calculated above include "party" and other differences and would, on an average, over-estimate the sampling error. In order to get the estimates of sampling error as such, it is necessary to analyse the data by the method of variance and eliminate the party and other differences thereby. The results of such a study for the birth and death rates of Kerala are given below. Although the population is not normal, the use of *F*-ratio may give approximate results. Limitation of resources did not permit calculation of sampling errors for the other States.

A2.10 For the analysis of variance, the rate (birth or death) for each sample village was taken as the basic observations. The analysis was done within each of the six strata into which the State was divided and also for the State as a whole with the following set up.

A. *Within Stratum*

	d.f
Party	1
Time	5
Error (party × Time)	5
Total	11

National Sample Survey

B. Within State

	d.f.	
Stratum	5	
Party	1	
Time	5	
Party × Time	5	
Stratum × Party	5	
Stratum × Time	25	} Error 2
Stratum × Party × Time	25 Error 1	
<hr/>		
Total	71	

It would be noted that Error 1 relates to the second-order interaction Stratum × Party × Time, that is the residual error, and the Error 2 relates to the two first order interactions Stratum × Party and Stratum × Time and the second-order interaction taken together.

A2.11. Tables (A2.2) and (A2.3) give the analysis for the birth rate and Tables (A2.4) and (A2.5) that for the death rate. For the analysis within stratum, none of the six *F*-ratios for Party was found to be significant at 5 per cent level for the birth or the death rates : one *F*-ratio for Time, however, was significant at 5 per cent level for the birth rate. From the analysis of variance in the State, it was seen that the Stratum came out significant at 5 per cent level when tested against Error 1 for birth rate and the first-order interaction Stratum × Time for the death rate, tested against Error 2; all the other *F*-ratios were not significant at the 5 per cent level.

Note : In the following tables (r) indicate error/party, error/time, etc. *F*-ratios.
*indicates significant at 5% level of significance.

$$\begin{aligned}
 F_{5\%} (1,5) &= 6.6; & F_{5\%} (5,5) &= 5.1; \\
 F_{5\%} (1,25) &= 4.3; & F_{5\%} (5,25) &= 2.6; \\
 F_{5\%} (1,55) &= 4.0; & F_{5\%} (5,55) &= 2.4; \\
 F_{5\%} (25,25) &= 2.0
 \end{aligned}$$

* $F(e_1)$ means error 1 is used in *F*-ratio and similarly $F(e_2)$.

Estimates of Birth and Death Rates and Growth of Population

TABLE (A2.2): ANALYSIS OF VARIANCE OF BIRTH RATE PER 1000 PERSONS BY STRATUM

source of variation	d.f.	stratum 1			stratum 2			stratum 3		
		s.s.	m.s.s.	F	s.s.	m.s.s.	F	s.s.	m.s.s.	F
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
party	1	35.71	35.71	1.12(r)	89.66	89.66	1.01	78.03	78.03	1.48(r)
time	5	141.95	28.39	1.40(r)	357.06	71.41	1.24(r)	310.67	62.13	1.86(r)
error	5	199.19	39.84	—	442.54	88.51	—	578.03	115.61	—
	11	376.85	—	—	889.26	—	—	966.73	—	—

source of variation	d.f.	stratum 4			stratum 5			stratum 6		
		s.s.	m.s.s.	F	s.s.	m.s.s.	F	s.s.	m.s.s.	F
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
party	1	76.51	76.51	1.37	41.82	41.82	1.00	26.41	26.41	1.12(r)
time	5	671.68	134.34	2.41	683.23	136.65	3.53	794.57	158.91	5.38*
error	5	278.90	55.78	—	193.39	38.68	—	147.73	29.55	—
	11	1027.09	—	—	918.44	—	—	968.71	—	—

TABLE (A2.3): ANALYSIS OF VARIANCE OF BIRTH RATE PER 1000 PERSONS WITHIN THE STATE

source of variation	d.f.	s.s.	m.s.s.	F(e ₁)	F(e ₂)
(1)	(2)	(3)	(4)	(5)	(6)
stratum	5	901.66	180.33	2.68*	2.22
party	1	46.40	46.40	1.45(r)	1.75(r)
time	5	470.49	94.10	1.40	1.16
party × time	5	160.29	32.06	2.10(r)	2.53(r)
stratum × party	5	301.72	60.34	1.11(r)	—
stratum × time	25	2488.65	99.55	1.48	—
error 1	25	1679.52	67.18	—	—
error 2	55	4469.89	81.27	—	—
total	71	6048.73	—	—	—

National Sample Survey

A2.12. The mean birth and death rates for the analysis of variance data are given by

$$r' = \frac{1}{72} \sum_{i=1}^6 \sum_{j=1}^2 \sum_{k=1}^6 y'_{ijk} / x'_{ijk}$$

where y'_{ijk} is the number of births or the deaths in the sample village of the i -th ($i=1, 2, \dots, 6$) stratum surveyed by the j -th ($j=1,2$) party in the k -th sub-round ($k=1, 2, \dots, 6$); x'_{ijk} is the current population of the ijk -th sample village.

The estimated sampling variance for the mean birth and death rates taken from Error 1 was found to be 0.9331 and 0.4321 respectively.

A2.13. On the other hand, the birth or the death rate could also be estimated by

$$r = \frac{\sum_i y_{i \times \times}}{\sum_i x_{i \times \times}}$$

where $y_{i \times \times}$ is the simple unbiased estimate of the stratum aggregate y_i ; and similarly for $x_{i \times \times}$. Thus r' is the simple arithmetic average of the birth rates in the sample villages, and r is the ratio of the estimated number of births to the estimated population in the State. The estimated variance of r is given by

$$\frac{1}{4x_{\times \times \times}^2} \sum_i [(y_{i1 \times} - y_{i2 \times}) - r(x_{i1 \times} - x_{i2 \times})]^2$$

where $y_{ij \times}$ ($j=1, 2$) is the simple unbiased estimate of the stratum aggregate Y_i from the j -th party; and similarly for $x_{ij \times}$; $x_{\times \times \times}$ is the simple unbiased estimate of the State aggregate X given by $\frac{1}{2} \sum_i \sum_j x_{ijk}$

A2.14. This error variance has, however, been noted to include party and other differences and could be termed as the square of the "margin of uncertainty". This is not amenable to the method of analysis of variance in separating out the components of error due to party and other factors. The estimated error variance in birth and death rate came out 5.1996 and 0.4755 respectively. The estimates of r and r' and their error and percentage error are given in Table (A2.6). From this table it will be seen that the error obtained from the margins of uncertainty is higher than those from the analysis of variance for both the rates; this is as could be expected. The F -ratio, calculated to test the difference of the variances, came out at 5.57 (degrees of freedom : 6, 25), significant at 5 per cent level for the birth rate and at 1.10 (degree of freedom : 6,25), not significant at 5 per cent level for the death rate .

Estimates of Birth and Death Rates and Growth of Population

TABLE (A2.4): ANALYSIS OF VARIANCE OF DEATH RATE PER 1000 PERSONS BY STRATUM

source of variation	d.f.	stratum 1			stratum 2			stratum 3		
		s.s.	m.s.s.	F	s.s.	m.s.s.	F	s.s.	m.s.s.	F
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
party	1	0.13	0.13	271.00(r)	17.59	17.59	1.28	12.47	12.47	2.95(r)
time	5	265.65	53.13	1.51	147.44	29.49	2.15	67.67	13.53	2.72(r)
error	15	176.15	35.23	—	68.49	13.70	—	183.99	36.80	—
total	11	441.93	—	—	233.52	—	—	264.13	—	—

source of variation	d.f.	stratum 4			stratum 5			stratum 6		
		s.s.	m.s.s.	F	s.s.	m.s.s.	F	s.s.	m.s.s.	F
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
party	1	11.49	11.49	1.51(r)	14.02	14.02	1.22	9.35	9.35	11.41(r)
time	5	24.77	4.95	3.50(r)	112.10	22.42	1.95	238.62	47.62	2.24(r)
error	15	86.55	17.31	—	57.56	11.51	—	533.53	106.71	—
total	11	122.81	—	—	183.68	—	—	781.50	—	—

TABLE (A2.5): ANALYSIS OF VARIANCE OF DEATH RATE PER 1000 PERSONS WITHIN THE STATE

source of variation	d.f.	s.s.	m.s.s.	F(e ₁)	F(e ₂)
(1)	(2)	(3)	(4)	(5)	(6)
stratum	5	86.32	17.26	1.80(r)	1.60(r)
party	1	21.83	21.83	1.43(r)	1.26(r)
time	5	159.96	31.99	1.03	1.16
party × time	5	363.39	72.64	2.33	2.63*
stratum × party	5	43.33	8.67	3.59(r)	—
stratum × time	25	696.40	25.86	1.20(r)	—
error 1	25	777.78	31.11	—	—
error 2	55	1517.51	27.59	—	—
total	71	2149.01	—	—	—

National Sample Survey

TABLE (A2.6) : ESTIMATES, ERRORS, AND PERCENTAGE ERRORS OF BIRTH AND DEATH RATES

type of estimates	birth rate/1000			death rate/1000		
	esti- mate	error	per- centage error	esti- mate	error	per- centage error
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. simple average of the rates of of the villages	36.53	0.96 ^a	2.63	11.16	0.66 ^a	5.91
2. simple average of the rate of the villages (<i>r'</i>)	36.53	1.07 ^b	2.93	11.16	0.65 ^b	5.82
3. ratio of simple unbiased aggregate of the variate to that of population (<i>r</i>)	37.26	2.28 ^c	6.12	11.54	0.69 ^c	5.98

^a From the interaction stratum × party × time in analysis of variance.

^b Ignoring stratification and calculating errors for two parties separately.

^c "Margin of uncertainty", obtained from the differences of the two parties at the stratum-level.

APPENDIX 3

RATES OF BIRTH, DEATH AND GROWTH FROM THE NATIONAL SAMPLE SURVEY ROUNDS, 1953-59

NSS 7TH AND 9TH—10TH ROUNDS RURAL

A3.1. Although it was only in the NSS 14th round (July 1958–July 1959) that birth and death data were collected on a comparatively comprehensive basis, arrangements had been made in the earlier rounds, starting from the seventh (October 1953–March 1954) to collect on an exploratory basis information on vital events occurring during the 365 days preceding the date of interview to supply a methodology for conducting population surveys subsequently. The straight-forward rates for the whole reference period of one year were seen to be under-estimates due to response lapse: on analysis this under-reporting was seen to be a function of the recall period, the time elapsed between the occurrence of the event and the date of survey. Basically the method of analysis was to calculate the birth and death rates for the different recall periods, and take the rates at recall period “O”. The birth and death data were first smoothed by suitable curves for the k -th preceding month, and the smoothed data cumulated (up to the k -th month) to give annual estimates and rates for the different recall periods (k months). The balance of the birth rate over the death rate, so obtained, gave the rate of growth for the different recall periods. The method of analysis has been described in the paper “*On recall lapse in demographic studies*” presented by R. K. Som to the International Population Conference, Vienna in 1959 and is detailed later.

A3.2. *Sample design and items of information*: In the NSS 7th to 13th rounds, rural India was divided into a number of strata (composed of tehsils or groups of tehsils), each stratum containing approximately equal Census 1951 population, within any “Natural Division”, into which a State was divided for purposes of Census 1951. In a stratum a number of villages was selected (either directly or through an intermediate stage of tehsils) with replacement and with probability proportional to Census 1951 population/area; and within a selected sample village, a systematic sample of households was taken with a random start. The information, collected by field investigators by personal visit to the sample households, on births included: type of birth (still birth, born alive but since dead, and born alive and also alive at the time of survey), age on the date of survey or at death (in weeks), sex, order of birth, duration since marriage (in years), interval since previous birth (in months), age of mother (in years), and month of birth; that on deaths included: sex, age at death (in years), marital status, activity status, month of death and cause of death.

A3.3. *Method of analysis by recall periods*: In a survey, where the sample units move randomly over the survey period of one year and the reference period for birth events the 365 days preceding the date of survey, let b_{ij} refer to the (estimated)

number of births reported in month of survey i ($i=1, \dots, 12$) to have occurred in month j : the number of births can also be represented by b_{ik} as the number reported in the i -th month of survey to have occurred in the k -th preceding month ($k=1, \dots, 12$): without any loss in generality we can assume all the births in a month to be concentrated at its central, suitable adjustment being made for the two ends.

Taking the model¹ (in which the small trend over the period covered and the border bias, if any, is neglected):

$$\beta = b_{ik} + s_j + d_k + e_{ik}$$

$$b_{ik} = \beta - s_j - d_k - e_{ik}$$

where β is the "true" value; s_j the seasonal component (j can be replaced by j' where $j=j', \text{ mod. } 12$); d_k the distortion factor, a function of recall period k ; and e_{ik} the random error; and assuming that

$$\sum_j s_j = 0; E(e_{ik}) = 0$$

the expectation of the observed total births

$$E(\sum_{i,k} b_{ik}) = 144 \beta - 12 \sum_k d_k$$

The expectation of the total number of births reported to have occurred in the k -th preceding month over the whole survey period is

$$E(\sum_i b_{ik}) = 12 \beta - 12 d_k$$

and the expectation of the average number of such births in the k -th preceding month is

$$E(b_{.k}) = \beta - d_k$$

where

$$b_{.k} = \sum_i b_{ik/12}$$

If there were no distortion factor present, i.e., $d_k = 0$ then $E(b_{.k})$ would be constant.

The $b_{.k}$'s may be smoothed by a curve $b_{.k} = f(k)$ from which $b_{.0} = f(0)$ can be estimated and taken to be equal to β on the assumption that $d_0 = 0$. In physical terms, $b_{.0}$ would connote the number of births were the investigator to visit the households at the exact moment of birth, when under-reporting (the recall factor) had not yet been started to operate. The d_k 's will then be given by the relation:

$$d_k = \beta - b_{.k} = b_{.0} - b_{.k}$$

¹At the two ends, where the event occurs in the same calendar month as that of survey, this year and last year, $2b_{i, \frac{1}{2}}$ and $2b_{i, 11\frac{1}{2}}$ will be taken in the following formulas.

Estimates of Birth and Death Rates and Growth of Population

In practice, a curve of the following type was seen to give a good fit to the NSS data :

$$\begin{aligned} f(k) &= c e^{-ak^2} \\ &= b_{x_0} e^{-ak^2}, \quad \text{from initial conditions;} \end{aligned}$$

i.e.,
$$d_k = b_{x_0} (1 - e^{-ak^2}).$$

The recall curve was so chosen that it has a maximum at "0" and was simple in form, involving only two parameters. One may next examine whether the distortion may fully or partly be explained by the omission of a proportion of infant deaths. The total number of children reported in the i -th month of survey to be born in the k -th preceding month b_{ik} can be split into two parts: b_{ik}^a the number alive, and b_{ik}^d the number reported to be dead, at the time of survey. The IDP, with an average exposure of six months, as reported is :

$$p = \frac{\sum_i \sum_k b_{ik}^d}{\sum_i \sum_k b_{ik}}$$

If the assumption that only infant deaths were missed leads to an implausible adjusted infant mortality rate, it could be reasonably inferred that not all the infant deaths but a number of infants alive at the date of survey were also missed. From the birth rates at recall period "0" and 12 months given later (40.9/1000 and 34.6/1000 persons respectively) for the NSS 7th round rural sector and the reported (conventional) infant mortality rate of 150/1000 and the infant death proportion (with an average exposure of six months) of 111/1000 live births, the adjusted infant mortality rate and the infant death proportion, assuming that only dead infants were missed, come to 281/1000 and 248/1000 live births respectively². These are obviously over-estimates. We can then infer that a number of infants alive on the date of survey was also missed.

A3.4. Response lapse can be of types : (i) failure to report the events, at all, that is, total omission, and (ii) failure to report the dates of reported events correctly. If the error arising out of the inaccurate reporting of the date of the event behaves in a more or less random manner, it can be included in the random component of the linear set-up assumed in the scheme of analysis. If, however, it leads on balance to a significantly uni-directional shift, the result will be an over- or under-estimation of the rates. This sort of over- or under-estimation, which may be termed the "border bias", cannot be taken account of in the scheme of analysis adopted. The best that one can do is to examine the existence of a significant "border bias" from the rates at recall period "0" : if these rates are more or less plausible, one can justifiably assume that border bias was not significantly present in the data.

² The formula for calculating such adjusted rates is $1 - (1 - q) \frac{b}{\beta}$

where q = reported infant mortality rate or infant death proportion ;
 b = birth rate at recall period 12 months; and
 β = birth rate at recall period "0".

National Sample Survey

A3.5. While it would have been more meaningful to study the recall lapse of vital data in the different socio-economic-demographic segments of the population (age, sex, religion, type of informant, etc.) and for the geographical breakdowns to find the causative factors involved, lack of resources did not permit such analysis. For the NSS 7th-13th round data, the sample size was too meagre to tolerate such fine sub-divisions.

A3.6. *Results* : Table (A3.1) gives the rates of births, deaths, and growth for the whole reference (recall) period of 12 months and also for the recall period "0", obtained from the 7th and the combined 9th and 10th rounds at the all-India rural level : the sample size at the all-India urban level was inadequate for construction of the rates. The results of the analysis of the 7th round data have been presented earlier by R. K. Som (1959) and of the 9th and 10th round data by R. K. Som and A. K. De (1959) in NSS Working Paper No. 10, Indian Statistical Institute : these are represented in Table (A3.2) and in Diagram A3.1. For comparison, the rates for "last year", obtained from the NSS 14th round (July 1958-July 1959), at the all-India rural level are also shown.

TABLE (A3.1) : BIRTH AND DEATH RATES FOR THE RECALL PERIOD OF 12TH MONTHS AND "0" FROM TWO INTERPENETRATING SAMPLES FOR DIFFERENT NSS ROUNDS : ALL-INDIA RURAL HOUSEHOLDS

(NSS 7th, 9th, 10th and 14th rounds)

round (period)	sample	rates/1000 persons					
		birth		death		growth-birth-death	
		recall period		recall period		recall period	
		12 months	"0"	12 months	"0"	12 months	"0"
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
seventh (Oct. 1953-March 1954)	1	34.6	42.0	17.4	23.3	17.2	18.8
	2	33.8	39.7	15.7	24.4	18.1	15.3
	C	34.3	40.9	16.6	24.0	17.6	16.9
ninth and tenth (May 1955-May 1956)	1	32.2	36.0	10.0	17.3	22.3	18.7
	2	31.0	41.6	12.7	24.0	18.3	17.6
	C	32.0	38.9	11.4	20.8	20.5	18.0
fourteenth (July 1958-July 1959)	1	38.5	—	19.5	—	19.0	—
	2	38.0	—	18.6	—	19.4	—
	C	38.3	—	19.0	—	19.2	—

A3.7. From this table it will be seen that the birth rate for the whole reference period of one year (recall period 12 months) was 34.3/1000 for the 7th round and 32.0/1000 for the combined 9th and 10th rounds : the rates corresponding to the recall period "0" were 40.9/1000 for the 7th round and 38.9/1000 for the 9th and 10th rounds. The death rate for the whole reference period was 16.6/1000 for the 7th round, and 11.4/1000 for the 9th and 10th rounds : the recall period "0", however, give the rate

Estimates of Birth and Death Rates and Growth of Population

at 24.0/1000 for the 7th round and 20.8/1000 for the 9th and 10th rounds. The growth rate, obtained as a balancing item, for the whole reference period was 1.76 per cent for the 7th round and 2.05 per cent for the 9th and 10th rounds : for the recall period "0", the growth rate was, however, 1.69 per cent for the 7th round and 1.84 per cent for the 9th and 10th rounds. The general consistency in the sub-sample results may also be noted. Interestingly, while both the birth and death rates with reference period of one year are affected by under-reporting (the latter more markedly) the rate of natural increase is over-reported only to a very small extent for the combined sample. 'Border bias', that is a uni-directional shift in reporting the dates of event, seems to be an insignificant factor within the reference of one year, because the rates obtained for recall period "0" were generally plausible. The suggestion is not that one should collect vital data for the optimum recall period (that is the period corresponding to the "shoulder" of the recall curve) established, but to collect information for a large reference period and then analyses by recall periods. For the NSS 14th round, as stated before, information was collected for the births and deaths occurring in the households during the two years preceding the date of survey; and for purposes

TABLE (A3.2): INDEX OF RATES OF BIRTHS AND DEATHS OBTAINED FROM FITTED RECALL CURVES, BY RECALL PERIODS FROM TWO INTERPENETRATING SAMPLES FOR DIFFERENT NSS ROUNDS: ALL-INDIA RURAL HOUSEHOLDS^a

(base : rate for combined sample at recall period '0' = 100)

recall period (months)	index of rates of											
	birth						death					
	7th round			9 & 10th rounds			7th round			9 & 10 rounds		
	com-bined	sam-ple 1	sam-ple 2	com-bined	sam-ple 1	sam-ple 2	com-bined	sam-ple 1	sam-ple 2	com-bined	sam-ple 1	sam-ple 2
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
0	100	102.9	97.0	100	92.7	107.0	100	97.1	101.6	100	83.1	115.2
1	99.8	102.6	96.9	99.8	91.9	106.6	99.6	96.8	101.1	99.1	82.5	114.1
2	99.4	102.3	96.5	99.3	91.5	105.8	98.5	96.0	99.7	97.2	81.0	111.6
3	98.7	101.5	95.9	98.5	91.0	104.5	97.0	94.9	97.8	94.4	78.9	108.1
4	97.8	100.4	95.1	97.5	90.5	102.8	94.7	93.3	95.2	90.7	76.2	103.6
5	96.6	99.0	94.1	96.2	89.9	100.7	92.5	91.5	92.2	86.5	73.0	98.4
6	95.3	97.5	92.9	94.7	89.2	98.3	89.7	89.2	88.7	81.8	69.4	92.7
7	93.7	95.7	91.5	93.0	88.3	95.6	86.6	86.8	84.9	77.0	65.7	86.9
8	92.0	93.8	90.0	91.1	87.4	92.6	83.2	84.2	81.0	72.2	61.8	81.1
9	90.1	91.7	88.3	89.0	86.4	89.6	79.8	81.4	77.0	67.5	58.1	75.5
10	88.1	89.4	86.5	86.9	85.3	86.3	76.3	78.5	73.0	63.0	54.4	70.3
11	86.0	87.1	84.7	84.6	84.2	83.0	72.8	75.5	69.1	58.8	51.0	65.5
12	83.8	84.6	82.7	82.2	82.9	79.8	69.3	72.5	65.3	54.9	47.8	61.0
actual at recall period '0'/1000	40.9	42.0	39.7	38.9	36.0	41.6	24.0	23.3	24.4	20.8	17.3	24.0
(number of sample households)	(8,235)			(3,213)			(8,235)			(3,213)		

^a Source for 7th round, "On recall lapse in demographic studies", by R. K. Som, International Population Conference, Vienna, 1959; for 9th and 10th rounds, "Rates of births, and growth from the National Sample Survey rounds, 1953-59", by R. K. Som and A. K. De, NSS Working Paper No. 10, Indian Statistical Institute, 1959.

National Sample Survey

TABLE (A3.3): INDEX OF BIRTH, DEATH AND GROWTH RATES FOR "YEAR BEFORE LAST" WITH CORRESPONDING RATES FOR "LAST YEAR" FOR THE COMBINED SAMPLE AS BASE 100 : NSS 14TH ROUND RURAL^a

rural zone (number of sample villages)	sample	index of rates "year before last"		
		birth	death	growth
(1)	(2)	(3)	(4)	(5)
1. north (80)	1	82.4	38.0	120.8
	2	76.6	49.7	100.0
	C	79.7	43.5	111.1
2. central (88)	1	76.7	56.1	105.7
	2	80.9	45.6	130.5
	C	78.6	51.3	116.9
3. east (101)	1	90.7	59.0	113.0
	2	79.1	51.7	98.4
	C	84.4	55.0	105.0
4. south (77)	1	84.9	47.9	117.8
	2	90.5	63.1	114.9
	C	87.9	56.2	116.2
5. west (70)	1	73.5	48.0	95.9
	2	85.4	60.3	107.5
	C	79.3	54.0	101.6
6. all-India rural (416)	1	81.4	53.5	109.1
	2	81.9	51.7	111.9
	C	81.7	52.6	110.5
7. actual, last year/1000	1	38.51	19.24	19.27
	2	38.91	19.33	19.58
	C	38.71	19.28	19.43

^aSource : "On recall lapse in demographic studies" by R. K. Som, International Population Conference, Vienna, 1959; the data relate to the 416 distinct sample villages and the rates for "last year" given in this table, therefore, differ slightly from those given in other tables, where substitution was made.

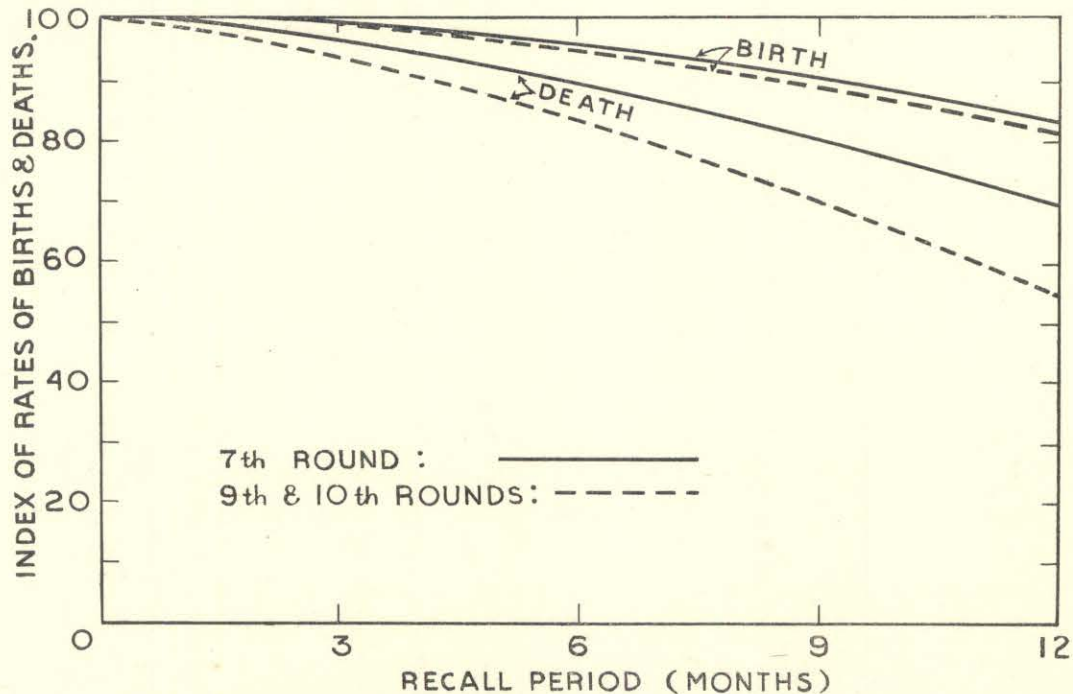


Diagram A3.I : Index of rates of births and deaths by recall period for different NSS rounds

Estimates of Birth and Death Rates and Growth of Population

of preliminary tabulation, birth and death rates were calculated separately for the reference period of last year and year before last. This method was aimed to minimise omission in reporting arising from lapse of memory and "border bias". Preliminary tabulation of the NSS 14th round data, given in Table (A3.3), showed that while the birth and death rates calculated for the reference (recall) period of last year were generally plausible and consistent and did not suggest any gross amount of under-reporting, those relating to the year before last were definite under-estimates. The under-reporting within the reference period of last year has yet to be examined on analysis by recall periods but this would take time. In any case, this under-reporting within the reference period of last year is expected to be much smaller in magnitude than these observed for the earlier rounds and the "shoulder" of the recall curve to extend to about one year. This is because of the collection of data for two years so that "last year" data become more reliable, the inclusion of many associated factors helping recall of events, and the much larger sample size.

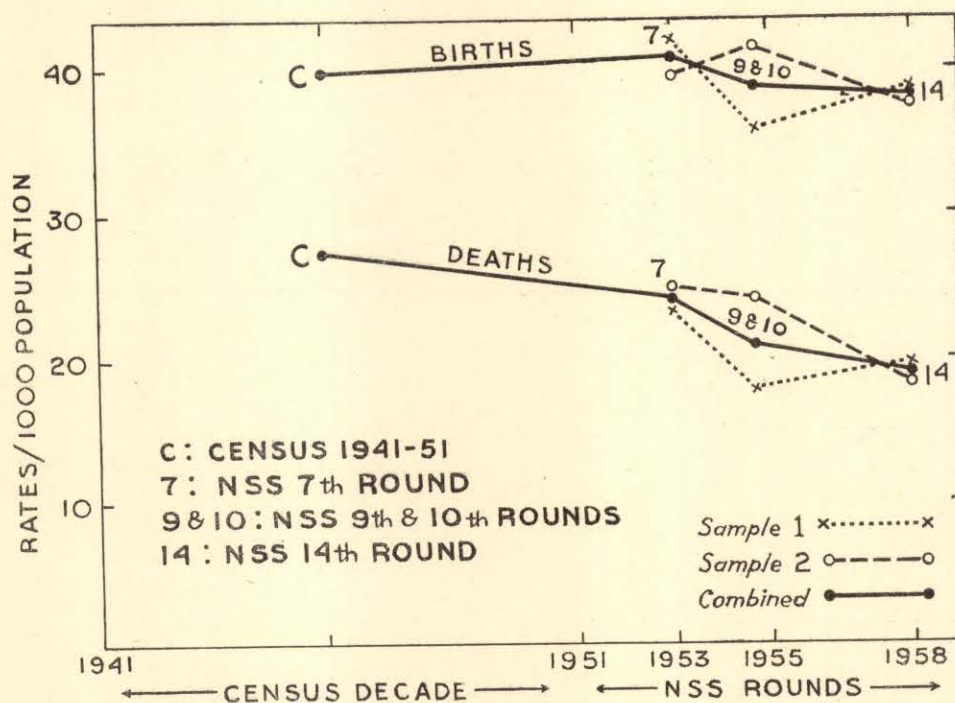


Diagram A3.II : Rates of birth and death/1000 population, Census 1941-51 and NSS rounds 1953-59.

A3.8. The rates at recall period "0" for the 7th, 9th and 10th rounds compare favourably with the rates for the last year, obtained from the NSS 14th round. Within the last seven years covered in these NSS rounds, therefore, while the NSS all-India rural birth rate has remained almost stationary at 39-41/1000, there has been a steady decline in the death rate, from 24/1000 in 1952-54 through 21/1000 in 1954-56 to about 19/1000 in 1957-59, resulting in an increase in the rate of growth from 1.7 per cent in 1952-54 through 1.8 per cent in 1954-56 to about 1.9 per cent in 1957-59. It will be recalled that the birth and death rates for the Census 1941-50 decade, centred at

National Sample Survey

1946, have been estimated by the Census actuary as about 39.9/1000 and 27.4/1000 respectively³. The reduction in mortality, observed from the NSS rounds would seem plausible on consideration of the various factors at issue. The trend in the rates has been shown graphically in Diagram A2.1.

A3.9. A decline in mortality has to be expected in this "decade of declining death rates" in view of the intensified public health measures and general improvements in the level of living⁴. Other countries in the region similarly situated with high birth and moderate death rates are also experiencing such declines in mortality⁵.

A3.10. *Birth and death rates in NSS 13th round urban*: The rates of birth and death in the NSS 13th round (September 1957–May 1958) urban are shown in Table (A3.4): birth and death data were not collected from sample households in the rural sector in this round, but those occurring in the household premises obtained at the time of listing, the results of which are given later. The sample design was two-stage stratified, the urban blocks being the first stage and the households being the second stage of sampling. For the urban sector, the birth rate at recall period '0' was 36.8/1000 and the death rate 13.7/1000.

TABLE (A3.4): BIRTH AND DEATH RATES FOR THE RECALL PERIOD OF 12 MONTHS AND '0' FROM TWO INTERPENETRATING SAMPLES: ALL-INDIA URBAN HOUSEHOLDS, NSS 13TH ROUND (1168 URBAN BLOCKS, AND 11,680 SAMPLE HOUSEHOLDS)

recall period	rate per 1000 persons					
	birth			death		
	sample 1	sample 2	combined	sample 1	sample 2	combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)
12 months	29.77	31.24	30.51	9.17	7.86	8.51
'0'	34.23	39.34	36.81	17.45	10.11	13.74

³ Census of India 1951, Paper No. 6, 1954, "Estimation of birth and death rates in India during 1941-50", Government of India.

⁴ "The various health developmental programmes e.g. Malaria control measures, B C G Campaigns, use of antibiotics etc. and better distribution of food and better nutrition and improvement in medical facilities are probably responsible for the reduction in mortality. The results of the 1st sub-round of the 14th round also show an unmistakable fall in the death rate in the rural areas. The spleen-rate and other indices prepared by the Malaria Institute for the years 1953-57 show that there is a substantial reduction in the incidence of malaria. For example, in Bihar, Madhya Pradesh and West Bengal the spleen-rate fell from 56.1, 34.7 and 20.4 in 1953-54 to 11.2, 8.7 and 4.0 respectively in 1956-57 as a result of the National Malaria Control Programme". (*Planning Commission Document No. CSO/PU59-3*, March 20, 1959).

⁵ UN-ECAFE: "Population trends and related problems of economic development in the ECAFE region", *Economic Bulletin for Asia and the Far East*, 10, 1959.

Estimates of Birth and Death Rates and Growth of Population

RATES OF BIRTH OCCURRING IN THE HOUSEHOLD PREMISES, NSS 13TH ROUND RURAL

A3.11. *Sample design and items of information* : Broadly the sample design for the 13th round (rural) was uni-stage stratified with villages as ultimate sample units. In each stratum villages were selected with probability proportional to population and households within the selected villages were completely enumerated. Within each stratum two independent sample estimates were built up on the basis of party —party 1 and party 2 forming sub-sample 1 and sub-sample 2 respectively. The total number of 1848 sample villages in the 13th round was classified into two sets, each set containing 924 sample villages. For one set of sample village (Set I, say) the sampling frame of earlier rounds was used and for the other set (Set II, say) it was constructed for selection of households for socio-economic enquiries. At the time of constructing the frame, information on total number of births during the past one year (preceding 365 days) “in the premises occupied at present by the household” was collected. The item was included in the listing schedule as an experimental measure in order to examine the reliability of the birth data so collected, without associated items (age of mother, order and type of birth, age of the child, etc.) and without attendant probes. While the complete enumeration of households at the village level eliminated the sampling variability within the village, the exclusion of associated items and probes was likely to introduce bias in response and reporting. Again, since the approach was by “premises” and not by “mother”⁶ as was the case with the earlier and also later (14th and 15th) NSS rounds (where a sample of households within a village was taken), this resulted in omission of births. Only the live-births which occurred to female members of the household or to visitors in the present premises were recorded. This approach would, of course, lead to under-estimation of the total birth-rate, because births occurring in hospitals and other institutions were not covered. Moreover if a household had resided in premises for less than a year, only births that occurred during the period of stay of the household in the particular premises were to be recorded.

A3.12. The Facsimilie of the main block of the listing schedule of the 13th round is given below.

Sch. 0.0-2

[6] list of households, record of selection, additional information												
house number	household serial number	11th/12th round household serial number	name of head of household	sampling serial number	schedule number if selected for enquiry	household size	number educated		duration of residence in present		number of births in present premises in past year	remarks
							all graduate	village	pre-mises	town		
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)

⁶ Births occurring to normally resident female members of the household or to any other female members who were dead but could have been considered as normally resident members of the household at the time of death were to be recorded.

National Sample Survey

A3.13. *Results* : The preliminary results were presented in NSS Working Paper No. 11 by A. K. De⁷ in November 1959. Table (A3.5) gives the birth rates for the 13th and 14th rounds in the five rural zones. At the all-India level, the birth-rate comes out as 35.2/1000 in the 13th round (with sub-sample estimates of 35.8 and 34.5) and 38.8/1000 in the 14th round. The zonal rates are also expressed as indices, with the all-India rural rates as 100, for the two rounds separately. The birth-rates in the 13th round are seen to come out lower at the all-India level as well as at zonal levels with the exception of the east zone where the 13th round estimate is slightly higher.

TABLE (A3.5): BIRTH RATES AND INDEX OF BIRTH RATES BY ZONE FROM TWO INTER-PENETRATING SAMPLES FOR TWO DIFFERENT ROUNDS: ALL-INDIA RURAL HOUSEHOLDS NSS 13TH AND 14TH ROUNDS

zone (number of sample villages; 13th round : 14th round)	sample	birth rate		index of birth rate	
		13th round	14th round	13th round	14th round
(1)	(2)	(3)	(4)	(5)	(6)
1. north (144 : 80)	1	38.58	42.55	107.5	109.5
	2	35.64	43.74	103.4	112.7
	C	37.08	43.10	105.5	111.0
2. central (240 : 88)	1	42.36	45.09	118.2	116.0
	2	42.35	45.19	122.9	116.5
	C	42.36	45.14	120.5	116.2
3. east ^a (192 : 89)	1	34.33	32.96	95.8	84.8
	2	31.56	31.34	91.6	80.8
	C	32.96	32.09	93.7	82.6
4. south (168 : 77)	1	27.67	32.73	77.2	84.2
	2	28.50	35.36	82.7	91.1
	C	28.07	34.15	79.8	87.9
5. west (144 : 82)	1	34.11	38.30	95.2	98.5
	2	31.53	40.38	91.5	104.1
	C	32.81	39.31	93.3	101.2
6. all-India ^a (888 : 416)	1	35.84	38.87	100	100
	2	34.47	38.80	100	100
	C	35.16	38.84	100	100

^a The data relating to Assam were rejected at the scrutiny stage.

A3.14. The under-estimation of the birth rate in the 13th round in relation to the 14th round is 9.5 per cent at the all-India level. At the zonal level, the divergence is maximum for the west, the rates in the 13th and 14th rounds being 32.81 and 39.31 respectively. The gap between estimates of the two rounds may be due

⁷ "Rate of births occurring in the household premises, NSS 13th round, rural," Indian Statistical Institute, 1959.

Estimates of Birth and Death Rates and Growth of Population

to the following factors: (i) the "premises" approach followed in the 13th round; (ii) lack of emphasis (probes and associated items on this item in the listing schedule); (iii) lack of cross-checks on birth data in the listing schedule; (iv) the differing reference periods: in the 13th and 14th rounds the reference periods were one year and two years respectively.

A3.15. From the tabulation of the NSS 14th round birth data by place of occurrence, it is seen that the exclusion of births in hospitals, etc. cannot wholly explain the comparatively lower rates in the 13th round. It is likely, therefore, that the other factors mentioned above also operated.

A3.16. The survey period of the 13th round was divided into six sub-rounds—each sub-round covering a period of 40 days. Table (A3.6) shows seasonal variations in birth rates over six sub-rounds at the all-India level. At the zonal level no seasonality was discernible, excepting in the central zone.

TABLE (A3.6): BIRTH RATES FOR DIFFERENT ZONES BY SUB-ROUND FROM TWO INTERPENETRATING SAMPLES: ALL-INDIA RURAL HOUSEHOLDS NSS 13TH ROUND (NUMBER OF HOUSEHOLDS 129,805)

zone (number of sample villages)	sample	sub-round ^b						all
		1	2	3	4	5	6	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. north	1	43.78	36.22	41.27	35.28	43.31	32.86	38.58
	2	42.00	31.72	38.74	37.35	26.03	39.05	35.64
	(144) C	42.78	33.88	40.09	36.30	34.15	35.83	37.08
2. central	1	35.97	43.89	46.53	42.15	41.83	42.76	42.36
	2	38.09	45.42	49.34	45.52	36.66	40.17	42.35
	(240) C	37.00	44.67	47.97	43.82	39.60	42.00	42.36
3. east ^a	1	35.65	33.16	35.48	33.87	30.46	35.90	34.33
	2	28.93	34.74	28.47	34.06	35.72	27.77	31.56
	(192) C	32.10	33.92	32.64	33.97	33.46	31.93	32.96
4. south	1	29.71	30.80	27.74	29.46	20.57	29.29	27.67
	2	26.98	27.52	30.15	28.07	32.13	26.34	28.50
	(168) C	28.38	29.20	29.93	28.78	25.58	27.79	28.07
5. west	1	31.07	29.73	39.69	35.63	35.00	33.41	34.11
	2	33.02	32.65	31.61	28.60	31.05	30.29	31.53
	(144) C	32.03	31.33	26.64	32.18	33.08	31.83	32.81
6. all-India ^a	1	34.82	35.49	38.07	35.88	34.25	36.41	35.84
	2	33.14	35.54	36.79	35.31	33.39	32.85	34.47
	(888) C	33.97	35.51	37.47	35.59	33.83	34.61	35.16

^a The data relating to Assam were rejected at the scrutiny stage.

^b sub-round period: 1. September-October 1947; 2. November-December 1957; 3. December-January 1958; 4. January-February 1958; 5. March-April 1958; 6. April-May 1958.

National Sample Survey

A3.17. The estimates for error⁸ and percentage errors of birth rates for five different zones and all-India (rural) are presented in Table (A3.7): these were calculated in the same manner as for NSS 14th round, first sub-round (Appendix 2). The error at the all-India level is of the order 0.45 and the percentage error 1.28. The zonal variation for the east zone is highest (1.25) while that for the south is lowest (0.75).

TABLE (A3.7): BIRTH RATES/1000 PERSONS WITH PERCENTAGE ERRORS FOR DIFFERENT ZONES FROM TWO INTERPENETRATING SAMPLES: ALL-INDIA RURAL HOUSEHOLDS NSS 13TH ROUND (NUMBER OF HOUSEHOLDS 129, 305)

zone (number of sample villages)	estimate	error	percentage error
(1)	(2)	(3)	(4)
1. north (144)	37.08	0.86	2.32
2. central (240)	42.36	0.89	2.10
3. east ^a (192)	32.96	1.25	3.79
4. south (168)	28.07	0.75	2.67
5. west (144)	32.81	0.52	2.80
6. all-India ^a (888)	35.16	0.45	1.28

^a The data relating to Assam were rejected at the scrutiny stage.

⁸ This, as explained in Appendix 2, is not standard error in the sense of sampling but includes the party-differences and may perhaps be called the "margin of uncertainty".

APPENDIX 4

RATE OF MARRIAGE

A4.1. Information was collected on the marriages of the male members of the households performed within the preceding 365 days. The rate of marriage was defined as the number of marriages per thousand population. The number of marriages was, of course, the same for both males and females but the marriage rate differed for the sexes with different population base.

A4.2. The birth rate is a function of, among other things, the rate of marriage obtaining in the country. Information on the number of marriages occurring to the household members was collected in the NSS 7th-13th rounds. This information is presented in Table (A4.1) for the males and females separately from the two interpenetrating samples. In the interpretation of this Table, the seasonality factor and the small number of sample households from which vital data were collected may be kept in view.

National Sample Survey

TABLE (A4.1): NUMBER OF MARRIAGES PER 1000 PERSONS BY SEX FOR DIFFERENT
NSS ROUNDS FROM TWO INTERPENETRATING SAMPLES: ALL-INDIA
RURAL AND URBAN HOUSEHOLDS

sector	round	survey period	sex	sample 1	sample 2	combined	number of sample households	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
rural	7	October 1953-March 1954	male	13.7	14.3	14.0	8,235	
			female	13.9	14.7	14.3		
	8	July 1954-March 1955	male	13.55	13.72	13.64	3,706	
			female	14.02	14.47	14.24		
	9	May 1955-November 1955	male	16.99	14.82	15.89	1,604	
			female	17.50	15.32	16.39		
	10	December 1955-May 1956	male	17.27	17.49	17.38	1,609	
			female	17.62	17.11	17.36		
	11	August 1956-January 1957	male	13.56	12.17	12.88	7,161	
			female	13.97	12.94	13.46		
	urban	7	October 1953-March 1954	male	6.22	15.19	10.53	1,720
				female	6.81	16.70	11.55	
8		July 1954-March 1955	male	13.59	8.39	11.00	1,823	
			female	14.59	9.25	11.97		
9		May 1955-November 1955	male	19.71	10.42	14.95	4,077	
			female	21.14	11.12	16.00		
10		December 1955-May 1956	male	11.09	7.85	9.51	1,320	
			female	12.15	8.74	10.50		
11		August 1956-January 1957	male	9.15	7.93	8.52	2,809	
			female	9.79	9.07	9.43		
12		February 1957-June 1957	male	9.91	13.10	11.51	1,731	
			female	10.58	13.99	12.30		
13		September 1957-May 1958	male	4.88	5.78	5.33	11,680	
			female	5.38	6.51	5.95		

Estimates of Birth and Death Rates and Growth of Population

A4.3. Table (A4.2) gives the number of marriages per thousand persons by sex and age group from two interpenetrating samples in the NSS 13th round urban sector. Information on marriages was not collected in the rural sector in the 13th round.

TABLE (A4.2): NUMBER OF MARRIAGES PER 1000 PERSONS BY SEX AND AGE-GROUP FROM TWO INTERPENETRATING SAMPLES : ALL-INDIA URBAN HOUSEHOLDS NSS 13TH ROUND

age group (years)	male			female		
	sample 1	sample 2	combined	sample 1	sample 2	combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. 0—11	0.23	0.42	0.33	0.92	1.84	1.38
2. 12—16	2.03	4.15	3.08	24.36	31.23	27.74
3. 17—21	14.20	24.26	19.26	22.19	23.08	22.64
4. 22—26	23.69	23.05	23.37	3.63	3.09	3.36
5. 27—31	6.81	6.00	6.40	2.86	3.89	3.42
6. 32—	1.41	1.17	1.29	—	0.28	0.14
7. all ages	4.88	5.78	5.33	5.38	6.51	5.95

A5.2: INSTRUCTIONS TO THE INVESTIGATORS

- Schedule 12.1 : Population, births and deaths enumeration,
 Schedule 12.1.1 : Population, births and deaths re-enumeration, and
 Schedule 12.2 : Births and deaths enumeration.

.0 INTRODUCTION

0.0. The Working Group on Vital and Health Statistics, Planning Commission, in its first meeting held on 13 and 14 March 1958, inaugurated by Professor P. C. Mahalanobis, agreed to ask the NSS to give high priority to the use of the NSS data for obtaining reliable estimates of birth and death rates and the rate of natural increase: a Sub-committee formed to discuss the utilization of NSS for obtaining national estimates of vital rates etc. in its meetings on 31 March and 1 April 1958, decided to request the NSS Programme Committee "to incorporate in the 14th round as a first priority in their programme for the rural areas as an exploratory work relating to estimates of rate of increase of population and of birth and death rates". Accordingly, in the 14th round of the NSS the population and the births and deaths in the sample villages are being enumerated so as to provide, on an exploratory basis, the population growth rate for rural India. New emphasis is, therefore, put on the definition and enumeration of normally resident members of a household as also the births and deaths occurring in the household.

National Sample Survey

0.1. Two enumeration schedules are being canvassed—schedule 12.1, the population, births and deaths enumeration (with a corresponding re-enumeration schedule 12.1.1) and schedule 12.2, the births and deaths enumeration. To recapitulate what has been stated in section 1 : in sample village 1, schedule 12.1 will be canvassed in sub-round 1 and the re-enumeration schedule 12.1.1 in sub-round 5; in sample village 4, schedule 12.1 will be canvassed in sub-round 2 and the re-enumeration schedule 12.1.1 in sub-round 6; schedule 12.2 will be canvassed in sub-rounds 3, 4, 5 and 6 in sample villages 2, 5, 3, and 6 respectively. The only difference between schedule 12.1 and 12.2 is that in schedule 12.1 the demographic particulars of the usual household members are taken in block 6, while this block does not appear in schedule 12.2, only summary sex-age information of the usual household members being taken in block 5 (household characteristics) of that schedule. To maintain comparability, the births and deaths enumeration blocks in both the schedules have been given the same serial numbers, necessitating a break in the serial of blocks in schedule 12.2. The re-enumeration schedule 12.1.1 contains, in addition to the items of schedule 12.1, information about the change in population. Instructions for Schedule 12.1 are given below, most of which will also hold for Schedules 12.1.1 and 12.2; for the later schedules only additional instructions will be given.

1. SCHEDULE 12.1

1.0. *Block 1 : Identification of sample village*

Items 1-5 and 8-11 are available from the sample list. Item 6 refers to the sub-round and item 7 to C.P.A. classification (codes for item 7 given in the body of the schedule). *Item 12, name of hamlet*, will be given only when there is a hamlet selection within the village. *Item 13, number of households in village/hamlet*, will be filled in after the households are completely enumerated.

1.1. *Block 2 : Particulars of investigation*

Particulars of investigation, inspection and field scrutiny will be filled in. In *item 4, date of receipt-despatch*, the date of despatch only need be given for the investigator while both the dates of receipt and despatch should be given with a semi-colon in-between for the inspector and the field scrutinizer.

1.2. *Block 3 : Remarks by investigator*

The investigator should write here remarks relevant to this schedule, which would be helpful in improving the methodology of investigation. These may include the existence of any systematic bias, e.g. under-reporting below a certain age or of certain sex due to superstition and under-reporting of children born dead, difficulties of getting the time of birth or death, and resistance to supplying death data. The local customs and traditions may be referred to in so far as they affect the efficiency of the birth and death data collected.

Estimates of Birth and Death Rates and Growth of Population

1.3. *Block 4 : Comments by inspector*

The inspector may record his comments on the work of the investigator and also his observations of the local custom, traditions and superstitions in their effect on birth and death data.

1.4. *General description of blocks 5-8*

In schedule 12.1, all the households in the sample village will be enumerated and the following information will be collected in the blocks mentioned against each item :

- (i) household characteristics (block 5);
- (ii) demographic particulars of usual household members (block 6);
- (iii) births during the preceding two years occurring to household members (blocks 7); and
- (iv) deaths during the preceding two years in the household (block 8).

1.5. *The household characteristics* will include the name of the head of the household, the household size, the household land possessed, the household industry-occupation, some items on household enterprise, household religion, and duration of stay in the village. The *demographic particulars of usual household members* will include relation to head, period of absence from the household (if any), sex, age, marital status, total live births (for ever-married females), and the usual activity status and industry-occupation. For *births occurring during the preceding two years* the following particulars will be collected : age of mother at reported birth and at first birth, sex of the child, time of birth (month and year, and how determined), birth code (alive, born alive but since dead, and born dead), attendance type (dhais, midwives, physicians, relatives, etc.), age on date of survey or at death, and informant (father, mother, etc.). The information on *deaths during the preceding two years* in the household will include : relation of deceased to head, sex of the deceased, age at death, time of death (month and year, and how determined), place of death, attendance type, with or without gainful work at the time of death, and informant.

1.6. *Block 5 : Household characteristics*

[5] household classificatory character															
household srl. no.	household srl. no. as in schedule 0.1	name of head of household	name of father/mother/husband of head	household size			household land possessed (0.00 acres)	household		household group code	household class code	industry of enterprise code	nature of enterprise code	religion code	duration of stay (in village)
				male	female	total		industry code	occupation code						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)

National Sample Survey

Definition of a household : normally resident members : For this schedule, usual or normally resident members will constitute a household. Those persons who normally pass nights under the same roof and take food from the same kitchen will be considered as normally resident members irrespective of the length of stay in the household. Normally resident members will exclude guests but include temporary absentees; the inclusion of the item "period of absence, if any" in block 6, col. (3) may be noted in this context. The decision as to whether a particular person will be treated as a normally resident member or not will be left to the judgement of the informant, the judgement of the investigator being exercised to ensure that (a) a person is not claimed to be a normally resident member by more than one household, i.e., that he has not either formed a separate household or joined, as an usual member, another household or (b) not omitted in all households. To illustrate: a daughter married three months ago and who left the household should not be recorded as a normally resident member in the household of her father to which she belonged prior to her marriage, on the other hand, she should be returned as normally resident member in the household in which she is currently residing and is expected to reside. In the case of child marriage or return marriages when the girl is not expected to go to the husband's household immediately, she may be considered as a normally resident member of the household in which she is currently residing and in which she is expected to reside for some time to come. Students in hostels and boarding houses in a sample village (or hamlet) will form a separate household only when they have no normal residence in some other place. Orphans usually residing in hostels or boarding houses will be examples of such cases. The investigator is therefore to ask the informant whether a normally resident member lives in a hostel or boarding house at the time of enquiry; and should take special care to include him in block 6. (This concept may, of course, come in conflict with that adopted in other schedules). In effect, de jure population counts are to be taken, being based on the normal residents at the time of the survey. Too, any birth or death event to these persons no matter where it occurs should be counted. In addition, the floating population, if any, without a normal residence (e.g., wandering tribes and other peripatetic persons) should be looked for and counted on the day of completion of the household enumeration; the assumption is that their normal residence is where they are found and the births or deaths occurring in the preceding two years recorded.

1.7. *The household size (cols. 5-7)* should be filled in on the above considerations. It is suggested that the household members be listed along with their relation to head in block 6 first and then the household size filled in.

1.8. *Single-member households* should be taken special care of. Deaths occurring to lone persons constituting single member households are difficult to ascertain and record. Neighbours and responsible, informed persons in the village are the only conceivable source of information in these cases. The investigator should in the course of the enquiry try to get such information from these persons and also from every tenth household and recorded in separate schedules without any household serial

Estimates of Birth and Death Rates and Growth of Population

number. Only death particulars in block 8 need, of course, be filled in, the name and other particulars if available being also recorded in other blocks. Such schedules (original copies) should be sent to the NSS Population Division, Indian Statistical Institute, Calcutta-35.

1.9. *Col. (1) : serial number of household and col. (2) serial number of household as in Schedule 0.1 :* In the first sub-round, the household particulars in the house-listing schedule 0.1 would be copied from schedule 12.1. As the 0.1 schedules are drawn up in the first sub-round, some new households may be formed and some old households disappear from the village during the intervening period. At the time of the enumeration of schedules 12.1 or 12.2 during the 2nd to 6th sub-rounds, a comparative study should be made with schedule 0.1. If the same households as in 0.1 were also observed while filling in schedule 12.1 or 12.2 in the 2nd-6th sub-rounds, in item 2 of block 5, the serial number of household as in schedule 0.1 will be put; for the new household or households formed by splitting up of old households, 'new' and 'split' respectively will be put in col. (2). If a household was missed in 0.1 schedule, "missed" should be written in col. (2). Obviously, in the 2nd-6th sub-rounds for Schedules 12.1 and 12.2, col. (1) and (2) may not have the same number. Also, the total number of households in Schedules 12.1 and 12.2 will not generally be less than the corresponding number of Schedule 0.1.

1.10. *Col. (3) : name of head of household :* The full name of the head of the household is to be given.

1.11. *Col. (4) : name of father/mother/husband of head :* The objective is to identify the head at the time of filling the re-enumeration schedule 12.1.1 and the name of the father/mother or husband will, it is believed, help in such identifications. The custom of the locality should be followed in recording the names. As a general rule, except in the case of married female, father's name will be given if he is alive and if father is dead and mother is alive, her name should be entered. If both the parents are dead the father's name should be entered. In case of married females the name of the husband whether alive or dead will be entered.

1.12. *Col. (8) : household land possessed :* The area of land possessed by the household as on the date of the survey will be entered in acres in two places of decimals. The land possessed constitutes of all lands owned by the household plus land leased in minus land leased out by the household; lands over which the household has permanent, heritable rights of occupancy irrespective of right to transfer the title will be considered to be owned by the household : the right of occupancy will be judged according to the legal position only. Land given for share cropping will be treated as land leased out and similarly land operated by sharecroppers as land leased in by the sharecropping household. In case of lands jointly owned or operated, the share of the household need only be shown.

4.1.13. *Cols. (9-10) : household industry-occupation :* The household industry occupation will be entered in terms of the six digit industry-occupation codes given

in the most recent "Classification of industry occupation". For a household with members having more than one industry-occupation, the industry-occupation combination contributing the maximum share of household income will be treated as the household industry-occupation. For a household whose income is from ungainful activity only, e.g. from remittances, pensions, charities, etc. the industry code should be left blank and the occupation code would be one of the codes X00, X08, X09; for households with members having ungainful as well as gainful occupations, the gainful occupations will only be considered for determining the household industry-occupation. The concept of usual industry-occupation has been discussed later (paras 1.28 and 1.29).

1.14. *Col. (11) : household group* : The groups relate to the manufacturing enterprise in the household. The codes are : self-employed in manufacturing, registered-1; self-employed in manufacturing, not registered-2; others-3. The investigator should first ascertain if the household is self-employed or not : a household would be said to be self-employed if at least one of its members is currently, or was at any time during the preceding 365 days, self-employed (employer or own account worker : for the definition of these terms, para 1.28 may be seen). If the household is not self-employed, code '3' will apply. If the household is self-employed the next question to be asked is : is it self-employed in manufacturing? If not, code '3' will again apply. If the household is self-employed in manufacturing, a further question should be asked as to whether the enterprise is registered under Section 2m(i) or 2m(ii) of the Factory Act or not. (Under the Factory Act, enterprises employing 10 or more persons and using power or employing 20 or more persons and not using power on any day during the preceding 365 days are eligible for registration). If the enterprise is registered code, '1' should be given and if not registered code '2'. It may be noted that all self-employed manufacturing household registered under regulations other than sections 2m(i) and 2m(ii), for example under State regulations, should not be considered as "registered" for this survey.

1.15. *Col. (12) : household class* need be filled in only for self-employed manufacturing households not registered, i.e. households with code '2' in col. (11), and will determine whether the manufacturing enterprise is the principal or subsidiary means of livelihood for the household. The codes are : manufacturing as principal means of livelihood-1; manufacturing as subsidiary means of livelihood-2.

1.16. *Col. (13) : industry of enterprise* for self-employed manufacturing households not registered, i.e. households with code '2' in col. (11), should be filled in terms of the three-digit industry codes, currently in use.

1.17. *Col. (14) : nature of enterprise* for self-employed manufacturing households not registered, i.e. households with code '2' in col. (11) will record whether the household is engaged only in manufacturing or servicing or in mixed operations. The codes are : only manufacturing-1; only servicing-2; and mixed-3.

1.18. *Col. (15) : religion code* : The codes are : Hinduism-1; Islam-2; Christianity-3; Sikhism-4; Jainism-5; Buddhism-6; Zoroastrianism-7; Jewish-8; Others-9.

Estimates of Birth and Death Rates and Growth of Population

1.19. *Col. (16) : duration of stay in village :* The duration of stay of the present head of the household in the village as the head of this household will be recorded in years and months upto duration 5 years, and in years only for duration 5 years and over : duration 8 months should be recorded as 0-08, 3 years 10 months as 3-10, and 14 years as 14-00.

1.20. *Block 6 : Demographic particulars of usual household members*

[6] demographic particulars of usual household members										
serial number	relation of usual member to head	period of absence, if any (weeks)	sex	age last birth day (years)	marital status	total number of live births	usual activity status	usual industry occupation		
								description	code	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)

Only one line (row) will pertain to a member of the household

1.21. *Col. (1) : serial number :* The head of the household will be given serial number 1. No definite rule need be followed about other members. It is, however, suggested that a biological family be listed first, then other relatives, and lastly the non-relatives; husband and wife, if household members, may also be juxtaposed.

1.22. *Col. (2) : relation to head :* The relation of each member to the household head should be provided. Terms expressing exact relationship, like "father's brother", "father's brother's son", "sister's daughter", should be entered in place of "uncle", "cousin", "niece", etc. If there is a possibility of confusion when re-enumeration Schedule 12.1.1 is being filled up, e.g. when two sons have wives of the same age, more specific terms like "1st son's wife", "2nd son's wife", etc. should be used. To save time, abbreviations indicating the relationship may be given; the following indicate a possible set of abbreviations :

father—f.; husband—h.; brother—b.; son—son;
 mother—m.; wife—w.; sister—sis.; daughter—d.;

For example, father's brother may be written as "f.b.", father's brother's son as "f.b.son", sister's daughter as "sis.d.", etc.

1.23. *Col. (3) : period of absence, if any (weeks) :* If an usual member is absent on the date of survey, the most recent, continuous absence, of that member from the household will be recorded in completed weeks; for a period of absence less than a week, "0" will be recorded.

1.24. *Col. (4) : sex :* The codes are : male-1, female-2. Inter-sex should, by convention, be given code 1.

National Sample Survey

1.25. *Col. (5) : age :* The age should relate to the last birth-day, i.e. will give the completed years.

1.26. *Col. (6) : marital status :* The codes are : never married-1; married-2; widowed-3; divorced-4; separated-5. The marital status should relate to the current status; for example, a widowed person marrying again should be given code 2.

1.27. *Col. (7) : total number of live births* need be entered for females with marital status code other than "1" (never married), i.e. for ever married females only. If a female was married more than once, the total births resulting from all the marriages should be entered together.

1.28. *Col. (8) : activity status :* The usual status of economic activity should be entered in codes; if a person has more than one usual activity status, the principal status should only be reckoned, based on the time spent. Though the term 'usual' does not explicitly involve any time reference, the principal status should obviously be taken as one which predominated, or if switched over currently, expected to predominate for a considerable period of time as a regular nature; an example of the latter category is : an unemployed person recently getting a job in which he will continue as an employee will have the status "employee". By and large, in determining the usual activity status, the preceding one year would be a sufficient time-reference. The code list used for Schedules 10 and 1.1 will also be used for this schedule : since the usual status is being taken, some codes (specifically, codes 15-17: gainfully employed, not at work; 21-26 : unemployed with job or enterprise at a future date; and code 41 : not in labour force—with job or enterprise at a future date, not seeking and not available) will not come in. Broadly speaking, the population is divided into two groups : (1) *within labour force* : (2) *outside labour force*; the former group being divided into (a) *gainfully employed*, and (b) *unemployed*. Unemployed as an usual activity status category is, however, extremely unlikely to occur specially in the rural areas; but codes 27-32 (unemployed, not with job or enterprise at a future date) may come in. The gainfully employed are divided into four groups : employees, employers, own account workers and unpaid household labours. An *employee* (code 11) is one who works for wage or salary in cash or kind under public or private institutions, individuals or groups of individuals; by covention, an agricultural labourer is treated as an employee. An *employer* (code 12) is a person who engages one or more person on wage or salary basis in cash or kind to help in carrying on his productive enterprise. A person will not be considered an employer who engages persons for non-productive services such as domestic servants. The status of a person who is his own employer and employee will be "*own account*" (code 13). Normally, when a person's services are hired by a person or group or an institution, he is treated as an employee. But there are cases where the individual, group or institution who hires the person does not treat him as a hired employee but as one who is serving more or less on a contractual basis. In such cases the employed person will be treated as working on own account : artisans employed by householders for repairing or construction of durable goods, implements or even houses are a case in point. A person working in

Estimates of Birth and Death Rates and Growth of Population

the productive enterprise of the household, which mainly uses household labour, without being paid in cash or kind will be regarded as unpaid family enterprise worker (code 14). The contribution, even if small but regular, by household members in the productive enterprise of the household should be included. Persons outside the labour force are mainly divided in the following groups: *students* (code 42); *houseworkers* (code 43); *rentiers and pensioners* (code 44); *beggars* (code 45); *too young* (code 46); *too old* (code 47); *permanently disabled* (code 48) and *others* (code 49). Houseworkers should be clearly distinguished from the unpaid family enterprise workers.

1.29. *Cols. (9)-(11): industry-occupation*: The usual industry-occupation should be given, determined on the same basis as in case of activity status. The industry of a person is the branch of economic activity in which he is engaged and is determined more or less on the basis of the end-products produced therein; as distinguished from this, the occupation of a person is the type of work he does. The new booklet entitled "Classification of industry-occupation" should be followed giving full description in col. (9). Industry codes remain the same as in the 13th round, while occupation codes have been revised.

1.30. *Block 7: Births during the preceding two years*

[7] births during the two years ended on.....												
serial number of birth	serial number of mother as in [6]	age of mother (years)		sex	time of birth			place of birth	birth code	attendance type	age on date of survey or at death (weeks)	informant
		at reported birth	at first birth		month	year	how determined					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)

The birth and death data have assumed added emphasis in this round and it is expected that the quality of the data will improve. The recent memorandum by the Deputy Director, Directorate of the National Sample Survey, in regard to the systematic errors and the helpful comments received from the NSS Field staff are relevant in this connection. The reference period for birth and death data has been made two years so as to enable us to study the recall lapse, if any, over a two-year period in birth and death reporting. It will always be advantageous to contact, if possible, the mother or an old female relative, if necessary through an intermediary; the latter might be in, or outside, the household.

The date (date, month and year) is to be given in the dotted line at the end of the block headings for block 7 and 8, viz. "births during the two years ended on" and "deaths during the two years ended on" respectively will indicate the date of survey of the household. In Schedule 12.1 even if there is no

National Sample Survey

entry either in the birth block or in the death block or in both, the date will be put in at least one of the block headings so as to indicate the date of survey of the household which will be helpful for getting the intervening period between the filling in of the schedule 12.1 and that of the re-enumeration schedule 12.1.1. This information may also be supplied for schedule 12.2.

1.31. Only one line (row) will pertain to one birth. It is suggested that for each married female member, i.e. for females with marital status code '2' in col. (6) of block 6, a question is asked about if any births occurred during the preceding two years. For the widowed (code 3), divorced (code 4) and separated (code 5) females, the same question may be asked only if the widowhood, divorce or separation occurred within the preceding three years. Also, questions should be asked about females, now dead but who would have been considered as a normally resident member at the time of death, whether any birth occurred to them during the preceding two years: in such cases, the deaths of these mothers should be recorded in the death block and a cross mark (x) will be put in col. (2), "serial number of mother", in this block.

1.32. *Col. (1) : serial number of birth :* In recording the births, those for one mother (if there are more than one birth during the preceding two years to her) should be put together. Separate serial numbers should be given to each birth. In case of multiple births (twins, triplets etc.), however, the entries will be made with the same serial number but with suffixes (a), (b), (c), etc. added to it, all the columns being separately filled in for each of the multiple births.

1.33. *Col. (2) : serial number of mother as in block [6]* will be put here. If the mother is dead, a cross mark (x) will be put.

1.34. *Cols. (3)-(4) : age of mother (years) at reported birth and at first birth* should be given in completed years.

1.35. *Col. (5) : sex of the child :* male-1, female-2.

1.36. *Cols (6)-(7) : time of birth : month and year :* In determining the time of birth, a good deal of probing may be necessary, firstly in fixing whether the birth occurred actually within the preceding two years and secondly in determining the actual month of birth; physical observation of the child should also be helpful. The type of evidence available for determining the month and year of birth will be entered in col. (8) "how determined". If the informant relates the month and year to the local calendar, it will be necessary to convert the local calendar month and year into the English calendar month and year. The English calendar month in which the reported birth occurred should be recorded in col. (6) in terms of numbers 01 to 12 representing January to December. The year (Christian era) in which the reported birth occurred will be entered in col. (7), only the last digit being shown; "6" will be entered for 1956, "7" for 1957 and "8" for 1958.

Estimates of Birth and Death Rates and Growth of Population

1.37. *Col. (8) : time of birth : how determined :* The entry in this column will indicate in codes how the time of occurrence of the event under report was determined. The codes are :

definite statement of age	— 1;	registration	
relating with : local and religious		certificate	— 5;
festivals	— 2;	other evidence	— 6;
: agricultural		guess, no evidence	— 7;
season	— 3;		
: others whose ages			
are known	— 4;		

1.38. *Col. (9) : place of birth :* The place of birth should be entered in terms of the following codes :

<i>Within the village</i>		<i>Outside the village</i>	
own premises	— 1;	own premises	— 6;
mother's father's		mother's fathers'	
premises	— 2;	premises	— 7;
other premises	— 3;	other premises	— 8;
hospitals, maternity homes		hospitals, maternity homes	
and other medical		and other medical	
institutions	— 4;	institutions	— 9;
others (specify)	— 5;	others (specify)	— 0

"Premises", it may be remembered, include dwelling units and other constructions within the household site. Code 6 (own premises outside the village) may come in if the household has moved in the sample village after the birth of the child.

1.39. *Col. (10) : birth code :* Births are being classified into three types : born dead-1, born alive but since dead-2 and alive on the date of survey-3. A foetus born before completion of 28 weeks since conception but showing no sign of life at birth will be regarded as a case of abortion and should not be taken account of in this block. If, however, an infant is born dead after 28 weeks since conception, it will be entered in this column with code "1". A child showing any evidence of life at birth, irrespective of the interval since conception, will be regarded as born alive even it expires within a very short time after birth. To avoid the possible misclassification of children "born alive but since dead" into the category of "born dead", whenever a child "born dead" is reported, the interviewer should probe if there was any sign of life after birth including mere pulsation of the chord or one cry from the baby, in which case it should be called a birth and death and given birth code "2" and the death particulars entered in block 8. Similarly, the misclassification of children "born dead" into the category of "born alive but since dead" should be avoided. The attendance type in col. (11) may be a helping factor in such cases.

National Sample Survey

1.40. *Col. (11) : attendance type* : The attendance type in codes will indicate the type of attendance to the mother at the time of birth of the child, the codes being :

Dhai	— 1	relatives	— 4
Midwife or qualified nurse	— 2	others	— 5
Physician	— 3	no attendance	— 6

The highest medical attendance available should be entered; for example, if any birth is attended both by a physician and a midwife either in the premises or in an institution, the physician should be only considered.

1.41. *Col. (12) : age on date of survey or at death (week)* : If the child is alive on the date of survey, its age (in completed weeks), and if it is born alive but since dead, its age at the time of death (in completed weeks) will be recorded. A child born alive but dying within a week after birth will be given the age at death '0'. For children born dead, i.e. with birth code '1' in col. (10), a cross mark (x) will be put in this column.

1.42. *Col. (13) : informant* : The informant's relationship to the child under report will be entered in codes. The codes are :

father	— 1	other relations : in the	
mother	— 2	household	— 7
head of household (if other than father or mother)	— 6	: outside the household	— 8
		others	— 9

If there are more informants than one, the informant supplying a major portion of the information will only be considered; for this purpose the informant may not be even interviewed by the investigator, somebody acting as intermediary. Codes 3-5 do not appear here because a common code is being used for both the informant types for births and deaths and codes 3-5 relate respectively to spouse, son, and daughter.

1.43. *Block 8 : Deaths during the preceding two years*

[8] deaths during the two years ended on.....											
				time of death							
serial number of death	relation of deceased to head	sex	age at death (years)	month	year	how determined	place of death	attendance type	with gainful work-1, without gainful work-2	informant	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	

Only one line (row) will pertain to a death. The death particulars to persons who at the time of death, which must be within the preceding two years, would have

Estimates of Birth and Death Rates and Growth of Population

been considered as normally resident members of the household will be collected in this block. If a household disintegrates consequent on the death of a person, his death will be recorded in the household in which the surviving members are residing as normally resident members. If a household splits up consequent on the death of, for example, the father of a joint family, and his widow survived, his death will be recorded in the household where she is now considered as an usual member; otherwise the order would be the senior male survivor down through all males, and if none, the senior female survivor. For a lone person constituting a single-member household, the instruction in para 1.8. may be seen, where the neighbours or informed persons in the village are the suggested source of information.

1.44. *Col. (2) : relation of the deceased to head :* The relationship of the deceased to the head of the household may be entered in terms of the abbreviations suggested in para 1.21.

1.45. *Col. (3) : sex of the deceased :* male-1; female-2.

1.46. *Col. (4) : age at death (years) :* The age (in completed year) at the time of death will be entered. For children dying within one year of birth, age '0' should be recorded. For a child dying within two years of life (i.e. with age at death either '0' or '1' year) who was born in the preceding two years, the entries in the birth block 7 should also be filled in only if the mother is (or if dead, was at the time of death) a usual household member.

1.47. *Cols. (5)-(7) : time of death : month, year, and how determined; Col. (8) : place of death; col. (9) : attendance type :* The instructions for the corresponding items in the birth block 7, "time of birth", "place of birth", and "attendance type" will generally hold here.

1.48. *Col. (10) : with or without gainful work :* The codes are : with gainful work-1; without gainful work-2. The concept of gainful work has been discussed in para 1.28. relating to activity status, col. (8) in block 6. If a person was laid up due to illness for a continuous period not exceeding one year preceding his death, code '1' will be given if he was with gainful work before his illness; if he was continuously laid up for a period of more than a year prior to his death, and for all other persons without gainful work at the time of death, code '2' will be given.

1.49. *Col. (11) : informant :* The relation of the informant to the deceased will be entered in terms of the following codes. As in case of births, if there are more than one informant supplying the information, the person who supplied the major portion of the information will only be considered.

father	— 1;	head of household (if other than 1-5)	— 6;
mother	— 2;	other relations : in the household	— 7;
spouse	— 3;	: outside the household	— 8;
son	— 4;		
daughter	— 5;	others	— 9;

National Sample Survey

2. *Schedule 12.2 : Births and deaths enumeration*

The instructions relating to schedule 12.1 will also hold here unless otherwise specified.

2.1. *Block 5 : Household characteristics*

[5] household classificatory character																					
household serial number	household serial number as in schedule 0.1	name of head of household	name of father/mother/husband of head	household size by sex and age								total	household land possessed (0.00 acres)	household		household group code	household class code	industry of enterprise code	nature of enterprise code	religion code	duration of stay in village
				male				female						industry code	occupation code						
(1)	(2)	(3)	(4)	0-14	15-44	45-	total	0-14	15-44	45-	total	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)

Cols. (5)-(13) : Household size by sex and age : Three age groups (0-14, 15-44, 45-) are provided for classifying the male and female members. Broad age specifications are only required, no detailed probing being necessary at this stage. Ages (years) refer to completed years.

2.2. *Block 7 : Births during the preceding two years*

The same items as in block 7 of schedule 12.1 appear here and the same instructions hold, the only exception being that in col. (2) here, "relation of mother to head" replaces "serial number of mother as in block 6" in schedule 12.1. The relation of mother to head may be given in terms of the abbreviations suggested. Too, since the usual household members are not being listed in this schedule as they are in schedule 12.1 (block 6), the investigator will, while filling in this schedule, ascertain the number of married females (and those females who were widowed, divorced or separated during the preceding three years, and also those who at the time of death, which must be within the preceding two years, were household members), and for each of them ask a question about the occurrence of any births.

2.3. *Block 8 : Deaths during the preceding two years*

The same items as in block 7, schedule 12.1 also occur here and the same instructions will hold.

3. *Schedule 12.1.1. : Population, births and deaths re-enumeration*

The re-enumeration schedule 12.1.1 will be introduced in the 5th sub-round in sample village 1, which was enumerated by schedule 12.1 in the 1st sub-round and in the 6th sub-round in sample village 4, enumerated by the schedule 12.1 in the 2nd sub-round. This schedule 12.1.1 is structured mainly on the same lines as those of

Estimates of Birth and Death Rates and Growth of Population

schedule 12.1, with the omission of a number of items and introduction of two new items, one on the membership change during the period intervening between the canvassing of the enumeration schedule 12.1 and this schedule, and the other on the number of days sick during the preceding 30 days. Here, in block 5, the household serial number as in 12.1 (col. 2), date of survey of schedule 12.1 (col. 3), the name of head of household (col. 4) and the name of father/mother/husband of head (col. 5) will be supplied, as also in block 6, the serial number (col. 1), the relation of member to head (col. 2), sex (col. 3), age (col. 4) and marital status (col. 5) as obtained in schedule 12.1. The investigator should try to identify the household with the household particulars supplied and within a household to identify the members with the help of the individual particulars given. No account need be taken for the change in age but the changed marital status, if there is a change, should be recorded in place of the marital status supplied.

3.1. *Block 5 : household characteristics*

[5] household classificatory character								
household serial number	household serial number as in schedule 12.1	date of survey of schedule 12.1	name of head of household	name of father/mother/husband* of head	household size			duration of stay in village
					male	female	total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

The usual *household size* obtaining at the current moment will be given in cols. (6)-(8). If the household was newly formed or split up during the intervening period or was missed at the time of canvassing the schedule 12.1, "new", "split" and "missed" respectively, should be written in col. (2), "*household serial number as in schedule 12.1*". For a new, split up or missed household, all the items should be filled in.

3.2. *Block 6 : Demographic particulars of usual household members*

[6] demographic particulars of usual household members						
serial number	relation of usual member to head	sex	age last birthday (years)	marital status	membership change	days sick last month
(1)	(2)	(3)	(4)	(5)	(6)	(7)

Col. (6) : membership change : This is a two-digit code, the tenth place indicating whether a member enumerated before, is still a member, or how he has ceased to be a member and for a new member how he has become a member; the unit place indicates the place of origin or destination. For a member in a household enumerated in Schedule 12.1, two possibilities can only be there : either he is, or he is not, a member now. If he continues to be a member he will have code '00' in col. (6). The *reason for exclusion* from membership or *for inclusion* will be indicated in the *tenth place* of the code. Exclusion from membership now may be by death (code 5; in this case a cross mark will be put in the unit place), by marriage (code 6), by splitting of household (code 7), or for other reasons (code 8). After the checking of the members who were enumerated in the schedule 12.1, particulars of the new members should be collected. The new member may be included by birth (code 1; in this case also, a cross mark will be put in the unit place), by marriage (code 2), by re-alignment of households (code 3), or for other reasons (code 4). In regard to *the place of origin or destination (in the unit place of the code)*, there can be either no change of place (code 0), or in the rural areas the place may be in the same district (code 1), other districts in the same state (code 2), or in other states (code 3). The place in the urban areas may refer to the same district (code 4), other districts in the same state (code 5), or in other state (code 6). Places outside India are divided into Pakistan (code 7), and other countries (code 8). For a new member, all the entries should be filled in. A child born during the intervening period should be shown in the birth block 7 and if currently a household number, will have code '1X' in col. (6) of block 6. A member previously enumerated, but who died during the intervening period, will have code '5X' in col. (6) of block 6 and his death particulars recorded in the death block 8.

A new member included in the household by marriage from the same village will have code '20' in this column, and from a village in the same district code '21', and so on. Similarly, a former member married away to another household in the same village will have code '60' in this column, in a village in the same district code '61', and so on. For new households, members who were not enumerated as member of other households in the same village previously will have code '9' in the tenth place, and one of the codes 1-8 in the unit place according to the place of origin, others will have one of the earlier codes depending on the mode of accession to, or separation from, the household. The duration of stay of the household in the village recorded in col. (9) of block 5 will help to determine whether the household is new or not. For the split and missed household, the instructions relating to households enumerated before apply. For households completely disintegrated with no member remaining in the village, information from neighbours or responsible persons will be collected.

3.3. *Col. (7) : days sick last month :* Persons absenting from their normal duties and activities for at least 24 hours in the preceding 30 days as a result of his ailment will be considered sick; a person living on a sick diet for a part or whole of the reference period if regularly following his normal avocation will not be shown in this column. The duration of sickness as defined above will be entered in complete days.

Estimates of Birth and Death Rates and Growth of Population

3.4. *Block 7 : births during the intervening period*

[7] births during the intervening period ended on										
serial number of birth	serial number of mother as in block [6]	sex	time of birth			how determined	place of birth	birth code	age on date of survey or at death (weeks)	informant
			month	year						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	

The births occurring to the household during the intervening period will be recorded in this block. Instructions as in the corresponding block in schedule 12.1 will hold apart from the difference in the reference period.

3.5. *Block 8 : deaths during the intervening period*

[8] deaths during the intervening period ended on								
serial number of death	relation of deceased to head	sex	age at death (years)	time of death		how determined	place of death	informant
				month	year			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Deaths during the intervening period will be recorded in this block, with same instructions as in the corresponding block of schedule 12.1 holding, apart from the different reference period. A child born and dead during the intervening period will be shown both in this and the birth block.

4. *Filling of the booklets containing Schedule 12.1 and 12.2 :* For Schedule 12.1 three booklets are being prepared, the first containing 48 pages, the second 8 pages and the third, which will be used only for reference and illustration, two pages. In the first booklet with 48 pages, accommodation for 94 households with size 8 or less and births or deaths 4 or less are provided. If either the household size or the number of births or deaths exceeds the above numbers, the succeeding blocks on the demographic particulars of household members, births or deaths will be covered; in such cases, no repetition of the household particulars need be made. When the number of households for the village is more than what can be covered in the 48-page booklet, the

National Sample Survey

smaller booklets of 8 pages should be used. This 8-page booklet has provision for 14 households with size 8 or less and births or deaths 4 or less.

4.1. For schedule 12.2 also, three booklets are provided, the first two booklets containing 20 and 4 pages respectively and the third booklet with 2 pages again being used for reference and illustration. The 20-page booklet has accommodation for 95 households and the 4-page booklet for 15 households, each with births or death 5 or less. If the number of births or deaths is more than 5, information can be flowed over to the next blocks; here again household particulars need not be repeated.

