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Opportunities for Research and Analytical Work from the Available Demographic Data in India

AMONG the three main sources of demographic data—the population census, registration, and sample surveys—the census is the major source in India particularly because the civil registration system has continued to remain deficient even though it is more than a century old. The population censuses through the various publications have provided data on size, distribution, structure, and growth of population for every decade from 1872 onwards. National and regional level sample surveys have also provided very useful demographic information from time to time, particularly since Independence.

Several types of analytical studies—demographic, economic *and* social-anthropological—have been undertaken in the past starting from 1881. The demographic studies relate to the analysis of the growth of population, construction of age tables and life tables, and the estimation of fertility and mortality rates; and the social-anthropological studies relate to exploration of social diversities of the population relating to languages and dialects, castes and associated cultural rituals, and ethnicity.

Attention to the problem of huge numbers and possibility of rapid growth was drawn in the past by Wattal (1916), Ganguli (1938), National Planning Committee of the Indian National Congress which was appointed in the late 1930s under the chairmanship of Jawahar lal Nehru. Since Independence attention has, however, been concentrated on issues relating to rapid population growth, employment and unemployment, structure of the working force, urbanization and migration besides generation of current estimates of birth

and death rates. In this respect data from the National Sample Survey have been widely used besides those of population censuses.

The issues relating to the need for population research as well as the priority areas have been considered at several occasions in the past. For example, in his Presidential address at the Second Annual Conference of the Indian Association for the Study of Population, Mitra (1976) stressed the need for research of the differential rates of growth of the scheduled tribes, scheduled castes, and other backward classes. He also emphasized research on issues relating to National Population Policy announced by the Government of India in April 1976. Again, in a Seminar on "Problem of Relevance in Social Science Research" held at the Institute of Economic Growth, Delhi in April 1980, Mitra (1980) spoke the "Relevance of Research on Population Problems in the Field of Social Sciences" and Desai (1980) spoke on "The Case of Research on Population Problems in India[1]". The Eighth Annual Conference of the Indian Association for the Study of Population held in New Delhi in December 1982 devoted one full session on "Priority Areas in Population Research." The Conference emphasized the need for developing demographic data banks in the country at regional levels, and laid emphasis on issues relating to the quality of life of the people rather than quantification of growth or certain other characteristics alone. The Conference also stressed the need of relating population research with social and economic development programmes in the country.

Starting with the innovations in the recent Indian censuses, in this paper, I propose to describe very briefly the National Sample Survey and the Sample Registration Scheme, *and* then discuss the research possibilities involving (1) development of methodological or analytical tools, and (2) the inter-relationships among the demographic variables or with other social and economic variables.

Innovations in the Indian Census

The 1981 population census is the twelfth decennial census of India and the fourth since independence. The Census Commissioners have, over time, introduced several innovations in order to reflect the reality of the changing socio-economic situation in the country by introducing new questions as well as new schedules and by expanding the tabulations. For example, the 1961 census introduced several innovations over the 1951 census. During the house-listing operations which precede the actual census count and help in carving out the enumerators' blocks, a houselist schedule was introduced wherein information was collected on the use to which a census house was put, the material of the walls and the roof; the number of members in the household, the number of rooms in it, etc. At the time of actual census operations, two new schedules, one called the "household schedule" to collect information on land tenure and

Household industry, and another relating to "scientific and technical personnel" were introduced. There were new questions also on migration including characteristics of the place of birth—rural or urban, district, and state, and duration of residence at the place of enumeration. In order to bring uniformity in the application of definition of urban areas in different states, it was made more specific and more stringent. The concept of worker was changed from "income" approach to "work" on "labour-input" approach.

with the 1961 census schedules and concepts and definitions, certain changes were felt necessary. Instead of continuing emphasis on land tenure and land holdings, the emphasis shifted to collecting detailed information on industrial establishments of all sizes wherein information was obtained on the nature of product manufactured or serviced, extent of employment, type of energy source, etc. The scope of the schedule on scientific and technical personnel was enlarged by covering all degree holders and technical or non-technical diploma holders after the completion of high school. A question was added in the individual slip on "place of last residence" besides "place of birth" and "duration of residence at the place of enumeration". The question on literacy and education was split into two parts : (a) whether the person is literate or not, and *(b)* exact education level in the case of literate persons. In order to estimate fertility of currently married women, questions on "age al marriage" and "any birth in the last one year" were introduced. The question on work was modified significantly to have more accurate estimates of the labour force by recording main activity of each person as to whether he was a worker or a non-worker. Besides his main activity if a person was engaged in some other activity also which could be regarded as work, record of the same as "secondary work" was made with similar details as for the main activity of workers (for more details, see Srivastava (1972)).

In the 1981 census three schedules—the Houstlist, the Household schedule, and the Individual Slip were canvassed. Another schedule, the Enterprise list was also canvassed on behalf of the Central Statistical Organisation which is responsible for data processing of this schedule. Identification particulars of the census houses, the uses to which they were put, the number of members in each household, and the number of physically handicapped persons, if any, were recorded in the Houselist. The Household schedule and the individual slip were canvassed in February-March 1981. In the first part of the Household schedule information was collected on such items as household size, number of couples living in the household, housing condition and amenities available to the household, tenurial status, land, and household cultivation. Part II of the Household schedule contained the list of members of household and their demographic, economic and social characteristics.

The Individual Slip of the 1981 census was also divided into two parts- universal items which were canvassed for every person and a set of sample

items relating **to** (i) fertility and (ii) migration which were canvassed only **in** 20 percent of the sample blocks. In the universal items, a question on "school attendance" was added. The economic questions in the 1981 census were modified to provide a comparative estimate of workers with both the 1961 and 1971 censuses. A new item "seeking/available for work" was added to the economic questions to get an estimate of unemployment.

Information on migration, age at marriage, and fertility was obtained in the sample part of the individual slip. A new question on "reasons for migration" was also added. Similarly, questions on "number of children ever born" and "number of children surviving" (by sex) for ever-married women were newly introduced. The tabulation programme of the 1981 census has been greatly expanded compared to the 1971 census (Census of India 1981, 1980 : 7-16) to provide vastly more information to the users of the census data, but the comparability between the 1971 and 1981 censuses has been lost at the tabulation stage in respect of certain characteristics. For example, 1981 census will not provide the distribution of workers for each village or census enumerator's block in urban areas in the nine industrial categories. From the viewpoint of migration analysis, there is significant change in the **1981** Tabulation **Plan** compared to 1971 tabulation; there is no table relating to industrial classification, of migrant workers, or no sex, marital status of the migrants by duration of residence at the place of enumeration.

Availability of the Census Data

The Indian Census materials are published at three levels : (1) AH India Reports (forming series 1 of the Census of India series), (2) State and Union Territory Reports (series 2 to 32), and (3) District Census Handbooks for each district. While the all India reports present census data at the national, state, and, sometimes, at the district level, the state reports give information at the state, district and tehsil/taluka levels and the District Census Handbooks give important details for each revenue village for the rural population, and enumerator block for the urban population.

The published volumes of the earlier censuses have provided the most accessible data on general, economic and social characteristics of the people of India at regular interval?. The 1971 census data were published in seven series of basic tables, namely general population tables, economic tables, social and cultural tables, migration tables, establishment tables, housing tables, and fertility tables besides special tables on scheduled castes and scheduled tribes, and on degree holders and technical personnel. In the 1981 census all the above sets of tables will be generated except the last special tables; the bousing tables have, however, been divided into two sub-series. (1) tables on houses and disabled population, and (2) household tables (Census of India 1981, 1980:3-16).

In the 1971 census, the office of the Registrar General ana Census Commissioner, India (ORGCC) prepared (i) a one percent sample tape, and (ii) a 10 percent rural and 20 percent urban sample tape. In the 1981 census computer tape on 5 percent sample has been prepared for advance tabulations of the census results. Other data will be processed on the basis of 20 percent sample for both rural and urban areas. For specific inquiries, it is possible to have additional tabulations on request besides those generated by the ORGCC under the 1981 Tabulation Plan.

The National Sample Surveys and the Sample Registration System

In the absence of dependable data from the civil registration system, alternative methods have been devised for the estimation of vital rates on a current and continuous basis. The National Sample Survey Organisation (NSSO) made a beginning to collect nationwide information on current and historic fertility as part of its regular socio-economic inquiries. During 1958-68, population surveys of the single round retrospective type became an integral part of its annual rounds, but they were later discontinued. In such surveys information on events occurring to the members of the sample households during the 12 months preceding the enquiry were collected. The NSSO conducted a comprehensive survey of population, fertility, family planning, and mortality in its Twenty-Eighth Round (1973-74), but the vital rates derived from that round have been found to be grossly underestimates. Results of other rounds of the NSS have also suffered from substantial recall bias (Premi, 1982 : 34).

In order to have regular and reliable estimates of birth and death rates at least at the state level, the office of the Registrar General and Census Commissioner (ORGCC) introduced in 1964 a pilot scheme of sample registration in the rural areas of selected states. Later, the scheme was extended to cover both rural and urban areas in all the states and union territories. The Sample Registration Scheme (SRS) is a dual record system in which events are continuously recorded as they occur by a local Registrar and a survey is conducted every six months by a supervisor covering all the households in the selected areas to make an independent list of events. As the sampled villages/urban blocks have remained fixed for a number of years in the SRS, it provides very valuable longitudinal data for them.

The results of the SRS inquiries are published regularly in the serial publication *Sample Registration .Bulletin* of the ORGCC. Results of the special inquiries conducted in 1972 and 1979 have been published separately (ORGCC, 1976; 1980; 1982). Some of the states have also brought out their own publications on the SRS.

Methodological and Analytical Studies

In the absence of reliable vital registration statistics, census data have been

used in the past and continue to be used *to* construct life tables and to estimate birth and death rates at the national, Zonal and state levels although questions relating to their quality, particularly relating to sex and age distribution, have been discussed in all the actuarial reports of the census actuaries and in the age tables of the 1961 and 1971 censuses besides individual researchers (Coale and Hoover; 1958, UNECOSOC, 1967; Natarajan, 1982; Swamy, 1982).

Census data have also been used to estimate the mean age at marriage at the state and district levels basing them on Hajnai's (1953) methodology and its modification by Agarwala (1962). As the Indian census data have strong tendency for heaping of age on certain preferred digits, it has always been necessary to smooth the age data. However, these smoothing exercises need to be expanded further to smooth the data on school-going population, labour force, and marital status of women aged 10-35 which, in turn, can help in generating valid single year enrolment rates, labour force participation rates and proportion of women who are unmarried at each age in the above range respectively.

In the Indian census children below the age of 5 are missed to a much greater extent than people in any other age group. Unless this age group is adjusted properly, the estimates of expectation of life at birth obtained from life tables constructed from census age distributions of two successive censuses and indirect estimates of birth and death rates are severely affected. A comparison of children aged 0-4 in the SRS villages on the census day and the census count can provide, dependable correction factors for this age group.

India being a vast country, many of its states are bigger in population size than majority of the countries in the world; hence, state level estimates of birth and death rates conceal the differences which exist in them at lower levels. The sample size of the SRS, however, is still not large enough to provide district level estimates of birth and death rates. These rates *can,* however, be obtained from the SRS at regional levels (each state being divided into three to four regions). Recently, Mukerji has developed a methodology of adjusting civil registration data at district level to get more valid estimates. Other indirect methods of estimating the vital rates including infant mortality rates need to be developed in future to understand changes in fertility and mortality at district and Jower levels.

There is also a need to undertake study on the comparative stability of infant mortality rates in India during the recent past and to discern the socio-economic or biological reasons for the same..'A study of the pattern of neonatal and post-natal deaths and changes therein, if any, over time would also be quite useful.

Mean age at marriage at the district level has been estimated in the past by Hajrjal's (1953) method utilizing census data on age and marital status under the assumption of no mortality from birth to the age at marriage. There is, however, a need to develop a more appropriate methodology for the estima-

tion of mean (or median) age at marriage, particularly with the availability of single year tabulations by marital status in the 1981 census. The methodology based on "decade synthetic cohort" (Agarwala, 1962) also needs to be improved further to obtain better estimates.

Although the SRS is based on a dual record system in which every effort is made to net all the vital events in the sampled areas, still the vital rates of the SRS suffer from a certain amount of under-reporting, that is, events are missed both by the local registrar as well as the supervisor. Whereas no systematic evaluation of the SRS has been made at the national level, certain studies conducted in selected areas in the past give estimates of the extent of omission of the events. An intensive inquiry to evaluate SRS was conducted in 1966-67 in the rural areas of Kerala and in 1973-74 in the urban areas of Andhra Pradcsh to find out the extent of omission of vital events which gave the following results :

	Percent events omitted by SRS	
	Births	***Deaths***
Kerala (rural) 1966-67	8.0	5.0
Andhra Pradesh (urban) 1973-74	7.7	9.2

The Committee on Population and Demography, U.S. Academy of Sciences, estimated an under-reporting of births in the SRS of about 8 percent during 1970-73 (Swamy, 1982 : 15) Similarly, Saguna Kumari (1981 : 8) concludes that it would not be very wrong in making a 10 percent correction for underestimation of birth rates in the SRS. She also concludes that deaths were missed to a lesser extent than births in SRS; hence the under-reporting of deaths could reasonably be assumed to be of the order of 5 percent (Saguna Kumari, 1981 : 9). Considering these findings it is necessary to develop appropriate methodology to evaluate the efficiency of the SRS.

Further, in some of the states/union territories, the fluctuations in the sample estimates of birth and death rates for each six month period are quite large due to high sample variability. The R.G. office has recently increased the sample size to reduce the errors arising from this- factor. It is necessary to have a study of the expansion and replacement of the sample on the birth and death rates. It may also be useful to try some alternative sample designs to reduce sampling variability.

Estimation of Net Migration

With the tabulation of migration data by place of last residence and duration of residence at the place of enumeration, it is possible to estimate net

intercensal migration at the state level. The net intercensal migration can also be estimated indirectly by utilizing either the census survival rates or the life table survival rates when data by age are available for two successive censuses. There is a need to undertake studies comparing these estimates and to arrive at valid estimates of the net inter-censal migration.

While the 1961 and the 1971 tabulations provide information on the in-migrants in each district, it has not been possible to have an estimate of out-migrants particularly when they cross state or national boundaries. However, estimation of net migration at district level is becoming more and more important owing to planning needs and for arriving at valid districtwise projections. These estimates may also help in deriving more accurate estimates of birth and death rates. Hence, efforts should be made to develop suitable methodology for estimation of net migration at the district level.

With the collection of data on place of birth, and place of last residence of the migrant, along with his/her place of enumeration, it is now possible to analyse the extent of return migration, step migration, and non-migrants, if the data are cross tabulated by place of birth, place of last residence and place of enumeration. Effort may be made to generate such three-dimensional migration matrices at least at the state level to shed light on these aspects.

Comparability of the 1981 Census Estimates of Workers with those of the 1961 and 1971 Censuses

While defining a worker in the 1961 and the 1971 censuses, the usual status as well as current status approaches were adopted with reference period of one year and one week for seasonal and for regular work respectively. At the 1981 census the usual status approach is adopted uniformly for all work. In the 1961 census, a person qualified as a worker if he/she had worked regularly during the last season or if he/she had worked at least for a day in regular (non-seasonal) work during the preceding fortnight. At the 1971 census a person was treated as a worker only if he/she spent his/her time mainly in work or if he/she worked at least for a day in regular (non-seasonal) work during the preceding week. In the 1981 census, a person is classified as main worker if he/she was engaged in work for at least 183 days in the year preceding the date of census taking. Those who worked for some time during the last year but not for the major part have been treated as marginal workers. It is expected that the main workers of the 1981 census would correspond to the main workers of the 1971 census, and the main plus marginal workers of 1981 would correspond to the workers of 1961 census. There is a need to undertake exercises at the state and district levels for males and females separately to confirm the same. A comparative study of the size of the working force after adjustments for conceptual differences can help in making projections of the working force for future dates. Certain analytical studies should also be under

taken by changing the order of categorization of workers from cultivators, agricultural labourers, household industry and other work into some other order.

With the introduction of a new question on "seeking/available for work", it has become possible to estimate directly the extent of unemployment in the country. The census estimates may be compared with those obtained in the various rounds of the NSS and other sources. If the rates prove to be reasonable, analysis of unemployment should then *be* taken up at the district and lower levels for males and females in the rural and urban areas separately and should be correlated with developmental, educational, and other socio-economic factors.

These are a few suggestions for methodological and analytical studies. This list is not obviously exhaustive. Other researchers may find other interesting and priority areas for analytical studies which can surely be added to this list.

Research Opportunities Concerning Demographic, Economic and Social Characteristics

I shall now describe certain other opportunities for population research which may interest people from different social science disciplines besides mathematical demographers.

Students engaged in the study of problems relating to regional development and comprehensive area planning may find the national and state level aggregations as inadequate since district is being increasingly used as the unit for area planning, and developmental activities are being operationalized even at the level of the block/tehsil. Considering this aspect Raza and Premi (1977 : 70-81) have indicated the levels at which various types of statistics are needed for regional planning purposes. Some of thess statistics are available right at the village/urban block level but there is need to process the relevant statistics for use at appropriate higher level. The data on social amenities available for each village from the 1961 and 1971 censuses, and the ones that will soon become available from the 1981 census should be utilized for understanding the pattern of development of planning units at different levels over time.

Urban Studies

In the census a settlement is classified as urban if it meets the criteria laid down for the purpose, the rest being classified as rural. There are, *however,* a large number of settlements, particularly small towns and large villages, which form an intermediate category and may be named as semiurban. For example, Kerala has great many of very large villages, even with population of 10,000 and above because their main activity is agriculture, otherwise they contain many urban facilities. In order to catch the Indian realily it is suggested that attempts should be made to evolve appropriate definitions of semi-urban and urban settlements for use in future censuses so that most of the tables could

be generated subsequently on the basis of this trichotomy instead of the present dichotomy.

The 1981 census has indicated a much faster urban growth as compared to the earlier censuses or to what was assumed in the projection of the Expert Committee (Census of India 1971. 1979). In order to understand the urbanization pattern during the 1970s, it would be useful to analyse the decadal urban growth into its components. In this respect it would be important to analyse the role of accession of peripheral areas into the city/town as a consequence of expansion of municipal boundaries.

Related to this is the problem of development of new towns in the country. In fact, this aspect of urbanization may be studied since Independence *so* as to analyse the role of developmental planning in the evolution of new towns. Such an analysis would also help in testing the applicability of existing locational theories in the Indian situation, or in discovering a new one which fits in with the current urban growth pattern.

The District Census Handbooks provide information regarding occupied residential houses, number of households, total population, literates and educated persons, population of scheduled castes and scheduled tribes, and workers classified by broad industrial categories at the enumerator's block level for each city/town. This information can be used for social area analysis and the study of changing ecological structure of the cities and towns.

A large number of cities and towns in India have a very high sex ratio (males per 100 females), say above 130. In contrast, there are cities and towns where the sex ratio favours females. As the life pattern of the people in these two categories of cities is likely to be different, it would be useful from sociological viewpoint to study their socio-demographic characteristics and to conduct surveys to understand more fully their cultural millieu.

The 1971 census introduced a new concept of "standard urban area" which is defined as the projected growth area of a city or town (with population 50,000 and over in 1971) as it would be in 1991 taking into account not only the towns and villages which would get merged with the central city in the next twenty years and also the intervening rural spaces. Such tracts include all extra-municipal urban growth such as the suburbs (both residential and industrial), railway colonies, civil lines, cantonments, and those villages and towns which are likely to be urbanized by 1991 (Census of India 1971, 1975 : 3).TableA-V of the 1971 census provides information on area of each unit and its population since 1951. Similar table will be published in 1981 census. Studies based on this information along with that contained in the primary census abstracts and the housing tables may prove very rewarding from the point of view of city planning and suburbanization.

Rural Studies

In the Indian census, villages are classified by size of their population and

the number of persons living in them. The changing pattern of the distribution of villages in different size classes over time in different regions can help in understanding the impact of rural development projects, and possibly, of the creation of new rural settlements, on population growth. Further, since there are a large number of villages with over 5,000 population each, it would be rewarding to make a detailed study of their location, the characteristics of their population, and of forward and backward linkages with urban and rural settlements.

The census has been providing information on the availability of certain types of social amenities in each village in its village directory and characteristics of the population in the primary census abstracts which are the basic components of the District Census Handbooks. This information over time can be utilized to develop indicators of social and economic development at the village level in a dynamic framework.

Working Force

The differences in the definition of workers in the 1961, 1971, and 1981 censuses and about the need for undertaking comparative studies on the size of the working force have been pointed out earlier. Certain other studies relating to the working population which can be taken up by the social scientists may now be indicated.

Since 1961 the census has been providing information on the cross classification of workers other than cultivators and agricultural labourers by their educational attainment and type of occupation. Although some studies have been undertaken in the past, a comparative analysis over time to understand the interface of education with the nature of occupation which individuals follow, especially in urban areas, would be very useful.

The pattern of female participation in industrial activity has fluctuated widely according to the concept of worker adopted in a particular census, but the same is also related with her age and marital status. It would be useful to analyse the work activity of females by their age and marital status as also the industrial category in which they are engaged as little is known systematically in this respect.

As the workers in the 1981 census are classified by their main activity and marginal activity, it would be useful to compare the industrial and occupational distribution of the two categories of workers and to examine the differentials if any, in their sex-age distribution, or in educational attainment.

Studies Relating to Family and the Household

Data have been collected in the 1981 census in the Household schedule on the composition of each household. The tabulation by household composition and its size when classified by headship—whether male or female—can provide important sociological information. Distribution of the households according

to the number of couples is a new information and will be quite useful to determine the extent of joint or extended households. It would also be useful to understand the regional variations *in it.* As Part I of the household schedule contains information on land holding, it is easy to test the hypothesis that the phenomenon of joint family is highly associated with land-holding. The data of the census when combined with other sources can also be used to determine the nature of relationship between the number of couples in the household and the extent of adoption of family planning.

The half-yearly surveys in the SRS provide information on the usual members of the households. As the sample villages of the SRS have remained constant over time, the data on household composition are amenable to longitudinal studies relating to family life cycle which has remained an unexplored area. These data can also be used to estimate the mean age at marriage of the newly weds, if any, in different regions of the country.

School Attendance and Educational Attainment

The 1981 census introduced a new question on school attendance in the individual slip. Such data were earlier available from a census of schools or from educational surveys conducted by the Ministry of Education and Culture. Thus census, for the first time, would provide independent enrolment statistics by sex, age, level of education, and rural urban residence at state and district levels. Tables will also be generated separately for the scheduled castes and the scheduled tribes populations. These data can be utilized to analyse the educational progress of children belonging to different groups and different regions. They can also be used for comparison of the census information with those coliected by the Ministry of Education.

The 1981 census would also provide cross tabulations for children in the age group 5-14 regarding their school attendance and economic activity. Thus, for the first time, information would be available about children by single year age who carry out some economic activity along with their schooling and who are not able to go to school owing to their engagement in economic activity and would be very useful in taking corrective measures in specific areas. This analysis separately for the scheduled castes, scheduled tribes and the remaining children at the district level will be very rewarding.

Detailed information on educational attainment is now available from the 1961 and 1971 censuses at the district level for the total population and for the scheduled castes, and the scheduled tribes *by* rural urban residence. *Similar* tabulations will become available from the 1981 census also. These data can be analysed to discern the changes in the levels of educational attainment by age over time for persons belonging to different groups. One can also analyse the level of educational attainment of the numerically preponderant scheduled castes and tribes on the basis of 1981 census tabulations.

Internal Migration

With the addition of question on "reasons for migration" the 1981 census will provide additional information on migrants. The suggested tabulations are, however, restricted to state level tables and for cities with population of one million and above. Hence, pattern of migration at the district level as in the 1971 census or for each city with population of 100,000 and above will not be available. Moreover, the use of different age groups in 1981 census in comparison to 1971 census will restrict the comparability of analysis over time.

Utilizing the data of the 1971 census, analysis can be made of the pattern of migration to the cities, non-city urban and to rural areas. Similarly, one can compare the characteristics of the migrants to the cities, non-city urban, and rural areas, with those of the non-migrants. Such analysis will throw light on the differentials in the migrant characteristics and may be used to predict the future migration patterns. The 1981 census data can be used to make analysis for the metropolitan cities and states/union territories only unless fresh tables comparable to the 1971 census are generated from the sample tapes which will become available in due course.

Migration tables of the 1981 census can also be used to estimate net rural to urban migration at the state level which will indicate the contribution of this factor in the urbanization process in each state and union territory. A. comparative analysis with the 1961 and 1971 estimates of net rural to urban migration will throw additional light on this phenomenon.

Studies on Fertility

The scope of the fertility tables has been greatly enlarged in the 1981 census compared to the previous census by the introduction of two new questions, but all these tables are restricted to the state/union territory level, hence, no detailed regional picture of fertility differentials can emerge from these data. At the state level these data will provide estimates of total fertility as well as current birth rates for people of each religious faith, scheduled castes, scheduled tribes, non-scheduled groups, by rural and urban residence and also by educational attainment of the women.

The 1981 census will also provide information on children surviving (by sex) among total children born to ever married women in their religion, scheduled castes, scheduled tribes and non-scheduled group status, educational attainment and work status of women, and their rural-urban residence. This information will bring the sociological differentials in the survival pattern and would be of great significance from the policy point of view.

The data can also be used to analyse the shift in the age at marriage by present age of ever-married women by their religion, scheduled castes, scheduled tribes, and non-scheduled groups by rural and urban residence.

It would be useful to compare the census estimates with those obtained in the SRS to cross-check the validity of each.

Studies on Housing Stock and Households

The household table of the 1981 census will provide useful information on the nature of housing stock in the country for rural and urban areas as well as for all cities with population 100,000 and over. Information will also be tabulated on the availability of certain basic amenities like source of drinking water, electricity, toilet facility, etc. These data can be used to analyse the extent of availability of proper housing in, different parts of the country. They can also be used in constructing social indicators of development at the district level for the city urban, non-city urban, and rural areas. Information on the number of couples in a household, number of living rooms per household, and number of persons per living room (all part of the household tabulation programme) can be utilized in the development of social indicators.

The household tables also provide information on the number of main workers and number of persons seeking'available for work in a household by its size for the scheduled castes, scheduled tribes, and total population separately for rural and urban areas at the district level. The analysis of these data will point towards the extent of employment and unemployment in different types of households which would be very important information for planning purposes. If the information could be related with the number of adult members in the households or with the number of couples, it would probably become still more meaningful.

Besides the above aspects, there will be special tables for the scheduled castes and the scheduled tribes (some of them will be for each caste or tribe separately) presenting information on the economic activity of the main and marginal workers; the main workers in special occupations; the sex, age, and marital status distribution of the people of each casle or tribe; as well as the level of their educational attainment. These data can be analysed to understand comparatively how much each caste or tribe is progressive in different states and union territories. As most of this information will be published at the district or even tehisl level as well as for each individual town, the data will bring out the regional variations among the different castes/tribes and within each caste/tribe (particularly in the case of numerically preponderant ones) quite sharply. These are second priority tabulations, but they would provide very useful information for developing appropriate programmes for the uplift of the various castes/tribes, particularly the ones that have suffered most in the past.

Civil Registration Data

An indicated earlier, the civil registration system still suffers from gross under registration of vital events of births and deaths. Further, there is no system of

registration of marriages and their dissolution. Hence, information from civil registration system is of limited value. The office of the Registrar General, however, publishes regularly birth rates, death rates, infant mortality rates separately for the rural and urban areas of each district that fall in the registration area. Similarly information on birth rates, death rates and infant mortality rates are published for each city and town *with population* 30,000 and over. *It* would be useful to consider these statistics for each areal unit on a time series basis to find out if they exhibit any regularity and, if so, effort may be made to build certain correction factors (even if they are different for different areas) so that some valid estimates of these vital rates are obtained at the district level and for each town for which information is separately published.

Conclusions

This paper has listed a number of suggestions for research proposals based on census and other demographic data which might invite the attention of hard core demographers as well as social science researchers in India. The list is not exhaustive. Many of these suggestions in this paper can probably become the basis for a series of census monographs.

The censuses of other countries in the South-Asian region have their own tabulation programmes and their own vital registration systems. Based on the availability of data in different countries of the region, some of the research issues may emerge from cross-country studies wherein international organizations like the ESCAP, East-West Population Institute, Population Council, World Bank etc, might find interest. This paper, however, represents only some initial thinking but can be expanded further with some collaborative effort.

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