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Translating Demographic and Health Survey Findings into Policies and Programmes: Past Experience in the Country and Potential Issues

Introduction: Rich Tradition of Sample Surveys in the Country

AS PROFESSIONAL demographers and social scientists we can all be proud of a rich and growing tradition of sample surveys of population undertaken since independence in the country. Various demographic and health surveys in the country have been undertaken with one or more of the following objectives.

(i) Measuring the current fertility and mortality trends,
(ii) Description of the population with regard to demographic, socio-economic and KAP variables,
(iii) Generating support for further investments in family planning, reproductive and child health programmes,
(iv) Evaluating the impact of a family planning, maternal and child health programme on the KAP variables, fertility and mortality levels,
(v) Validating the data on official service statistics on contraceptive prevalence, immunization levels and impact of other health programmes,
(vi) Measuring private sector activities in family planning and maternal and child health,
(vii) Assisting programme administration,

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(viii) Advancing social science and,
(ix) Institution building.

The number of demographic and health surveys that have been undertaken in India since independence with one or more of the objectives listed above can be estimated between 2000 to 2500 depending on the minimum sample size specified and most of them were undertaken at the local, district or state levels with very few undertaken at the national level. However, many important surveys undertaken at the local, regional or state level have been of high quality in design and execution and played an important role in highlighting the magnitude of the population problem and high fertility levels prevailing in the rural areas and the factors associated with such high fertility. Notable among them are the Mysore Population Study conducted under the auspices of the United Nations in 1951-52 in the erstwhile princely state of Mysore, the Fertility Surveys in selected districts of Maharashtra state carried out by the Gokhale Institute of Politics and Economics, Pune in the early fifties, the Demographic Survey in Delhi slums carried out by the Institute of Economic Growth in the early sixties and the Standard Fertility Surveys conducted in six selected areas of the country, using a standard format of questionnaire to assess the levels, differentials in fertility and associated socio-economic factors conducted under the auspices of the Family Planning Communication Action-Research Centers during 1964-5.

The first national level demographic survey is the Couple Fertility Survey carried out by the National Sample Survey as a part of the seventh round on a variety of social and economic conditions of the sample households in the early fifties and published in 1955 by Dasgupta *et al*. In 1970, 1980, and 1988 the Ministry of Health and Family Welfare commissioned a Baroda based market research organization, Operation Research Group (ORG), to organize nationwide household surveys to obtain statistically reliable estimates of rural and urban contraceptives prevalence levels and associated factors at the state level. Fieldwork for these three surveys was conducted from July 1970 to January 1971, January 1980 to January 1981, and July 1988 to February 1989 and covered fairly large samples of households as below :

- 25,330 eligible couples with wives aged 15-44 in ORG Survey I in 1970.
- 34,831 eligible couples with wives aged 15-49 in ORG Survey II in 1980.
- 44,918 eligible couples with wives aged 15-44 in ORG Survey III in 1988.

In these surveys half of the respondents were husbands interviewed by male investigators, and half were wives interviewed by female investigators.

These three surveys offer a wealth of information on the levels of awareness, knowledge, and attitudes about family planning, contraceptive use, fertility, and related factors of a cross-section of Indian couples at three times when they were undergoing

demographic transitions. They also provide an independent assessment of the diffusion of the family planning message and practice in the community within and outside the government programme and a validation of couple protection rate figures compiled from service statistics data. Unfortunately the rich data available from these surveys were not made available to scholars and research workers because the Governments of the time were reluctant to share many details about the country to the outside world because of the command and closed economy. There were severe restrictions on the availability and use of survey data even to well established researchers within the country.

Again, for largely political reasons, India did not participate until 1991 in the international survey series that covered a large number of developing and a few developed countries using a standardized format of questionnaire : the World Fertility Survey (1974-83), the Contraceptive Prevalence Survey (1983-86), and the Demographic Health Survey (Phase I, 1985-90) *organized* with financial support from the United States Agency for International Development (USAID) and the Westinghouse Corporation.

Recent Boom in Sample Surveys

Only since the end of 1991 has India participated in Phase II of the international series of Demographic Health Surveys and agreed to conduct the National Family Health Survey by the Ministry of Health and Family Welfare with the International Institute for Population Sciences, Mumbai as the nodal agency, and Financial support was provided by USAID and technical assistance by East-West Population Institute, Hawaii. This survey is in a way unique and a turning point in the history of large scale sample surveys in the country. There has been a boom in the number of large scale national and district level surveys on health and family planning conducted in the country since then.

NFHS-1 can be considered as an indicator of the process of economic liberalization and globalisation initiated in the country in other fields as well and I had the privilege as, Director of the International Institute for Population Sciences at Bombay at that time, to agree for UPS to serve as the nodal agency for the survey and assist in the design and conduct of the first phase of the survey during 1991-92. The survey covered a very large sample of 88,562 households, drawn from most of the states of the country, the design of the survey and training of investigators were very meticulously planned and executed with international standards and it involved for the first time a partnership between population research centers which were government institutions and private data collection agencies like ORG, MARG, MODE, CFDRT and VIMARSH. The partnership between the government and private agencies helped tone up the survey quality with field workers from private agencies not bogged down by governmental rules and regulations. Analysis of data was carried out with a high degree of efficiency and state level reports and the national report were published with detailed tabulations and substantive analysis within two years from the date of completion of the survey in good

quality paper. NFHS-I has in a way set standards and bench-mark for the future surveys in the country, especially for the surveys conducted by the NSSO. Within a few years of data collection the entire data set were made available to the public for a nominal cost or through the web site. The data collected on many variables were considered to be of very high quality by national and international standards. The data were used extensively by research scholars within and outside the country and it is estimated that more than 500 research papers have so far been published based on NFHS data. Many doctoral dissertations have been written up using NFHS data within India and outside. The successful completion of first National Family Health Survey (NFHS-I) and the rich set of data put out from the survey and usefulness of the findings led to the launching of the second round of NFHS-II which was conducted during 1998-1999. The second round was conducted approximately six years after the first survey and covered a sample of 91,196 households.

Both the rounds of National Family Health Survey (NFHS-1&2) were undertaken with the broad objective of strengthening the population research centers in the country, the database on population and child health parameters and facilitate implementation and monitoring of population and health programmes in the country. The principal objective of NFHS-1 and NFHS-2 is to provide scientifically compiled, statistically valid and internationally comparable estimates of fertility, family planning practice, infant and child mortality, maternal and child health, utilization of health services provided to mothers and children and growth and development of children below 5 years of age by measuring their height and weight. They also included information on the status of women, education, and the standard of living. In addition to the above items, NFHS-2 survey also provides indicators of: the quality of health and family welfare services, women's reproductive health problems, domestic violence, measurement of the nutritional status of women through height and weight measurements, which were available only for young children in the earlier survey. In addition, NFHS-2 had, for all ever-married women and their children below age three, tested blood for the level of haemoglobin, using the HemoCue instrument. Through these blood tests, for the first time the survey provides information on the prevalence of anaemia throughout India. In two metropolitan cities, Delhi and Mumbai, a further test was done for children below age three to measure the lead content in their blood. The survey also measured the extent to which households in India use cooking salt that has been fortified with iodine. Based on the success of NFHS-I, NFHS-II has outstretched its scope in my view—rather hastily, in collection of data on rather very sensitive variables such as domestic violence, for which data collection requires different methodology. As stated earlier, The United States Agency funded the NFHS-1 and 2 surveys for International Development (USAID). UNICEF provided additional financial support for the nutritional components of the survey. Thus the survey is the outcome of the collaborative efforts of many organizations.

After the launch of NFHS-I many other large scale surveys and studies have been conducted in the country, and notable among them are the RCH Surveys and RCH Facilities Survey at the district level carried out with the World Bank assistance and the first and second round of Multi Indicator Cluster Surveys (MICS) conducted under the auspices of the UNICEF, the District Level Base Line Surveys carried out as a part of the Perform Project in Uttar Pradesh and the base line surveys carried out by the India Population Projects. Following the Cairo Conference on Population and Development (ICPD) in 1994 there was a change of the strategy in the implementation of family welfare programme in the country. Family Planning targets were dispensed with in 1995 and since 1996 Family Welfare Programme is considered as an integral part of the Reproductive and Child Health programme. These have added significance to the findings from these surveys as possible sources which will provide clues and directions for the implementation of newly oriented family welfare programmes.

The major funding agencies for these large scale surveys were international donors; USAID, World Bank and the UNICEF and they seem to be working almost independently with overlapping objectives and providing different set of estimates on the same parameters causing a considerable degree of confusion for researchers and programme managers. From a condition of data scarcity before 1990 we are faced with abundance and glut of data on population and reproductive health. Before we can fully analyze and digest one set of data we are flooded with new set of figures. For instance the Multiple Indicator Cluster Surveys (MICS) were first conceived in India as a part of the Child survival and Safe Motherhood programme when the EPI Cluster Evaluation Surveys were modified as a part of the CSSM programme in 1992 to include additional indicators related to Vitamin A coverage, diarrhoea morbidity and treatment practices and the safe motherhood component of the programme with emphasis on quality of ante-natal care, place and type of assistance during delivery. Similar data are also available from NFHS-I.

India has been conducting MICS in a number of states, districts and towns (including specific surveys for urban poor populations) for nearly four-five years now. Over 175 local or state level surveys have been conducted and have been used by programme planners at the level that they are conducted. India was one of the countries included in the Global Evaluation of Multiple Indicator Cluster Surveys conducted in 1996. The observations and recommendations of the global evaluation were very useful in modifying the approach and standardizing the MICS-Phase II during 1999-2000.

The list of global indicators being used to assess progress at end-decade was developed by UNICEF, New York through extensive consultations, both within UNICEF and with WHO, UNESCO, and ILO. The Executive Directive EXD/1999-01 dated 23 April 1999 forms the basis for the development of the MICS-II including all the indicators that will be discussed at the United Nations General Assembly Special Sessions (UNGASS) in September, 2001 .The main objective of the survey is to provide useful information on key indicators related to the health and well being of children and

to evaluate the progress on these key indicators related to women and children. The survey intends to collect information on more than 100 indicators through its carefully designed questionnaires, sample design and survey procedures. The data on these indicators are also expected to help policy makers and programme managers to design programmes appropriately. Thus policy makers and programme managers are almost bombarded with information and data from different sources.

Problems in Translation of Survey Findings into Policies and Programmes

The problem of translating one or more research findings from a sample survey into a policy statement with meaningful programme implications is no easy task both from the conceptual and empirical points of view. It requires a good statistical knowledge and insights into the manner in which the survey data have been collected, analyzed, limitations of the findings and at the same time good insights on the existing policy and programme framework within which the research findings have to be incorporated. It requires a good understanding of the design of the survey, nature of observed interrelationships among the variables with their confidence intervals and a knowledge on the entire web of causation operating on the desired outcome variable in a particular situation. Thus it requires knowledge and skills of varying disciplines and programme experience that can hardly be expected in a single individual. Thus at best it should be a group exercise involving a number of scholars from different disciplines and programme managers. This is particularly relevant in the present context when a large number of demographic and health surveys are being conducted in the country starting with NFHS-I in 1992-93 and almost every paper written on the survey data usually ends up with a section or paragraph on 'policy and programme recommendations'.

Most of these recommendations are based on the nature of the observed correlation and regression coefficients between the desired outcome variable such as fertility, infant mortality, contraceptive use, and immunization status or growth and development of children and selected predictors for which data have been collected in the survey. Again and again it has to be recognized that any observed correlation and regression may not necessarily arise out of causation but may as a statistical artifact. Hauser (1967) argues that ". . . sample surveys have exhibited two major deficiencies. First, they have, in general, failed to include adequate efforts to study their reliability of data; and second, they have failed to make adequate efforts to obtain measurements of the 'intensity' of the opinions or attitudes reported . . . It is a moot question whether surveys do not mislead as much as they inform. . ." Again as Cochran (1965) points out ". . .An observational study is a study of the associations between two sets of variables. . . and to interpret these associations as causal or non-causal must rely heavily on information not supplied by the study". The problem gets confounded if the findings are based on a retrospective sample survey and the estimates have a sizeable sampling error, that can be estimated,

but with unknown level of non-sampling errors which is usually the case in demographic and health surveys. Jumping from observed correlation and regression coefficients to policy and programme implications may not always be a valid conclusion. In this address I would like to highlight some of the basic steps to be followed and precautions to be observed before any research finding based on a retrospective survey data set pertaining to health and family welfare is translated into action or policy recommendation.

Limitations of Retrospective Surveys

(1) First and foremost among these steps is to recognize the fact that there are some policy and programme action points that need not and should not depend on survey findings because, these are based on scientific theories and facts and internationally well established relationships through carefully designed experiments. For example the need to provide potable and clean water for reduction of diarrhoea and gastro-enteric diseases or safe and efficient contraceptive services to enable couples to space their births or limit child bearing should not be questioned from a retrospective survey data. If the survey data lead to different conclusions the quality of data and the reliability of estimates should be called to question. Similarly the need for providing good quality antenatal care to pregnant women and skilled attention to mothers at the time of their delivery to improve maternal health and reduce maternal morbidity and mortality should not depend on survey findings. If the sample survey is undertaken with a view to cross check the official figures put out by the government departments (which are, indeed, many times exaggerated) then they should be specifically designed for this purpose from the very beginning and data collected as per the design. Only when the programme manager or the policy maker does not know where, when and how the earlier policies and programmes have failed or did not work upto their expectations there is a need to invoke findings from special studies or surveys. Similarly when there is a problem in assigning priorities for action in a gamut of activities to be undertaken in a programme there is a need to resort to survey or study findings. Surveys should not be elaborate attempts at reinventing the wheel or reestablishing well known facts between sound public health practices and reduction in morbidity and mortality. Unfortunately, the wide availability of survey data has recently led to this type of so called 'policy oriented research', based on such data.

(2) Second, it has to be recognized that analysis of retrospective survey data, with whatever sophisticated statistical techniques that can be adopted, cannot yield unequivocal results on the nature of causation between the variables analyzed. Correlation and regression coefficients computed from the survey data should not be construed as causal mechanisms to be used in policies and programmes.

Such unequivocal causal inferences can be drawn only on the basis of carefully planned experimental designs where the treatment and control units are randomized before the treatment is administered and there is replication in both the groups and both the groups are followed over time, data on the change and correlated variables compiled and analyzed according to the principles of experimental design. The *principles of randomization and replication* often repeated in statistical texts as fundamental requisites for estimating effects of programmes or treatments are not and cannot be observed in retrospective surveys. Demographic and health surveys are no exception. Survey data can at best provide a good description of the levels and differentials on the population and related variables on which data have been collected and can help to test hypothesis on the nature of interrelationships among these variables based on a conceptual model developed by the researcher. Possible causal relationships can then be postulated to be later tested by experimental designs, if possible and feasible, or place for discussions and appropriate action at an interdisciplinary policy group. The observed relationships from a survey data should not in themselves be viewed as proofs of success or failure of a programme when the programme variable is included as one of a large number of predictors impacting on the dependent variable, such as the fertility levels. The problem gets further compounded when the survey findings differ from one survey to the other or there are gross inconsistencies in the trends on a variable over time.

(3) Third, it has to be realized that any estimate based on a sample survey has an associated sampling error, dependent on the presumed value of the parameter in the universe, sample size and the sampling design. In a given survey, for a rare event such as the maternal mortality rate the sampling error is much larger than for a more common event such as the prevalence of contraceptive use. It is safer not to provide estimates for a rare event when the sample size is not adequate to provide the estimate within a desirable confidence interval or when the non-sampling errors are found to be large than to provide an estimate and give statistical justifications for the same later. The increase in maternal mortality rate to a level 540 maternal deaths per 100,000 live births for the period 1997-98 based on NFHS-II from a level of 437 for the period 1991-92 based onNFHS-I has created considerable heat and controversy because such data were publicized as valid estimates by the agencies concerned.

(4) Fourth, it has to be realized that in demographic and health surveys which attempt to compile information on sensitive variables, such as contraceptive use, abortions, infant deaths, age of women, age at marriage and on domestic violence as is done in NFHS-II, there is likely to be a high level of non-sampling errors especially response errors. Errors of omission and distortion of facts are likely to be rampant in such data sets. Such data sets, should be followed by carefully

conducted repeat surveys at least on a sub sample, and reliability and validity checks carried out before they are publicised. Data on extent of domestic violence collected and published in NFHS-II survey has so many internal inconsistencies that the credibility of the whole data have come to question. While we can estimate the sampling errors and the confidence intervals of the various estimates, based on the sample size and the design, it is extremely difficult to estimate the magnitude of non-sampling errors without carefully planned repeat surveys. A number of such repeat surveys carried out within the country and outside on a sub sample of large scale demographic surveys have revealed gross inconsistencies in the reporting of sensitive events by men and women including a high level of omissions and timing errors. Even the accuracy of data on the reported age of the respondents collected in the NFHS-I and NFHS-II surveys have been found to be quite low especially NFHS-II as measured by the Myer's index on digit preferences, and the latter worse-off in quality than the former and the age data from these surveys do not seem to be much better than many other survey data and SRS. When even age data cannot be obtained accurately in these surveys what is the credibility we can attach to the data collected on the other sensitive variables, is a logical question. The non-sampling errors are likely to constitute a larger proportion of the total error in a retrospective demographic and health survey than the sampling error. These errors are likely to arise due to differences in the educational levels, perceptions and understandings of the questions of the *interviewers* involved in the survey; the *questionnaire* used; and the educational levels understanding of the questions and willingness to part with the information on the part of the *respondents*. The interviewer, instrument and respondent all contribute their share to the non-sampling error. Attempts should be made through research studies to estimate the separate contribution of each of the factor to the total error.

(5) Fifth, it has to be realized that all the statistical techniques used in any analysis of data have an underlying set of assumptions and the inferences drawn are circumscribed by these assumptions. One of the most important of these assumptions usually violated in demographic data analysis is the requirement that the dependent variable should not have any measurement error. Most of the demographic analyses of survey data use the various statistical techniques of multiple regression analysis. The dependent variables used are usually fertility, contraceptive use, infant mortality, immunization status and growth and development of children and these are related to a host of other predictors directly or through a path model. Detailed analysis of data on each of these dependent variables, compiled from the survey, reveals that there is a considerable degree of measurement errors in each of these variables and as such any finding from a regression analysis carried out on the survey data have to be interpreted with a degree

of caution. Econometric models have been developed during the past two decades which allow for measurement error in the dependent variable but these models are yet to find wide applications in demographic and health surveys. The easy availability of a large number of statistical packages for the analysis of large scale survey data has eclipsed the underlying assumptions behind the various techniques and the caution to be exercised in the interpretation of the findings. In the estimation of fertility and mortality rates it is advisable not to use the survey data if alternative more reliable sources are available.

(6) Sixth, the conclusions from any analysis can be expected to vary with the level of analysis. The analysis of data at the household, village, district and the state level using the same set of variables could yield different results, even contradictory at times. While analysis at the aggregate level will be more useful for policy and programme purposes, analysis at lower levels of aggregation are necessary for the understanding of interrelationships, testing of hypothesis and if possible causal relationships.

(7) Seventh, the findings from different surveys have to be considered together and not in isolation before new policies are initiated or the existing policies are modified. As a result of the above factors the utilization of results from retrospective surveys in demography and health into population and health policies and programmes become extremely difficult. As you are all aware in the recent years there has been a survey boom, as such, on demographic and health conditions in the country and there are repeated attempts to translate many of the research findings from these surveys into policies and programmes by both the organizers of the surveys and policy makers. As I mentioned earlier every research paper written using the survey data ends up with a paragraph on 'policy recommendation'. This is not a bad thing in the context of a growing demand from the donors, policy makers and programme managers to seek justification for the money spent on the survey from the point of view of the relevance of the survey findings to policies and programmes. This has caused many a problem at various levels and the main purpose of this address of mine is to bring to your kind attention and discussion at professional level at this august body on the problems of translating survey findings in policy and programme implications.

An Illustrative Example of Difficulties Faced

Let me illustrate the type of difficulties one faces when we try to translate survey findings into policy and programme implications. Table 1 provides data derived from the NFHS-I on the total fertility rates of women in different states classified in four broad educational categories: illiterate, literate but not middle complete, middle complete, high school and above. The table also provides the TFR as computed by the SRS for

TABLE 1: TOTAL FERTILITY RATE (15-49) BY EDUCATIONAL STATUS OF WOMEN (NFHS-1) FOR 1990-92 AND COMPARISON WITH SRS

States	*Illiterates*	*Literate, < Middle Complete*	*Middle School Complete*	*High School & above*	*Total*	*Comparable SRS data (1990-92)*	*% drift of NFHSfrom SRS*
Andhra Pradesh	2.97	2.23	2.23	1.84	2.59	2.97	-12.79
Assam	4.51	3.27	1.90	1.78	3.53	3.40	3.82
Bihar	4.28	3.77	2.65	2.58	4.00	4.60	-13.04
Delhi	4.47	3.27	2.63	2.09	3.02	1.80	67.78
Goa	3.00	1.83	1.69	1.75	1.90	1.60	18.75
Gujarat	3.59	2.83	2.51	2.16	2.99	3.20	-6.56
Haryana	4.69	3.52	3.48	2.75	3.99	3.90	2.31
Himachal Pradesh	3.63	3.12	2.77	2.02	2.97	3.00	-1.00
J& K	3.69	3.45	2.62	2.29	3.13	NA	NA
Karnataka	3.39	2.57	2.45	2.00	2.85	3.10	-8.06
Kerala	2.31	2.16	1.95	1.95	2.00	1.80	11.11
Madhya Pradesh	4.31	3.17	3.47	2.47	3.90	4.70	-17.02
Maharashtra	3.47	3.00	2.47	2.08	2.86	3.00	-4.67
Orissa	3.17	3.08	2.59	1.63	2.92	3.30	-11.52
Punjab	3.69	3.02	1.95	2.23	2.92	3.10	-5.81
Rajasthan	3.88	3.33	2.41	2.32	3.63	4.50	-19.33
Tamil Nadu	2.84	2.49	2.20	2.04	2.48	2.20	12.73
Uttar Pradesh	5.36	4.16	3.81	2.55	4.82	5.20	-7.31
West Bengal	3.73	2.82	1.77	1.50	2.92	3.20	-8.75
India	4.03	3.01	2.49	2.15	3.39	3.70	8.38
S.D.	0.74	0.70	0.58	0.33	0.71	1.03	
C.V.	0.55	0.49	0.34	0.11	0.51	1.06	

Source: (i) National Family Health Survey (1990-92) reports of various states and India.
(ii) Compendium of India's Fertility and Mortality Indicators (1971-1997) based on the SRS, RGI, New Delhi 1999.

the same relevant period 1990-92. From the table it can be seen that while the estimate of TFR put forth by NFHS-1 agree fairly closely with SRS estimates 3.39 compared to 3.70 (less by 8.3%), when we make the comparison by the states there are sharper differentials, more than ± 15% in the states of Delhi (+68%), Goa (+19%), Madhya Pradesh (-17%) and Rajasthan (-19%). In Rajasthan the NFHS estimate of TFR was significantly lower at 3.63 compared to 4.50 by SRS while in Delhi NFHS estimate was significantly higher at 3.02 compared to 1.80 in the SRS. When we compare the TFR estimates in different educational categories across the states there is a clear evidence from most of the states of consistent decline in the TFR values as education of women improves. Education seems to be an important factor that has contributed to lowering fertility levels in the country in all the states. However it is worth pointing out that

illiterate women in Andhra Pradesh, Kerala, Tamil Nadu and Goa have recorded much lower fertility than more educated sisters in Uttar Pradesh, Rajasthan, Bihar, Madhya Pradesh and Haryana. This indicates that some state level factors, possibly the programme related or other cultural factors are operating in addition to the education factor. Based on a more detailed analysis of NFHS and other data sets across different states many researchers including myself developed hypothesis of the dominant role of the state in moderating the fertility levels of its population through strong political commitments and bureaucratic efficiency in programme implementation. The inter-play between top down and bottom up in reducing fertility were highlighted. There were Tamil Nadu model, Andhra model, Kerala model advocated by different people for accelerating fertility decline in more backward states. Recently a more detailed analysis of fertility using village level the data from 1991 census in the southern states using geographic mapping procedures by Guillmotto and others has indicated a strong geographic pattern of fertility emerging cutting across state boundaries, almost co-terminus with cultural and lingua-dialectic variations. These patterns were similar to the patterns of fertility change recorded in a study of European Fertility Transition in the early twentieth century carried out by Coale and others from Princeton University and published in the late fifties and early sixties. These studies indicate that once for some reason lower fertility is achieved by a small group of people considered as pace setters in their society the norm of small family spreads rapidly in the same language and cultural groups irrespective of the state's policies and programmes. Of course in Europe when fertility decline was observed it was in the absence of any natural policies and programmes to control fertility. In India we have such policies and programmes since independence. What is the present role of the states in moderating population trend? How do we reconcile these conflicting findings into policies and programmes? My suggestion is that the duty of the state is provide good quality contraceptive and reproductive services and promote the value of small family to the health and happiness of the mother, child and the family and not to interfere in the decision-making by the family members. Others may differ in their views.

References

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