

BOOK REVIEWS

Fertility in India: An Econometric Analysis of a Metropolis

By S. C. Gulati.

New Delhi: Sage Publications. 1988. 203 pp. Cloth. ISBN 0-8039-9562-8 (U.S.).
81-7036-099-4 (India)

Dr. Gulati has produced a very useful, comprehensive and well structured book on econometric analysis of fertility for metropolitan city of Delhi, India in 1970. More important, he has contributed to our understanding of how relevant are and what are the policy implications of the socio-economic theory of fertility formulated on basis of experience of developed countries to fertility behaviour to a developing country like India. Taking due consideration of social and cultural conditions of a near perfect contraceptive society of metropolitan Delhi (according to the survey results, almost all currently married women at reproductive age were aware of contraception and 53 percent of them were ever users), Dr. Gulati's findings lead him to conclude that women's education, creation of women's job opportunities, increasing their wage income and coupled with a family size control policy are the effective measures of fertility reduction in the transitional phase of the reproductive span. These findings are consistent with theoretical expectations and empirical results from both developed and most other developing countries.

The first chapter of Dr. Gulati's book presents plan for the study. The following two chapters provide brief reviews of major fertility theories and empirical studies conducted in India. Based on his critical appraisal, Dr. Gulati ventures to weave together the crucial and relevant elements of the alternative theories and postulates in a socio-economic theoretical framework of fertility to accommodate specific settings of India. In chapter four, Dr. Gulati describes the data used to test the validity of the framework. Undoubtedly, the selected data set is obtained from one of the most comprehensive demographic sample survey. This survey comprises 5,624 currently married women between 15 to 39 years of age in the metropolitan city of Delhi during July 1968 to August 1970 and was ably conducted by the Population Research Center of the Institute of Economic Growth. Dr. Gulati claims

that the means and distribution of various attributes of a cross-section sample of such a size "can be interpreted as being equivalent to longitudinal cohort attributes over the reproductive career or long-run adjustments toward fertility" (p. 23). This assertion obviously based on the assumption that Delhi metropolitan is a society without any dynamic social and economic changes.

The fifth and sixth chapters cover the core of the book. From the thirty-four fertility related variables provided by the Delhi demographic survey, Dr Gulati uses the technique of multiple factor analysis to identify the most important socio-economic, demographic and fertility variables that are closely associated with different dimensions of fertility characteristics. Based on the selected variables he formulates the functional specification of determinants of fertility behaviour. The findings, as stated early, reaffirm the validity socio-economic theory of fertility based on experience of developed and most developing countries.

In the final chapter and in some other related places, Dr. Gulati reiterates an important but well-known policy implication of his findings: "*A judicious mix of education and employment policies together with methods for family size control in the long run can yield a desirable effective family size and spacing of children. The application of these policies will result in welfare benefits to all the members of the family*" (p. 153). It however should bear in mind that the policy implication is based on cross-sectional relations. Under the rigid caste system of India, the success of the policy suggested by Dr. Gulati has to be supplemented with a social policy that ensures the provision of education and employment opportunities is equally made available to families of all castes.

Paul K. C. Liu
Research Fellow

The Institute of Economics
Academia Sinica

Fertility and Mortality: Theory, Methodology and Empirical Issues

Edited by K. Mahadevan, with P.J. Reddy and D.A. Naidu.

New Dehli, Beverly Hills, London: Sage, 1986. 351 pp. \$29.00 cloth.

This book, containing eighteen papers divided into four parts, is a celebration of the work and influence of C. Chandrasekaran who has done more than most to introduce methods into demographic data collection and analysis in developing nations. The range of themes covered in the volume – fertility theory, cultural aspects of fertility, social change and fertility and some analytical framework of mortality study – is a reminder of the breadth of Chandrasekaran's interests in this field. Only three chapters in this book deal with mortality issues, but very few touch issues related to the relationship between infant mortality and fertility. Furthermore, none of the chapters addresses methodological issues in any depth.

Part 1, "Theory of Fertility," contains five chapters. The first chapter, by Davis and van den Oever, addresses the effects of increased longevity, widening sex differences in mortality, aging population and low fertility on sex roles in advanced industrial societies. Their argument is that these important demographic changes force alternations in the sex roles. This is the only chapter that addresses issues in developed nations. Freedman overviews theories of fertility decline. He suggests that demographers need to emphasize their future research on the "the prior determinants of both proximate variables and of desired family size." Namboodiri critically reviews some of the major theories of societal development and population change. He concludes that little progress has been made. Hermalin, based on the work by Bongaarts and others on the proximate determinants of fertility, addresses three issues concerning fertility regulation: the levels and trends in developing nations, the issues in modeling fertility regulation, and new approaches to measuring the cost of fertility regulation. The last chapter of this section by Fawcett describes

various micro-level approaches dealing with the value and cost of children.

Part 2 examines cultural aspect of fertility, mainly in India. The approaches and theoretical emphases vary from one chapter to another. Chandrasekaran's paper discusses cultural factors affecting the length of married life and the interval between births in the Mysore Population Study. The study shows that the motivation to limiting the number of children ever born is weak. Abstinence, a cultural sanction, is practically the only birth control method used. Mahadevan studies the determinants of religious and caste differentials in a village of Andhra Pradesh State. The village includes several cultural groups, namely, the Caste Hindus, the Harijans, the tribals and Muslims. The author indicates that "changes in the attitude of leaders toward family planning, child labor, concept of belief, norms and values related to family formation, female education and an increase in the age at marriage," are important factors in explaining the cultural variations of fertility behavior. Krishnan examines the interrelation between fertility and religious affiliation, age at marriage, present age, level of schooling and residence in Gujarat. However, the findings are in the expected direction except that the education variable is not statistically significant. Rani examines the direct and indirect costs of rearing children and their relations to fertility in South Central India. The findings support the hypothesis that the costs of rearing children is the most important economic factor in explaining the fertility behavior and explains significantly more variance in the fertility behavior of the poorer sections of society as compared to the higher socio-economic status group. Naidu indicates in his paper that the demand for child labor depends on the type of occupation. The labor value of children is higher in the household industrial sector as compared to the agricultural sector. Nayar examines the role of culture as a facilitator in fertility decline in Kerala State during the second half of the Twentieth century. Massive programs of educational and health care promotion have directly contributed to the fertility decline.

Part 3 turns to the issues of social change and fertility. There were four papers in this section. Srinivasan reviews the theoretical frameworks that have been developed during the past thirty years for studying the relationship between modernization and fertility change, with special reference to the case of India.

Kurup examines the population growth, birth and death rates in Kerala. He further discusses factors contributing to mortality and fertility declines. Finally the author reviews threshold hypothesis, Easterlin's theory, new economic approach and linked them to the interpretation of demographic transition in Kerala. Hull explores the institutional changes underlying the fertility decline in an attempt to specify those elements which are unique to Indonesia. He specifies certain aspects of social change that affect fertility, discusses how the effect has worked through the intermediate variables and decision-making processes, and finally specifies whether the decline is likely to continue. Hull indicates that the reorganization of the government in the late 1960s is a key factor in the promotion of fertility control. Indonesian family planning program is based on an autonomous board responsible directly to the President. The logistics of contraceptive supplies and the system of rapid feedback monthly service statistics are organized very efficiently and effectively. Reddy's article investigates the different and common social and psychological determinants of fertility behavior of the non-slum and slum population of Hyderabad City in South Central India. The study reveals that social and psychological factors are as important as demographic factors in non-slum dwellers. In contrast, the demographic factors are found to be the prime determinants of fertility among slum dwellers.

Parts 4 include three articles to address issues related to mortality, infant and child mortality. Mahadevan presents an analytical framework and a conceptual model on infant and child mortality. His discussion includes a variety of determinants on mortality, such as ecological, cultural, institutional, socio-economic, biological, genetic, policy and program aspects. Life-affecting variables are developed for the entire category of all the determinants of mortality. Then, a set of imminent variables is selected to categorize certain life-affecting variables in order to highlight their prominence for urgent research and prompt attention in program interventions. The first level of life-affecting variables in the author's conceptual model constitute the structural and macro variables. The next level constitutes program interventions. Another set of variables include natural calamity, accidents, and war. Overall, this paper provides us with a systematic classification of the direct and

indirect determinants of infant and child mortality and can be served as a very useful framework and guidance for mortality study. Nam and Harrington propose a micro-level of analysis of morbidity-mortality expectations of youth. A socialization model is used for understanding the elements of the morbidity-mortality process in the early life-cycle. Finally, Mahadevan and his colleagues study the cultural, nutritional and certain health aspects related to mortality among three major cultural groups: the Muslims, the Harijans and the Caste Hindus in South Central region of India. The authors conclude that bio-familial factors, such as breast-feeding and nutritional factor, affect infant mortality and familial-environment factors, such as diarrhoea, dysentery and communicable diseases, affect early childhood mortality.

Although the chapters in this book vary in breadth and depth of coverage. I found the volume well worth the effort. It would provide useful supplementary readings for courses in population, economic development, social change. More importantly, it provides some much-needed insights that are useful in the study of fertility and mortality in developing nations. I just wish that this book could provide more theoretical linkages between child survival and fertility.

Jow-Ching Tu

Research Demographer

Center for Social and

Demographic Analysis

State University of New York

at Albany

Social Development, Cultural Change and Fertility Decline: A Study of Fertility Change in Kerala

by K. Mahadevan and M. Sumangala

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The subtitle of this book, "A Study of Fertility Change in Kerala", indicates a case study of a region which has experienced fertility decline which has not been preceded by a higher level of socio-economic development, industrialization, urbanization and greater investment in family planning. Along with fertility decline, the quality of population in Kerala has also improved in terms of health, hygiene, sanitation, occupational mobility, modernization, and emancipation of women. Investments in social education, in the fields of education and health is notably higher than other Indian states.

The authors have employed a useful research design taking as their focus a village in Kerala and, as a control group, a village in Andhra Pradesh. Using both qualitative and quantitative data, the authors have combined the anthropological and survey methods to convincingly demonstrate the importance of socio-cultural factors in rapid fertility decline in the state. This book confirms that a higher age of marriage, a decline in infant mortality, an extensive family planning infrastructure and the widespread use of contraceptive methods are important influences on fertility decline. In addition, the authors highlight several new factors. Using case studies as illustrations, the authors argue that the relatively low value attached to the sex of children, the revival of polyandry, the recognition of deep-rooted kinship obligations, the emancipation of women and modernization, all contribute significantly towards a decline in fertility. None of these influences, it appears, are important in the Andhra village.

The book is divided into nine chapters, which are 1) social development, cultural change and fertility decline: a theory, 2) nuptiality and fertility, 3) demographic profile and fertility, 4) economic and cultural values of children, 5) socio-economic status, 6) modernization, status of women and fertility decline, 7) communication and contraception, 8) primary health centres, 9) summary and implications.

The special contributions of this book are: 1) This study has made a pioneering attempt by using both the anthropologist and survey approaches to explore a maximum number of new variables which can explain fertility behavior, 2) The research design though focussing on Kerala, has also taken a village in Andhra Pradesh, as a control group. In the survey, both husband and wife constitute the respondents. 3) The various individual and interrelated factors which determine fertility decline in Kerala, and the corresponding situation in Andhra, have been taken together to provide a model applicable to other regions in India and the developing world. The model is based on the priority given to social development and cultural change which leads to declining fertility and, more importantly, an improvement in the quality of life. 3) This work is invaluable for students of the social sciences (particularly those interested in population studies and health and management sciences), as also for administrators and those involved in the implementation of socio-economic development programmes.

Based on the assumption of this book, that the model of social development and cultural change has accounted for fertility decline, one expects application to other regions of the developing world for further effective, policy formulation and programme implementation. However, one should also raise the question that cultural tradition, economic and social structures could vary from place to place and often not provide the same ingredients that form the basis for change.

Lan hung Chiang

Professor of Geography

Department of Geography

National Taiwan University

Infant Mortality in India: Differentials and Determinants

Edited by Jain A.K. and Visaria P.

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Infant mortality in India: Differentials and determinants is a collection of 14 papers presented and discussed in a seminar on the Determinants of Infant Mortality in India held at the Indian Institute of Management during 1-4 October 1984. There are four sections in this book: National perspective, Lessons from community health projects, Evidence from selected states, and Unresolved research issues. The first section focuses on the analysis of infant mortality at the national level. The second section reports on the experiences of lowering infant mortality through community health projects in Haryana, Maharashtra and Tamil Nadu. The third section examines correlates and determinants of infant mortality in six selected areas. The fourth section outlines several unresolved issues in the research of infant mortality rate. This book illustrates a dialogue between social scientists and health professionals on the subject of infant mortality.

Being an excellent indicator of the level of socio-economic development in a country or area, infant mortality is determined by multiple risk factors. Such multifactorial mechanism makes the study of infant mortality difficult. This book provides a comprehensive review of this index for India. However, most data used in the nine papers of this book were not specifically collected for the purpose of improving the understanding of the determinants of infant mortality. Neither the procedure of sampling was comparable in various studies, nor the analysis of data was adequate. The methodological issues and analytical frameworks proposed for the researches on infant mortality are discussed in details in this book. The discussion is valuable for those who are engaged in the study of infant mortality, especially those who are in the third world where most vital statistics are inadequate.

The editors argue against the commonly held belief that high rate of infant mortality in India began to decline only from 1978 after having remained stable for a decade. It is postulated that the level of infant mortality has declined steadily since 1947, although the pace of decline has varied over the past 40 years. It is em-

phasized that infant mortality may be reduced through a rapid improvement in maternal and child health even in a less developed socioeconomic milieu. In this book, neonatal and post-neonatal mortality are analyzed distinctly because of their different etiologies and intervention measures. This is an appropriate approach in the analysis of infant mortality. The identification of the determinants of neonatal and post-neonatal mortality is important for the policy-maker and those designing action programs to lower the level of infant mortality.

In this book, determinants of infant mortality has been categorized into three groups: proximate factors, maternal factors, and household- and community-level factors. The first category includes prenatal non-medical cares, prenatal medical cares, cares at birth, postnatal non-medical cares, postnatal preventive medical cares, and postnatal curative medical cares. The second category includes maternal age, parity and birth interval. The third category includes socioeconomic status of family, household environment, availability of social amenities, nature and type of community, and social and economic institutions. The impact of these factors on infant mortality has been assessed in nine papers of this book. But the limitations in data collection and analysis make the findings of several papers inconclusive. Further studies are required for better understanding of infant mortality in India.

Chien-Jen Chen

ScD, MPH

Professor of Epidemiology
and Human Genetics

Institute of Public Health

College of Medicine

National Taiwan University