The roots of demographic science can be traced to a number of distinguished sources. One of the most important of these was the school of classical political economy, of which Malthus was a major figure. Yet modern economics grew to scientific maturity in the twentieth century regarding population as a peripheral subject. Demography, by historical happenstance, became part of the sociology curriculum in most American universities. Demography retained its unique identity, however, often approaching disciplinary status, emphasizing its strong empirical focus and borrowing freely from (and contributing to) a variety of related disciplines, including sociology, economics, psychology, geography, and statistics. In the last decade or two the application of microeconomic theory to a variety of demographic phenomena, particularly fertility, has given rise to a renewed interest in population among economists. Given the central place of economic variables and interpretations in demography and the small, but very active, group of economists already part of the field, this larger interest should have been an important impetus to interdisciplinary exchange. Yet with a few notable exceptions, there has been slow progress toward common understanding. Initially, the emerging economic analyses of demographic topics seemed to ignore the voluminous research of demographers on the same subjects. To the established demographic community, it appeared that economists were more interested in asserting the validity of their models than in analyzing demographic phenomena in detail. Nor was the heavily formal mathematical character of economic theory easily assimilated by demographers (who are quite adept at applied statistical analysis but not trained in formal economic theory). Some years have now passed and there appear to be the beginnings of more communication on both sides of the disciplinary fence. Economic
demographers and social demographers (trained in sociology), particularly among the younger generation, have become more knowledgeable about the value and unique contributions of one another’s disciplines. Informal networks, linked by common interests and institutional ties, have mellowed some of the earlier barriers of communication. There are even the beginnings of a real interdisciplinary demography that freely incorporates ideas from both economics and sociology (e.g., the works of Michael Hout in sociology and Richard Easterlin in economics). But there is much more to do to bridge the gap between economic models of demographic behavior, and the conventional study of these topics by demographers. The publication of the *Economics of Population*, an introductory text by T. Paul Schultz, who is a leader of the new school of the economic analysis of demography, provides a good opportunity to evaluate the promise and products of economic demography.

There are not one but several schools of economic demography. The major microeconomic demographic model, which is the focus of Schultz’s book, is the “demand theory of household time allocation and demographic behavior” (p. 2). Basically, this perspective, popularly known as the “new home economics,” is an extension of consumer choice theory, which deals with the allocation of household income for goods and services in order to maximize household utility. The application of consumption theory to demographic behavior turns out to be very complicated; babies are quite unlike other consumer durables, both in their production and in their consumption. The major new twist in the revised model of household demographic behavior is the incorporation of household time as the pivotal element of the theory. The time of husband and wife can be used in the labor market to earn income, or it can be spent (forgoing market income) in nonmarket household activities, such as the bearing and rearing of children. While more income generally leads to higher levels of consumption, including consumption of children, the price of children (income foregone) will rise with the potential economic value of parental time (primarily women’s—assuming mothers are most engaged in child care) and thus complicates the model. The decomposition of income and price effects, considering the value of time, is central to the demand model of microdemographic behavior.

There are two other major models of economic fertility, to which Schultz does not give equal billing in his book. The first is the relative income hypothesis of Richard Easterlin (which is briefly reviewed in chap. 6). Easterlin’s influential model posits that the effect of income on childbearing is conditioned by the economic aspirations of the parents. Couples who encounter prosperity (relative to their aspirations, which are molded during adolescent socialization) will feel successful and have more children. While Easterlin’s model fits the post–World
War II baby boom, it remains the subject of much theoretical and empirical debate in the literature. The other school of economic demography (which Schultz does not consider at all) hypothesizes the economic value of children. In contexts where child labor is of great economic value, fertility can be considered a form of investment as well as of consumption. Moreover, children are a major source of old age security where insurance and social security programs are not present. This thesis is the subject of considerable innovative research in the field.

Any evaluation of the new home economics in the progress of demographic science is certainly premature and probably biased by the evaluator’s own disciplinary perspectives. Nonetheless, it may be useful to consider the most obvious “pluses” and “minuses” of economic research on fertility behavior (the demand approach favored by Schultz). Perhaps the greatest contribution has been the theoretical impact of formal economics in a field that has been primarily inductive and largely shaped by the availability of data. Even when wrong, the use of theory forwards the cumulative direction of science with a persistent focus on the predictive validity of basic hypotheses. Moreover, the imperialist purview of economic theory encourages the replication of basic models and systematic comparisons across different times and places. Another major contribution of economic theory is its stress on the interdependence of all household decisions, childbearing and rearing, labor force participation and intensity of work, and household consumption. To address these obviously related, yet very complex, decisions and behaviors requires a very parsimonious model, and economic models provide an initial handle.

Most social demographers have not been impressed with the results of many economic studies because these studies appear to be preliminary warm-ups rather than full-fledged tests. Economic demography has invested much more effort in the formal modeling of demographic problems than in the empirical analysis thereof. The early exercises at economic modeling proved that it could be done, and that the results were generally consistent with the general line of theory. But there remain a number of issues, both conceptual and empirical, that have limited the progress of economic models of demographic behavior. For instance, not only does the price of children vary with the value of parental time, but also, because the costs of child rearing can vary considerably, the “quality” of children varies. In spite of much attention this remains a major problem for empirical study.

Childbearing is not only an economic phenomenon, but also a biological process that is affected by fecundity (the physiological ability to reproduce), frequency of sexual activity, the length of breastfeeding (which suppresses the return of ovulation for a variable period after childbirth), the practice of contraception, and the incidence of
abortion. These factors are considered "supply constraints" in economic models, as opposed to the economic demand factors, and are only considered to be important in high fertility countries. This seems to be a premature conclusion and a conceptualization that complicates more than it clarifies. For instance, many variables, such as education, could influence both the supply and demand determinants of fertility. An alternative perspective is offered in Davis and Blake's framework of intermediate variables, which posits the biological processes that must intervene between any social or economic factor and reproduction.\(^2\)

Another major obstacle to economic research on fertility is that the central concepts of economic theory—for instance, "permanent income," "opportunity costs," and "child quality"—are not measured directly in most available data sources. This has meant that much empirical research has been inconclusive because of the crude measures of central concepts. Most tests of microeconomic theory have been based upon cross-sectional data. Since economic theory is dynamic in character, assuming life-cycle decision making, this is another major handicap of present studies. The collection of improved data for economic analysis is a critical item on the agenda for future progress of the field.

In addition to these concrete problems is the more amorphous question of the applicability of economic demand theory to reproductive behavior. While the basic assumption of economic rationality is standard in social demography, there is also an openness to other sources of explanation, including the complexity of family organization and social norms that shape reproductive behavior (age at marriage, periods of sexual abstinence, customs of widow remarriage). Although social norms and family structure probably arise out of materialist forces (in the past if not the present), they cannot always be reduced to individual economic needs or dismissed as tastes. Economic models may lose in richness what is gained in parsimony. Another conceptual issue, often ignored in economic models, is the uncertainty linking reproductive intentions and outcomes. The knowledge of and successful practice of birth control vary enormously across societies and within groups in any society. Treating such uncertainty as random error is likely to obscure structural relationships that shape the knowledge of and motivation for reproductive control.

As an effort to present a systematic introduction to the microeconomic approach to demography, Schultz's book can be considered a success. The book contains a clear exposition of the microeconomic demand theory and its application to household decision making on reproductive and labor force activity. For economists unfamiliar with the study of population and for noneconomists wanting to know the microeconomic approach to demography, this book provides an in-
troduction and survey of the field. But it must be judged as a contribu-
tion to the interdisciplinary field of demography as well. Here, it seems
to reflect the strengths and weaknesses of the school of new home
economics. Although Schultz attempts to survey the field—from cy-
cles of population growth in preindustrial England to formal models of
women’s labor force participation in advanced economies—the reader
leaves much more about the demand theory of demographic behavior
than about the results of previous demographic research of the topic.
The emphasis is on the implications of demand theory, with almost no
attention to alternative frameworks. Data are used to illustrate major
points or to test selective hypotheses, with considerable reliance on
Schultz’s own previous research.

In the first substantive chapter, Schultz reviews the classical
Malthusian framework and measures it against patterns of preindustrial
population dynamics, drawing upon the excellent work of historical
demographers, including Ronald Lee and E. A. Wrigley. One of the
major findings of these studies is that there is evidence of fertility
control within marriage. In other words, population growth could be
adjusted without the Malthusian checks of excess mortality and moral
restraint (postponement of marriage). Schultz’s primary conclusion is
that models of “individual choice” are the appropriate prism through
which to study population dynamics then and now. This seems, in my
opinion, to be an effort to score a point for “economic man” rather
than to address the broader implications of the finding. To know that
fertility is constrained does not necessarily imply that reproductive
behavior is the product of individual level cost-benefit analysis. I ex-
pect there are considerable differences in fertility levels across prein-
dustrial communities that may be explained by knowledge of tradi-
tional methods of birth control, familial ties and organization, as well
as by rational adaption to economic opportunities. Nor are economic
motivations a simple matter. They may vary considerably, depending
on the value of child labor, the availability of land or other economic
opportunities, and the roles of women. To note all of these potentially
relevant factors does not suggest that economic theories are the wrong
theoretical framework, only that they are incomplete.

The next chapter, on modern economic growth and population,
ranges broadly from a quick historical survey of world population
growth to the links between age composition and economic policy.
Because the author’s objective is to touch on a large number of topics,
it is impossible to do justice to all of the complexities and controversies
of each issue. On many counts, I think Schultz does an adequate job,
but there are serious and surprising omissions. For instance, the
significant studies of Allen Kelley and Richard Bilsborrow, both econo-
mists, on the links between age composition and savings rates, are not
mentioned.
Subsequent chapters are titled "Demand Theory and Economic-Demographic Behavior of Households," "The Demographic Transition: Mortality Decline and its Effect on Fertility," "Microeconomics of Fertility and Surviving Family Size," "Labor Force and Development: Participation and Time Allocation," and "Prospects for the Demand Approach to Demographic Behavior." There is much wisdom and insight in these presentations, and I learned much about the value of the demand framework for demographic analysis. However, I was also frustrated by the omission of what I consider to be central ideas and evidence of demographic science. It seems unwise to formulate a theory of human fertility (or other demographic behavior) without confronting the theoretical contributions of Kingsley Davis, Ronald Freedman, Norman Ryder, and Jack Caldwell. Many of the ideas of these scholars are compatible with microeconomic models, while others call into question some fundamental postulates of the new home economics. Schultz seems to consider Malthusian theory to be the only real alternative framework. Even some significant contributions to the microeconomic framework are ignored (the significant works of B. Turchi, K. Namboodiri, and T. Espenshade are not cited).

Perhaps the most glaring limitation of Schultz’s theoretical model is its refusal to consider the impact of the institutional frameworks, both social and cultural, that may condition the links between economic variables and reproductive behavior. For instance, Schultz considers the potential market wage (measured by human capital variables) as the primary cost of fertility (the income forgone by choosing to engage in child rearing). This may be a fair approximation in middle class American society where most paid work is outside the home and babysitting services are costly. In many circumstances, especially in agriculture and in the informal sector in Third World countries, women typically combine market and child-care activities. And in many cultural groups of industrialized societies, relatives (e.g., grandmothers) provide child care for working mothers. Of course, subsidized child care would also affect the cost of child rearing. While these points are obvious when mentioned, they are often ignored in the testing of a universal model.

Aspiring economists who read only Schultz’s book will get a quite selective picture of the accumulated wisdom of contemporary demographic research. I wish it were otherwise, for I believe that sociological and economic demographers have much to gain from intellectual exchange. Schultz’s book, however, does not take us in that direction.

Notes
* I gratefully acknowledge the critical comments of Barry Edmonston, Gary Fields, and Boone Turchi on an earlier draft of this review. The opinions expressed in the review are mine, not necessarily shared by my critics.
1. This does not mean that consumer choice theory has no relevance for reproductive behavior, but it clearly must be modified (see Judith Blake, “Are Babies Consumer Durables? A Critique of the Economic Theory of Reproductive Motivation,” *Population Studies* 22 [March 1968]: 5–25).


Robert Wade
*Institute of Development Studies, Sussex*

I

In the 1950s and through the 1960s India attracted much hopeful attention from students of economic dirigisme. Its Five Year Plans were the concrete expression of the intention to use state resources to force the pace of economic growth and structure that grow into rationally preselected forms; while preserving, even encouraging, private capital—and preserving, too, parliamentary democracy. Could it be done? The Third (1961–66) Plan document promised confidently, “As the relative share of the public sector increases, its role in economic growth will become even more strategic and the state will be in a still stronger position to determine the character and functioning of the economy as a whole” (quoted by Toye, p. 85, emphasis added). Nowadays, by contrast, whatever attention Indian planning receives is much less hopeful, and it is widely recognized that the strategy of using the state as the engine of national capital accumulation has been largely abandoned.

Toye’s book traces “the broad trajectory of Indian planning, in a way that accounts for its early history, its zenith between 1955 and 1963–64, and its subsequent decline” (p. xvii). Specifically, the book shows the growing disjunction over the 1960–70 period of the planning objective of rapid public sector capital accumulation and the reality of government expenditure trends. The bulk of the book, five chapters out of nine, is a careful exploration of the conceptual and empirical basis of the existing statistics on public expenditure and revenue, at central and state level; and, correcting for their weaknesses where possible and allowing for them where not, of what can be said about real trends over the decade.

This analysis shows, for example, that from about the middle of the decade, plan development spending declined in real terms; public sector capital formation shrank as a percentage of GNP and of total fixed capital formation; public sector savings financed a diminishing