

## Book Review

T. Paul Schultz. *Economics of Population*. Reading, Mass. (USA): Addison – Wesley Publishing Co. 1981.

Unfortunately this is not the long-awaited textbook in economic demography. Indeed, it is not so much a text – a survey and introduction to the area – as it is a collection of essays on particular topics, often quite advanced and difficult for all but advanced students to follow. Also, the volume should, in all fairness, be subtitled “A Chicago Approach” since the philosophical and theoretical orientation as well as the methodological framework presented is totally that of the Becker-Nerlove Chicago School. Easterlin, Leibenstein and the other non-Chicago writers are mentioned only in passing. Thus, a beginner to the field would get no feeling for the enormous, far-ranging controversies which continue to rage.

In short, for one already familiar with the scattered literature of economic demography this volume does summarize once again the Chicago School approach. To this extent it is a useful reference and bibliographic source. But, to repeat, it is not the much-needed textbook for the field.

The best chapter is Chapter 2 (“Preindustrial Equilibrium: A Malthusian Perspective”) which draws on interesting recent work by Ronald Lee and others. The worst chapter is Chapter 4 (“Demand Theory and the Economic-Demographic Behavior of Households”) which is an elaboration of such arcane Chicago paradigms as “full potential income”. The chapter does not, in fact, review theories of fertility, but rather loses itself (and the reader) in the intricacies of the one particular theory which it espouses.

Its usefulness as a textbook aside, one can also legitimately raise the question of what value this book will be to policymakers and planners in countries like Pakistan? Pakistan is deeply concerned about the possible negative effects of population growth and has a population-control programme. The author stresses the policy relevance of the research in the field. Thus, it seems fair to ask what the Chicago Model offers in the way of guidance. This, it would seem, can be summarized as follows: (1) at the macro level, Pakistan should encourage rural-urban migration and speed up the growth of market-based activities and monetization of many economic activities now performed in the traditional quasi-subsistence sectors; and (2) at the micro level the complex, traditional family structure

should be discouraged as should male domination of household decision-making. Female education and employment should receive precedence and a full-blown social retirement scheme introduced. The Schultz (Chicago School) Model sees all fertility reduction as being due to a rising cost of children (child-services) relative to other sources of satisfaction. The traditional family-social structure "supports" high fertility by lowering its cost to the parents. Employment of women increases the opportunity cost of children. Costs are higher in urban industrial settings than in rural, agricultural ones, and so on.

By now one suspects that even the most open-minded policy-maker in a country like Pakistan has lost interest in (or patience with) such advice. For it seems to say that population growth will look after itself if you transform your country into a group of urban (or suburban) middle-class nuclear households with both adults working for wages and a one-generation life-cycle planning horizon for economic decisions. Whether Pakistan will ever experience such a transformation is, to say the least, debatable. Whether it would want to (or would be better off if it did) experience such a transformation is even more debatable.

Overall, one is led to ponder the reasons why such an elaborate, sophisticated body of theory apparently has so little relevance to the two-thirds of the world made up of countries like Pakistan. We can suggest only a few possible answers which seem to stem from the underlying assumptions and philosophical judgement of the theory and the model.

First, the Chicago Model assumes a conventional, well-behaved (double-differentiable) utility surface such that all goods trade off against each other at all levels of income and relative prices. Figure 1, reproduced from Schultz, illustrates this. This is, of course, the time-honoured way of conceptualizing the consumers' decision-making process and of explaining it at the elementary level. But, it is not necessarily a very good guide to behaviour in real situations. There is growing evidence that consumers do not trade off everything against everything else but rather have a rank-ordering of needs. Maslow [3] and other psychologists argue that "basic needs" (security, subsistence and instinctive "drives") are met before secondary needs are considered. This suggests a preference system such that it cannot easily be represented by a utility surface. This in economic theory has come to be called "lexicographic ordering."

"The term lexicographic draws attention to the similarity of the ordering to the arrangement of the words in a dictionary . . ." [2, p. 81].

Consider a two-commodity set of any two points  $x = (x_1, x_2)$  and  $x^1 = (x_1^1, x_2^1)$   $x > x^1$ , if  $x_1 > x_1^1$ , irrespective of the values of  $x_2$  and  $x_2^1$ . But if  $x_1 = x_1^1$ ,  $x > x^1$  if  $x_2 > x_2^1$ . Given such an ordering there is no set of real numbers such that  $U(x) \geq U(x^1)$  if and only if  $x > x^1$ .

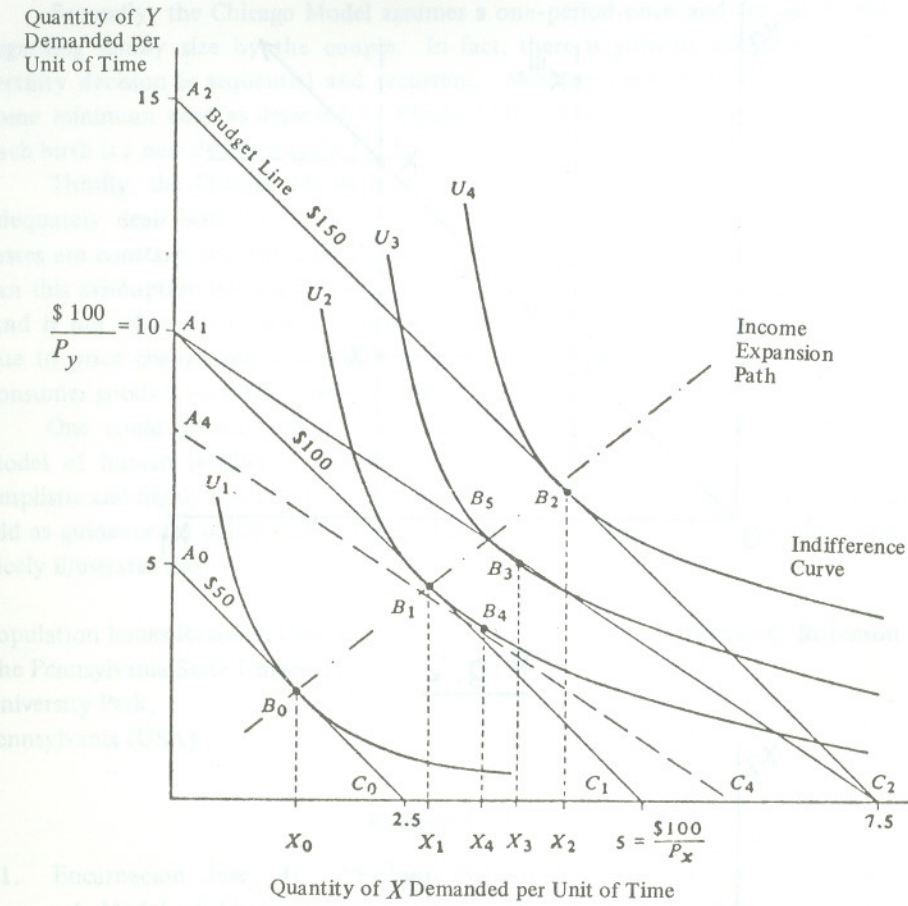
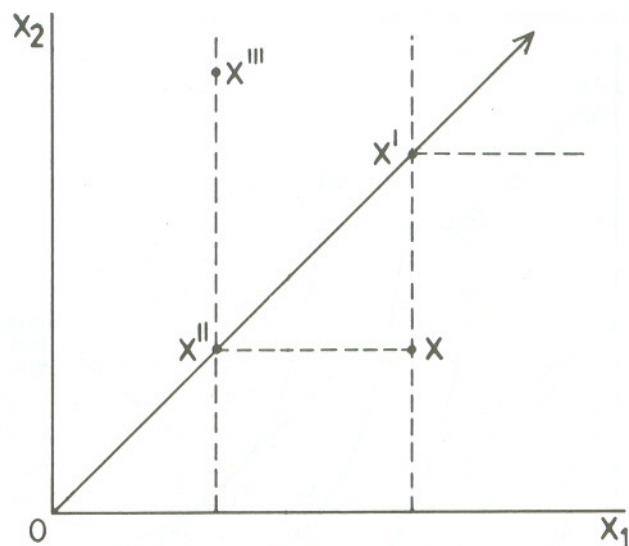
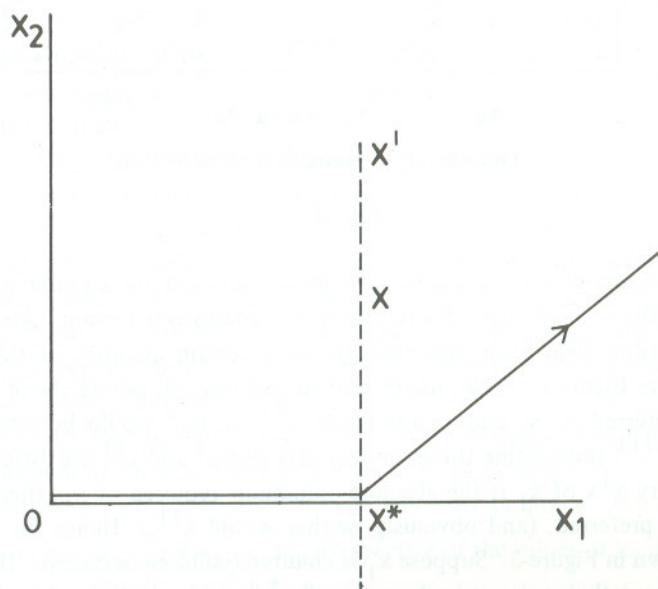


Fig. 1

What this amounts to saying is that unless a set contains a minimum value of the primary utility-creating good, everything it contains is irrelevant. An expansion path in the utility field must pass through some certain quantity of this primary good. Consider Figure 2. Now, under normal ordering, all points above  $x^1$  on  $ox^1$  would be preferred to  $x$ ; and points below  $x^1$  on  $ox^1$  would be inferior to  $x$ .  $x^1x$  and  $x^1x^{11}$  thus define the boundary sets and  $x^1$  and  $x^{11}$  are different. But, if the boundary  $x^1x$  of  $x_1$  is the absolute minimum required of  $x_1$ , then set  $x^{11}$  could not be preferred, (and obviously neither would  $x^{11}$ .) Hence the expansion path is as shown in Figure 3. Suppose  $x_1$  is children (children-services). The logic of this ordering says their price is irrelevant until  $x_1^*$  is attained. Only after that can an increase in the relative cost of children affect the  $x_1$  to  $x_2$  trade-off. Such a model has been used with Philippine data [1] and seems intuitively attractive for Pakistan as well.



**Fig. 2**



**Fig. 3**

Secondly, the Chicago Model assumes a one-period once-and-for-all decision regarding family size by the couple. In fact, there is growing evidence that the fertility decision is sequential and recurrent. Marriage may imply children (up to some minimum need as depicted by Figure 3) but after a certain parity is reached, each birth is a new decision again [5].

Thirdly, the Chicago Model ignores "tastes." Schultz suggests that tastes are adequately dealt with by a "well-distributed error term." The assumption that tastes are constant and normally distributed solves many problems statistically. But can this assumption be taken seriously for a rapidly-changing country like Pakistan? And if not, then what part of changes in demand (for children or anything else) is due to price change and which part is due to taste change? A growing taste for consumer goods is very often associated with a declining demand for children [4].

One could go on with such criticisms [6]. Taken at its best, the Chicago Model of human fertility is rigorous, elegant and neat; at its worst it is narrow, simplistic and highly special. It trades elegance for relevance and has little of value to add as guidance for policy and planning in countries like Pakistan. The Schultz book nicely illustrates this.

Population Issues Research Center,  
The Pennsylvania State University,  
University Park,  
Pennsylvania (USA).

**Warren C. Robinson**

#### REFERENCES

1. Encarnacion, Jose, Jr. "Fertility Behavior and Labor Force Participation: A Model of Lexicographic Choice". Discussion Paper 7908, April 1979, School of Economics, University of the Philippines.
2. Green, H. A. John. *Consumer Theory*. New York: Academic Press. 1979 (Revised Edition). Chapter 6.
3. Maslow, Abraham. "Higher and Lower Needs". *Journal of Psychology*. Vol. 25. 1948. pp. 433 - 436.
4. Mueller, Eva. "Impact of Demographic Factors on Economic Development in Taiwan". *Population and Development Review*. Vol. 3, No. 1-2. 1978. pp. 1-22.
5. Namboodiri, N. Krishnan. "A Look at Fertility Model-Building from Different Perspectives". In Thomas K. Burch (editor), *Demographic Behaviour*. Boulder, Colo. (USA): Westview Press. 1981. (American Association for Advancement of Science, Selected Symposium No. 45. 1980) pp. 71-90.
6. Robinson, Warren C., and Sarah F. Harbison. "Toward a Unified Theory of Fertility". In Thomas K. Burch (editor), *Demographic Behaviour*. Boulder, Colo. (USA): Westview Press. 1981.