

no one using *any* parametric form has ever suggested that all total expenditure elasticities are unity, it comes as something of a surprise that the Afriat condition appears to be acceptable for an 111 commodity disaggregation of post-war U.S. data, see Manser and McDonald (1984).

Clearly, more work needs to be done on reconciling parametric and non-parametric approaches. The non-parametric methodology has not yet been successfully applied to cross-section data because it provides no obvious way of dealing with non-price determinants of demand. There are also difficulties in allowing for "disturbance terms" so that failures of, e.g. GARP, can be deemed significant or insignificant, but see the recent attempts by Varian (1984) and by Epstein and Yatchew (1985).

3. Cross-section demand analysis

Although the estimation of complete sets of demand functions on time-series data has certainly been the dominant concern in demand analysis in recent years, a much older literature is concerned with the analysis of "family budgets" using sample-survey data on cross-sections of households. Until after the Second World War, such data were almost the only sources of information on consumer behavior. In the last few years, interest in the topic has once again become intense as more and more such data sets are being released in their individual microeconomic form, and as computing power and econometric technique develop to deal with them. In the United Kingdom, a regular Family Expenditure Survey with a sample size of 7000 households has been carried out annually since 1954 and the more recent tapes are now available to researchers. The United States has been somewhat less forward in the area and until recently, has conducted a Consumer Expenditure Survey only once every decade. However, a large rotating panel survey has recently been begun by the B.L.S. which promises one of the richest sets of data on consumer behavior ever available and it should help resolve many of the long-standing puzzles over differences between cross-section and time-series results. For example, most very long-run time-series data sets which are available show a rough constancy of the food share, see Kuznets (1962), (1966), Deaton (1975c). Conversion to farm-gate prices, so as to exclude the increasing component of transport and distribution costs and built in services, gives a food share which declines, but does so at a rate which is insignificant in comparison to its rate of decline with income in cross-sections [for a survey of cross-section results, see Houthakker (1957)]. Similar problems exist with other categories of expenditure as well as with the relationship between total expenditure and income.

There are also excellent cross-section data for many less developed countries, in particular from the National Sample Survey in India, but also for many other South—East Asian countries and for Latin America. These contain a great wealth