procedure for testing_ One is a statistical issue, and questions have been raised about the appropriateness of standard statistical tests in this context; I deal with these matters in the next subsection. The other arguments concern the nature of flexible functional forms themselves.

Empirical work by Wales (1977), Thursby and Lovell (1978), Griffin (1978), Berndt and Khaled (1979), and Guilkey and Lovell (1980) cast doubt on the ability of flexible functional forms both to mimic the properties of actual preferences and technologies, and to behave "regularly" at points in price-outlay space other than the point of local approximation (i.e_ to generate non-negative, downward sloping demands). Caves and Christensen (1980) investigated theoretically the global properties of the (indirect) translog and the generalized Leontief forms. For a number of two and three commodity homothetic and non-homo-thetic systems, they set the parameters of the two systems to give the same pattern of budget shares and substitution elasticities at a point in price space, and then mapped out the region for which the models remained regular. Note that regularity is a mild requirement; it is a minimal condition and does not by itself suggest that the system is a good approximation to true preferences or behavior. It is not possible here to reproduce Caves and Christensen's diagrams, nor do the authors give any easily reproducible summary statistics. Nevertheless, although both systems *can* do well (e.g. when substitutability is low so that preferences are close to Leontief, the GL is close to globally regular, and similarly for the translog when preferences are close to Cobb—Douglas), there are also many cases where the regular regions are worringly small_ Of course, these results apply only to the translog and the GL systems, but I see no reason to suppose that similar problems would not occur for the other flexible functional forms discussed above.

These results raise questions as to whether Taylor series approximations, upon which most of these functional forms are based, are the best type of approximations to work with, and there has been a good deal of recent activity in exploring alternatives. Barnett (1983a) has suggested that Laurent series expansions are a useful avenue to explore. The Laurent expansion of a function *f(x)* around the point x_0 takes the form

$$+00 \qquad (63)$$

and Barnett has suggested generalizing the GL form (62) to

$$f\,(0)^{I} = a_0 + 2ai.7 + viAt, -21A1- 6^{1} 135, \qquad (64)$$

where v, = $r'^{/2}$ and ii — r,$T^{1/2}$. The resulting demand system has too many parameters to be estimated in most applications, and has more than it needs to be