

to elements of  $p$  are the quantities consumed,  $q$ , and since the derivatives of the profit function with respect to output and input prices are quantities of outputs,  $z$ , and (minus) inputs  $r$ , respectively, total differentiation of (1) gives

$$dy = (q_i - z_i)dp_i + E r_i du_i, \quad (2)$$

This is the familiar result, that those who are net producers benefit from a price change, and that those who are net consumers lose, and that, to a first approximation, the *amount* of the money-equivalent benefit (or loss) is the net amount produced (production less consumption) multiplied by the price change. Hence, the survey data not only identify the gainers and losers of a price change, but also quantify the sizes of their gains and losses. All this is obvious enough, but is nevertheless important. In many LDCs, where tax and welfare instruments are limited in number, there is a wide range of commodity taxes and subsidies. Many of these are justified on distributional grounds; imported consumer goods should be taxed because only the rich use them, or bus services should be subsidized to support the poor. By looking at (2) for different households, survey data can be used to check whether such claims are in fact correct, or whether they are simply a cover for special interests.

Provided that we accept the underlying economic assumptions of atomistic maximizing agents in competitive markets with minimal uncertainty, the evaluation of (2) requires only the raw data; no econometric model is required. Of course, there are different ways of presenting the results, and I shall give examples in Section 2.3 below of how non-parametric techniques can be used to illustrate the distributional issues in an immediately assimilable form. Note too that the basic result can be extended in various directions. In particular, (2) is a local approximation and so cannot safely be used except for small price changes. For large changes, a better approximation can be made by including substitution effects, effects that in some circumstances can also be estimated from the survey data, a topic to which I return in Section 2.1.

Note what happens when the policy involves a quantity change rather than a price change, as when additional health, education, or agricultural extension services are provided. If these publicly provided quantities are incorporated into the cost or profit functions, and a compensation is calculated as in (2), the result involves the shadow prices of the public goods, prices that can often be estimated using appropriate behavioral models, [see for example Gertler and van der Gaag (1990) and the studies reviewed in Jimenez (1987)]. However, even without such calculations, the survey data frequently tell us who uses the public goods, and by how much, something that is frequently of direct concern, even where we do not have estimates of how much the households value the services.