

Notes and Comments

“Shadow Prices for Pakistan: An Assessment of Alternative Estimates” – A Reply

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Ms. Tsakok [1] has done a useful job in summarising and commenting on the various estimates of shadow prices which appeared in the symposium on shadow pricing in Pakistan, published in the Summer 1979 issue of this *Review*. However, her discussion of my paper in the symposium [3]¹ is misleading regarding a number of points of detail, and, more seriously, obscures the general thrust of the argument. Considering the detailed points first, Ms. Tsakok is concerned with a comparison of the values of the key shadow prices given in the different studies as well as with the explanations for the variations between the different estimates. However, JW discusses not the estimation of a set of shadow prices for Pakistan, but the broader question of the implications of the use of an income-weighting system, described conventionally as ‘social’ analysis, in project appraisal. The shadow prices attributed to my work in Table 1 of Ms. Tsakok’s paper [1] are not in fact contained in JW, but are taken from an earlier mimeographed paper written in 1977. These shadow prices are preliminary estimates, which are not used in my more detailed study on cost-benefit analysis in Pakistan [2].² Furthermore, it is strange to find these estimates cited, since they conflict with the analysis of JW, which is the paper under review.

Firstly, Ms. Tsakok gives my estimate of the Standard Conversion Factor (SCF) as 0.91. In JW, the SCF is used in the discussion of v , the value of public income relative to average private consumption. There, the SCF is taken to be 0.85, which is the same figure as that attributed to Squire-Little-Durdag by Ms. Tsakok. Secondly, Ms. Tsakok refers to my estimate of the Consumption Conversion Factor (CCF) of 0.98. However, JW contains no reference to a CCF. There, in the analysis of v , the SCF is used as a proxy for the CCF. Thirdly, Ms. Tsakok gives my estimate of v as within a range between 1.3 and 2.8. However, much of the analysis of JW is concerned with the difficulty of estimating a meaningful value for v . In particular,

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¹Henceforth, following the terminology of Ms. Tsakok, this paper will be referred to as JW.

²This study illustrates the application of the UNIDO method of appraisal.

its sensitivity to the choice of the Consumption Rate of Interest (CRI) is stressed. Since one of the conclusions of JW is that the Squire-van der Tak weighting system is difficult to apply because of the problem of estimating v , and since a very wide range of possible values of v is identified, it is odd that such a narrow range should be referred to by Ms. Tsakok. Fourthly, Ms. Tsakok attributes to my analysis a weight of 1.0 for consumers at the Critical Consumption Level (CCL). This follows since the CCL is defined by the equality

$$\frac{d_i}{v} = B$$

where d_i is the weight given to consumers at the CCL in relation to average consumers, and B is the CCF. As my earlier paper used a value of 0.98 (rounded to 1.0) for the CCF, $\frac{d_i}{v}$ at the CCL must equal 1.0. However, this approach again conflicts with the argument of JW since it follows the weighting system of Squire and van der Tak, whilst JW suggests an alternative approach to weighting which does not involve the use of the parameter v . Finally, with reference to my treatment of the opportunity cost of public investment, q , Ms. Tsakok points out rightly that my discussion of this parameter in JW is very brief. However, a more detailed analysis is given in the study on the application of the UNIDO methodology [2] referred to above, although both the practical and conceptual problems regarding q , mentioned by Ms. Tsakok, are not solved satisfactorily.

The general thrust of the argument of JW is to question the usefulness of the extension of cost-benefit appraisals into the field of 'social' analysis. JW argues that there are major difficulties in applying an income-weighting analysis, both in estimating actual income changes created by a project and in identifying a relevant set of weights to revalue these income flows. It suggests that decision-taking on projects on its own is unlikely to be an effective policy instrument in achieving significant income redistribution. Ms. Tsakok, by carrying out an overall survey of the various shadow price estimates, does not distinguish clearly enough between problems related to 'social' analysis and those related to 'economic' or efficiency analysis. It is clearly correct to point to the inadequacy of some of the calculations in the symposium papers due to poor data, and to stress the need for frequent revisions of estimates as more data become available. However, JW stresses the particular problems for the application of social analysis, resulting from the intrinsically subjective nature of key parameters such as the CRI and v . Even with an improved set of basic data these problems will remain. Furthermore, the application of social analysis requires considerably more additional information on specific projects, if the income changes created by projects are to be identified in a meaningful way.

Ms. Tsakok ends her comments with the suggestion that what is needed is an in-depth study of the usefulness of shadow pricing analysis as an aid to decision-

taking. It is important to remember that the literature on cost-benefit analysis for investment appraisal in developing countries considered originally that only a few major adjustments to market prices would be required, relating chiefly to the discount rate, the exchange rate for foreign currency, the wage for unskilled labour, and the prices of some internationally traded commodities. In recent years, the development of the so-called comprehensive methods of cost-benefit appraisal has meant that a complex theoretical structure has been erected whose application, in principle, involves a comprehensive set of detailed shadow price estimates. The papers in the symposium illustrate many of the problems involved in producing such a set of estimates, and Ms. Tsakok is correct to stress the limitations of those given for Pakistan. However, there is considerable evidence from a number of countries that decision-taking on projects can be improved by introducing relatively crude adjustments to the market prices of a relatively small number of key parameters. The position implicit in JW is that whilst there may be major difficulties in introducing a detailed 'social' analysis of projects, a relatively simple form of 'economic' or efficiency analysis can be a useful aid to decision-taking.

It is not a question of whether the relatively simple shadow prices used in such an analysis are wholly accurate reflexions of the full effects on the economy of using inputs or producing outputs on a project. The question is whether they capture these effects more accurately than do prevailing market prices. In many economies, market prices are such inadequate measures of full costs and benefits, however these are defined, that this is likely to be the case. However, this relatively simple type of cost-benefit appraisal is a very long way removed from the application of detailed and comprehensive sets of shadow prices. As Ms. Tsakok suggests, for many economies the practical effects of this comprehensive approach may remain small because of the problems involved in the estimation of the necessary parameters.

REFERENCES

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