

BIAS IN INCOME ELASTICITY ESTIMATES DERIVED FROM EXPENDITURE PER FAMILY DATA—A NOTE*

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IN calculating the income elasticities one often faces the problem of effects of family size on the consumption of various commodities. It is generally recognised that these effects are different on different commodities. Messrs Houthakker H. S. and Prais J. S.,¹ have stated that an increase in the household size increases the household consumption of necessary and inferior goods at the cost of luxury articles, and decreases the per capita consumption of both necessities and luxuring while increasing the per capita expenditure on the inferior commodities. The recognition of such effects of family size has led the above authors to provide the additional definitions² of "luxuries" and "necessaries" on the basis of these influences.

It is also generally recognised, therefore, that these effects should be explicitly taken into account by considering the data on "per capita" or "per consumption unit" basis rather than on "per family" or "per household" basis. Quite frequently, however, information regarding family size is not available and one has to work the consumption analysis by taking family/household as a unit without considering the effects of family size.³ But it is not always realised in such studies that the elasticities obtained by taking family as a unit might be significantly different from the real income elasticities.

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¹ Prais, J.S., and Houthakker, H.S., *Monographs—4—The Analysis of Family Budgets*, 1955, pp. 127. "In particular commodities, for commodities, that are luxuries (income elasticity greater than unity) the consumption will decline with an increase in household size."

² "A common definition of luxury is that it is a good the income elasticity of which is greater than unity; correspondingly, for necessary it is less than unity. An alternative procedure suggested by above considerations is to define a good as a luxury if its consumption decreases with an increase in household size; that is, it is sacrificed to the consumption of necessities the demand for which increases with the household size." *Ibid.*, 90.

³ As analysed by:

- (a) Guha Thakurta, B. K., "A Note on Changing Family Expenditure in Calcutta During 1939-58", *Artha Vijnana*, Vol. 5, No. 3, September 1963, Gokhale Institute of Politics and Economics, Poona, p. 190.
- (b) Mitra, Ashoka and Lokanathan, "Demand Forecast for Consumer Goods", National Council of Applied Economic Research, New Delhi 1959, p. 14 (note 2).