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ESTIMATING A SYSTEM OF DEMAND EQUATIONS FOR LOW-INCOME HOUSEHOLDS FROM A BIASED SURVEY OF EXPENDITURES

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Abstract. A few consistent demand systems for household expenditures have been around for many years. In this study we tested an alternative system that also satisfies the restrictions that theory places on such systems. The test shows how a survey of expenditures, with biased and missing reporting, can be treated as long as a subsample is reasonably accurate with respect to reporting of expenditures, and the reporting of income is reasonably accurate for the whole sample. Estimation of a model on this subsample enables us to devise a consistent model that allows the initially biased reporting to be corrected and also furnishes corrected expenditure shares and demand elasticities. Demand elasticities can give us important insights into expenditure patterns and how these are affected by price and income changes. The spending patterns of households are rooted in the fundamental forces of the socio-economic circumstances of societies. Policies targeted at specific socio-economic groups can therefore be made more efficient through knowledge about the target groups' specific expenditure patterns and demand elasticities. The averages of such measures for the population at large are of limited use in this respect. Estimates from a specific area can be used to simulate how subsistence quantities, own price elasticities and income elasticities may vary from household to household within specific income groups. Knowledge of how demand elasticities and spending patterns change with household income may thus facilitate policy efforts of government to serve the needs of those communities better. The estimated demand elasticities discussed in this paper show some interesting patterns when income increases or the prices of broad expenditure groups change.

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