Introduction

The health benefits of the consumption of milk and dairy products are well known facts. Despite this, the per capita consumption of milk in Malawi is very low. Tebug (2012) estimated it at 4.6 kg/capita/year, which is well below the African average of 15 kg/capita/year, and significantly lower than the 200 kg/capita/year recommended by the World Health Organisation.

Key to increasing the demand for milk is to understand what determines it. The literature on the demand for food products (particularly on dairy) in Malawi is scarce and an exception is the paper by Ecker and Qaim (2011) which used information collected by the second Integrated Household Survey (IHS2) 2004-05. This paper updates some of those results using the third Integrated Household Survey (IHS3) 2010-11.

Data

Estimation of the demand for dairy products was carried out using data from IHS3 conducted by the National Statistical Office of Malawi over the period of March 2010 to March 2011. The sample size (12,271 households) is representative at national, district, urban and rural levels.

The consumption data were collected as part of the household questionnaire, together with information on socio-demographic and economic characteristics of individuals living in the household. Table 1 presents the description of the data.

Methodology

A three-stage Almost Ideal Demand System (AIDS) was estimated with budget share for good i given by (1). \( p_j \) is the price of commodity j, \( x_t \) is total expenditure and \( p_t^* \) is the Stone’s price index defined by (2):

\[
\log p_t^* = \sum_{k=1}^{n} w_{kt}\log p_{kt}
\]

The demand properties were imposed during the estimation. To overcome the zero expenditure problem for some food groups, the two-step approach proposed by Shonkwiler and Yen (1999) was used. The unconditional elasticity were computed using the Carpentier and Guyomard (2001) formulae. The food categories/products considered in each one of the three stages are shown in Figure 1.

Results

Tables 2 to 4 present the average Marshallian and expenditure elasticities. Elasticities and their statistical significance were computed using bootstrapping.

Conclusions

- All the dairy products are price inelastic except chambiko and the own-price elasticities show that dairy products are normal goods.
- Expenditure elasticities show that consumption of milk in Malawi increases with income.
- Powdered milk (mostly imported) is a substitute for fresh milk (domestically produced).
- Results show that to expand the consumption of milk it is important to keep dairy prices relatively low or maybe to subsidise consumers.
- However, a more sustainable way of securing lower prices could be by both expanding the domestic supply of milk and monitoring the marketing margins along the supply chain

References


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