ANALYSIS OF QUADRATIC ENGEL CURVE PATTERN FOR SECTORAL HOUSEHOLD FOOD EXPENDITURE IN SRI LANKA

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Engel curve reveals the income and consumption relationship of households (HHs) and it plays an important role in HHs consumption budget share. Complementing the existing empirical studies on the Engel curve, the present study investigates Engel curve pattern for household food expenditure based on sectoral wise analysis using Sri Lankan data, making this study unique within the studies on Engel curve. The objective of this study is to investigate monthly food consumption expenditure behavior and estimate Engel food elasticities in urban, rural and estate sectors in Sri Lanka. Data were obtained from Household Income and Expenditure Surveys in 2016, 2012/13, 2009/10 and 2006/07 and HH food expenditure, total expenditure of HH, HH size, age and education level of the HH head have been chosen as the variables. Badulla, Kandy, Nuwara-Eliya and Ratnapura districts were selected as the study area where minimum of 5% of the population was selected in all three sectors. The total sample size was 13,881. The Quadratic double log form model was applied for regression analysis. Total household expenditure was used as a proxy for income. OLS technique was employed to examine the relationship between the variables. In order to execute the model, firstly data were estimated by OLS and then checked by Wald test. Appearance of all four quadratic Engel curves was shown initially for normal goods and then for inferior goods. Our results reveal that Engel curve food consumption pattern of the estate sector was highly influenced and affected by income changes; the urban sector had easily responded for inferior goods consumption when income increases while the rural sector had tolerable response for food consumption pattern. The Engel food elasticities for all sectors were significant at 1% level and all the elasticities were greater than one, which implies that all included food items were normal in nature. The estate sector had higher food elasticity. Food is a necessity commodity with HH allocating a large part of their budget towards food expenditure. Food budget share is even higher among poor HH especially in the estate sector. Therefore, special attention is required while implementing tax policies on food, as most of the tax on food are borne by poor HH. Thus, it would be better if tax policies are applied in a way that will have less impact on low income groups in tax applications for compulsory expenditures like food items.

***Keywords*:** Engel curve, Quadratic double log function, Wald test, OLS