

ABSTRACT

Non-Communicable Diseases (NCDs) have surpassed infectious diseases as the leading cause of death in Indonesia. Unhealthy diet—especially habits formed early in life—shapes later-life NCD risk. Sugar-Sweetened Beverages (SSBs), which are energy-dense and nutrient-poor, are widely consumed due to taste preferences, massive advertising, and its affordability, and are often treated as demerit goods. This study derives a SSBs demand system and estimates its price elasticities to provide evidence for fiscal measures aimed at reducing excessive SSB intake.

Using Indonesian household data from the 2023 Survei Sosial dan Ekonomi Nasional (Susenas), we estimate a Quadratic Almost Ideal Demand System (QUAIDS) over five beverage groups: sweetened condensed milk, bottled water, ready-to-drink tea, packaged fruit juice, and Ready-To-Drink beverages (RTDs). Budget shares serve as dependent variables; prices and income enter the system as independent variables alongside demographic controls (household size, age and education of the household head, and urban–rural residence). From the estimated parameters we derived uncompensated own- and cross-price elasticities.

Overall results show that Indonesian SSB demand is positively associated and statistically significant with income. Furthermore, SSBs demand is price-elastic (own-price elasticities are negative). Cross-price estimates indicate complementarity across several SSB categories and substitution between SSBs and bottled water. These findings suggest that an excise tax on SSBs can reduce consumption and may contribute to decrease premature mortality associated with excessive sugar intake.

Keywords: Sugar-Sweetened Beverages; Indonesia; Fiscal Policy; Demand System; QUAIDS; Uncompensated Price Elasticity; Uncompensated Cross-Price Elasticity.

