



Tropentag, September 10-12, 2025, hybrid conference

“Reconcile land system changes
with planetary health”

Economic drivers of household food choices: income elasticity of food demand in selected urban and rural districts of Tanzania

EWARD MUSHI¹, ROSELYNE ALPHONCE², BETTY WAIZED³, MIKIDADI MUHANGA⁴, NILOOFAR KHALILI⁵, CONSTANCE RYBAK⁶

¹*Sokoine University of Agriculture, Dept. of Agricultural Economics and Agribusiness, Tanzania*

²*Sokoine University of Agriculture, Department of Agricultural Economics and Agribusiness, Tanzania*

³*Sokoine University of Agriculture, Department of Agricultural Economics and Agribusiness, Tanzania*

⁴*Sokoine University of Agriculture, Dept. of Development and Strategic Studies, Tanzania*

⁵*Leibniz Centre for Agric. Landscape Res. (ZALF), Germany*

⁶*Humboldt-Universität zu Berlin, Thae-Institute - Div. Urban Plant Ecophysiology, Germany*

Abstract

Economic access to food is essential for promoting healthy diets and fostering sustainable food systems. Households in low-income countries like Tanzania spend the largest share of their income on food, which limits their economic access to healthy diets. Nutrition-sensitive interventions targeting household income can enhance access to healthy diets. Achieving this goal requires understanding how household food demand responds to changes in income. This study employed the Quadratic Almost Ideal Demand Systems to explore the responsiveness of household food demand to income changes. Cross-sectional data were collected using a structured questionnaire administered to 549 households in Ilala (urban) and Mkuranga (rural) districts, Tanzania. Findings confirm that the highest proportion of household income (0.66) is spent on food. The demand for each food increases with income, as indicated by positive income elasticities of demand. Households exhibit elastic demand for legumes, meat, fish, fruits, and milk, disclosing that these food groups are considered luxuries since a small increase in household income leads to a higher demand for them. Staples (cereals, roots, and plantains), oils, fats, and vegetables show the most inelastic demand, implying they are necessary foods. The demand for staples is highly elastic to income changes among rural households, while for their urban counterparts, it is highly inelastic. This illustrates a strong reliance on staple foods in rural areas, potentially compromising their dietary quality. Urban households display greater income responsiveness in their demand for legumes, meat, fish, fruits, and milk, which are regarded as healthier foods. Strikingly, households with high socioeconomic status (SES) have higher income elasticity of demand for staples, legumes, fats, oils, and vegetables than their low and middle-SES counterparts. This can be explained by high-SES households substituting similar food items with higher-quality or premium brands, ultimately increasing per unit expenditure on these food categories. Collectively, irrespective of spatial location (rural/urban) and household SES, these findings reveal that, except for vegetables, household demand for healthy foods (fish, meat, legumes, and fruits) is highly influenced by changes in household incomes. Thus, income-boosting initiatives have the potential to improve households' access to quality diets and promote the sustainability of food systems.

Keywords: Economic drivers, food choice, income elasticity of demand, rural and urban, Tanzania