

## **Sustainable consumption and population dynamics in Brazil**

Topic: Sustainable Development Goals

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This paper analyses sustainable consumption in Brazil, highlighting the consumption profile of sustainable products by income level and household composition. We integrated the results from structural equation models (SEM) to a demographic scenario and a Computable General Equilibrium (CGE) model. The structural equation model was estimated from survey data from the Brazilian Ministry of the Environment, collected in 2012, designed specifically to understand attitude, knowledge, and behavior towards sustainable consumption. The SEM model provided results about pro-sustainable consumption attitude, pro-sustainable consumption behavior, supply constraints, effective sustainable consumption practices and organic consumption preferences in Brazil. Results were disaggregated by sex, age, and household income. While the SEM estimates provided a rich set of preferences for overall organic and sustainable consumption, it lacks the ability to quantify actual consumption of organic and certified products. To fill this gap, we used data from the 2008-2009 Brazilian Household Budget Survey. Actual consumption of both organic and certified products was stratified by income and household composition (age groups). While data from the latter survey allowed us to analyse how the pattern of organic consumption varies along income and household composition, the former survey provides us estimates of preferences. To estimate a future consumption scenario for Brazil and the impacts of changes in household consumption preferences towards organic products we employed a dynamic computable general equilibrium model. Household income growth, economic growth, population dynamics, productivity, and energy efficiency gains were explicitly modelled. A dynamic path for consumption preferences towards organic products was also included. Our simulation assumes that preference for organic consumption increases from 2016 to 2050, varying among income deciles. By 2050, Brazil would experience an overall increase in organic consumption, despite differences between poor and rich households regarding preference and share of income spent in organic products. This result is the consequence of the combined effect of income growth (faster for poorer households) and preference change (faster for richer households). The projected consumption path suggests that increase in organic consumption may generate positive effects for all households, including the poor, by increasing production, employment demand in sectors where the poor are more likely to be employed, and family income.