

Economic impact assessment of food waste reduction on European countries through social accounting matrices

Campoy-Muñoz P.

Cardenete M.A.

Delgado M.C.

Food waste is becoming a major global issue, threatening sustainable food systems and generating negative externalities in environmental terms. To highlight the associated cost to society from an economic perspective, studies estimate the amount and monetary value of the wasted food by households and along the supply chain. In this paper, we adopt a different point of view by assessing the effects of food waste reduction on national economies in terms of total output, Gross Domestic Product (GDP) and employment. We use linear multiplier models based on social accounting matrices with a highly disaggregated agricultural account for the year 2007. The proposed methodology is applied to a sample of European countries with different economic structure, i.e., Spain, Germany and Poland. The results show that the most significant impacts are due to a reduction in the avoidable portion of the wasted food by households across the countries. However, the size of these impacts depends on the economic structure of the country in which reduction could be implemented, highlighting the need to tailor measures intended to reduce food waste. © 2017 Elsevier B.V.

Food waste

Linear CGE models

Social accounting matrix

Supply chains

CGE model

Economic perspective

Economic structure

European Countries

Food waste

Gross domestic products

National economy

Negative externalities

Matrix algebra

computable general equilibrium analysis

economic impact

employment

food

Gross Domestic Product

numerical model

solid waste

waste management

employment

food waste

Germany

gross national product

household

human

Poland

Spain

statistical model

Europe