What Are Impacts of Waste Treatment Option on Green Products' Prices by Sector?

Topic: (8.3) Environmental IO Modelling (5) Author: Xiuli LIU

This paper established a framework of Waste treatment Input-Occupancy-Output (IOO) table which integrated the environment and economic costs of waste treatments with the normal IO model. Based on it, an innovative model to calculate price change rate of green products by sector compared with their basic price (it was assumed to be 1 for each sector) in 3 scenarios was established. The model was applied in sewage treatment case in China, price change rates of 51 sectors in 3 scenarios were evaluated. The input-output table of China as a base was published by China Statistical Bureau. The treatment cost for sewage of secondary industry was from China Statistical YearBook, the data of the other industries was cited from Tan et al. (2015). The results showed that, the price increase rate of Chemicals, Metal smelting and pressing and Electricity, steam and hot water production and supply (excluding hydroelectric power) ranked top 3. The price increase of 43 sectors were mainly caused by other sectors' added sewage treatment cost. The results in 3 scenarios were compared, the producers and the administrative organizations were suggested to pay charges for disposing sewage to make production which could bring more price advantage for green products.