

## **Input-Output Relation and Distribution of Emission-Recycling-Final Disposal Coefficients of Japanese Industrial Wastes at the Establishment Level**

Topic: Enterprise input-output approach, environmental issues and policy making II

Author: Hitoshi Hayami

Co-Authors: Masao Nakamura

Technical coefficients should be stable if the "ceteris paribus" is established. But output-waste relations vary across establishments and by type of wastes. It causes uncertainty to the controlling authority such as the local government. There are a few establishments with extremely high coefficients of some specific wastes (such as animal and vegetable remnants, coal cinder etc.), and many establishments with relatively small or zero amount of wastes, although its pattern of distribution considerably differs by type of waste. It may give some reason for the authority to regulate quantity of waste in the upstream sectors. An empirical comparison with different industrial wastes can derive implications to CO<sub>2</sub> emission that is almost no quantity regulation and of which coefficients per output are mainly determined by fuel consumption not concentrated in a few sectors unlike some industrial wastes (such as waste paper, scrap glass, etc.).