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Evaluating the impacts of waste treatment management modes on product price by sector in a macro economic systemXiuli Liu¹, Shouyang Wang¹ and Geoffrey J D Hewings²¹Chinese Academy of Sciences, China²University of Illinois, USA

This paper established an Input-Occupancy-Output (IOO) table that was integrated with several alternative waste treatment management modes. Based on this table, a Ghosh price model was developed to evaluate the price changes in each sector compared with their traditional prices for the direct and indirect impacts of costs of waste treatment management modes. The model was applied to the waste water treatment case in China. In each waste treatment management mode, the price change of each sector was evaluated. The results revealed that different waste treatment management modes generate different ranks for the price changes by sector. There are 22 sectors whose prices increase are mainly caused by other sectors' added waste water treatment costs. An optimal combination of two waste treatment management modes for 42 sectors generates the minimum price increase for all sectors. The model can help to set reasonable price for each sector systematically when a waste treatment management mode is adopted.

Biography

Xiuli Liu is a Professor from Chinese Academy of Sciences and a Visiting Scholar of the University of Illinois at Urbana-Champaign in 2008 and 2012. Her research fields are mainly focused on input-output analysis linked with econometric model, water, energy, population management and sustainable development. She had published over 80 articles in national and international journals and 3 monographs (1 in English, 2 in Chinese) and co-edited 10 books. Over 50 international conference papers were authored by her, of which 5 were specially invited presentations. She has been Principal Investigator of 15 research projects and Co-PI of another 14 research projects. She is the Secretary Vice General, Executive Member of China Input-Output Association (2010-2019). She is also an Editor of *Frontiers in Environmental Science*, *Journal of Systems Science and Mathematical Sciences* (2014-2019) etc. and reviewers of many international and national journals.

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