

The creation of a dual Waste and Multi Regional Input-Output model for Australian conditions

Topic: Environmental IO models 1

Author: Christian John Reynolds

Co-Authors: John Boland, Kirrilly Rebecca Thompson

Waste is an inevitable part of production and consumption in the Australian economy. However, wastes economic and environmental impact is misrepresented, undervalued, and misunderstood by society at large. In Australia this miscomprehension is deeply engrained with various states and territories having differing conceptions of what waste is and how to manage it.

This paper will lay out the theoretical processes (and problems) of creating and applying both a Waste Input-Output (WIO) and Multi Regional Input-Output (MRIO) model to Australia. After, discussing the developmental histories of both models, this paper will then discuss the operation, creation, and the merging of the two, as well as the particular difficulties that are due to the nature and structure of the Australian economy and government. Specifically, the challenges in applying the WIO methodology to Australia's states and territories will be explored, as this has not previously been attempted to this author's knowledge.

To illustrate the effectiveness of MRWIO as a tool for sustainable policy development, this paper concludes by displaying a basic MRWIO model for Australia. A hypothetical scenario of changes to the management of food waste and compost will be used to illustrate and demonstrate the impacts caused by differing waste management policies in Australia's states and territories.

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