

Scarcity rents and backstop technologies in exhaustible resources modeling

Topic: Special session on rent in IO models

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In addressing problems in the dynamics of exhaustible resources input-output modelers have a number of options. In this paper we shall discuss and compare two methods, both based on linear programming techniques. One of these methods focuses on the total stocks of primary resources, while the other one focuses on constraints in the supply of primary resources to the individual sectors. In both cases, the assumption of a one-to-one relation between technology and commodity is replaced by an assumption involving multiple technologies producing the same good.

Both methods are remarkably different in terms of procedure and outcome. This is valid, for example, for scarcity rents where an important role is played by so-called backstop technologies. Also a role for property rights in I-O structures is implied, where classical roots of specific concepts need to be considered.