An Input-Output Model with Resource-Constrained Sectors: An Application to the Agri-Food Development Strategy in the Context of a Portuguese Bi-Regional Model

Topic: Input-Output Analysis for Policy Making

Author: Eduardo Barata

Co-Authors: Ana Lucia Marto Sargento, Luís Cruz, Pedro Nogueira Ramos

The Portuguese economy may be divided into two main regions (not coincident with the official NUTS II arrangement): the Interior and the Coast. The Interior region amounts to 11% of national GDP and remains very dependent on agricultural exports (mainly to the Coast). Accordingly, one very common policy proposal for the Interior economy is to add value to these products by transforming and delivering them elsewhere as agri-food transformed products. This argument is based on the idea that the agriculture sector production capacity in the Interior is limited, such that the products used in the new agri-food plants have that destination instead of being directly exported. This paper analyses the case where an agri-food expansion is admitted, but the farming products used in the new production are subtracted from the exogenous exports or from other sources of final demand. This study is based on a bi-regional Interior-Coast version of the MULTI2C input-output model, developed by a group of researchers, from the Coimbra University, Portugal. The local transformation of the agricultural products in the agri-food industry, instead of other untransformed uses, has (as predicted) a positive impact in regional GVA; but this impact is relatively small, less than the one that might arise if the agriculture itself could be expanded to match the additional demand. Furthermore, the impact of this kind of agri-food expansion is smaller than those that would result from other shocks on the demand for other products not constrained by resources availability. As a rule, the major local impacts in the Interior region derive from the increase on the demand for the so-called "non-traded" products, or other products with high income effects, namely because households' income is in its turn largely employed in those "non-traded" products (e.g., personal services).