

A SOCIAL ACCOUNTING MATRIX FOR A STRUCTURAL ANALYSIS OF THE BASILICATA'S AGRIFOOD SECTOR

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1. Introduction

Local agri-food products are increasingly perceived as a form of cultural capital, representing potentially fruitful resources for rural development (Brunori and Rossi, 2000; Marsden et al., 2000). Italy and its regions offer a rich and diverse agricultural and food heritage that has led to the creation of several quality agri-food systems (Platania et al., 2015) scattered across the whole Italian territory that could create new opportunities for rural development. Despite their ability to absorb disturbances and maintain their functions (Conway, 2007; Thompson^[1] and Scoones, 2009), it is important to develop economic models to analyse the relationships among the components of food systems, in order to identify their strengths and weaknesses and drive the implementation of sectoral policies (Jarosz, 2000). In this framework, it is important to point out that any strategy of sectoral development should be based on top-down multi-sector approaches, which take into account the dynamics of the agri-food sector within the wider regional economic system.

Based on that, the aim of this work is to analyse the structure of the Basilicata's agri-food system using a multi-sector model based on a Social Accounting Matrix (SAM) (Rocchi et al., 2015; Viccaro et al., 2017, 2018), specifically developed for Basilicata, an Italian region characterised by a highly specialised agri-food sector (Platania et al., 2015).

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2. Materials and methods

The SAM used in this study is a two-region (Basilicata vs. Rest of Italy) matrix referring to 2011. The structure of the matrix includes a total of 347 accounts; the account concerning the food industry activities has been broken down into ten sub-sectors, while agriculture has been broken down into 5 production activities.

Starting from the SAM, the structural analysis of Basilicata's agri-food system was carried out using the sub-system approach proposed by Momigliano and Siniscalco (Momigliano and Siniscalco 1982; Viccaro et al., 2018). The input-output approach is based on the representation of the interdependencies existing between different economic sectors. In the sub-system approach the production system is divided into blocks, constituted by the shares of the production sectors represented in the I-O table that are directly and indirectly committed to satisfying the final demand towards different categories of goods. Although the reclassification by subsystems (based only on the matrix of coefficients representing the interdependencies existing among different production sector) does not consider the feedback through the consumption, the application of the sub-system approach to a two-region model, like that used in this study, makes it possible to extend the analysis to the participation of each region's sectors in the fulfilment of the demand addressed to the production sectors of the other region.

3. Results

The results of the subsystem-analysis in Table 1, show the contribution of each sector of Basilicata's agri-food industry to four different subsystems of the Italian economic system (Basilicata and Rest of Italy) satisfying certain "blocks" of final demand. Comparing the data classified as "sector", it is possible to see how industrial activities tend to meet the sectoral specific demand more than the agricultural activities (except only those of the farms specialised in horticulture that represent, however, a negligible component of Basilicata's agriculture). The participation in the subsystems associated with the demand of the other sectors of Basilicata's agri-food industry is quite variable in the case of the regional food industry, ranging from 15% of the activity of grains and starch products to 2.2% of the meat-processing industry. The value is more homogeneous in the case of agricultural sectors, which commit, on average, around 11% of their activity to the participation in other subsystems. The datum shows the degree of integration between the

components of the agri-food system and could be an interesting indicator of possible areas for innovation to promote its competitiveness, also to fulfil the final demand for accommodation and food services.

Considering the participation in subsystems oriented to the final demand of the other regions (Rest of Italy), the higher percentage in agricultural branches may represent an interesting opportunity for the economy in so far as it expresses the capacity of “attracting” (either directly or indirectly) a higher share of final demand towards the regional production system.

Tab. 1 – Share of Basilicata’s agri-food sectors to the various “blocks” of the production area

Agri-food sectors	Blocks of final demand			
	Sector	Other agri-food sectors	Other regional sectors	Rest of Italy
Cereal grains	46.5%	11.8%	3.2%	38.5%
Horticulture	76.0%	3.3%	7.3%	13.3%
Permanent crops	45.9%	12.5%	3.3%	38.3%
Livestock	46.5%	11.6%	3.2%	38.7%
Mixed	46.2%	11.9%	3.2%	38.7%
Meat	81.2%	2.2%	3.8%	12.8%
Fish	42.1%	11.5%	22.6%	23.8%
Olive oil	70.7%	5.9%	6.9%	16.5%
Vegetable oils, sugar, pasta	76.3%	2.6%	6.3%	14.8%
Vegetables and fruits	67.3%	6.2%	8.5%	18.0%
Dairy products	77.3%	2.2%	4.5%	16.0%
Cereals	47.9%	15.2%	2.9%	34.1%
Animal feed	54.4%	12.2%	1.1%	32.3%
Wine	61.4%	5.6%	5.5%	27.5%
Water and other beverage	70.6%	1.9%	10.0%	17.6%

To enhance the positive impact of agri-food production activities on the regional economic development, two basic strategies may be followed.

The first consists in attracting increasing shares of non-regional demand towards Basilicata’s products: if the participation in the market of agricultural commodities (like in the case of cereals for the pasta industry) is an important business segment in Basilicata’s agri-food system, it can and must be made stable by innovation processes aimed at increasing the qualitative differentiation of products. The second strategy could be described as the

strengthening of interdependencies within the regional production system aimed at increasing the share of the multiplier effect remaining within the regional economic system. The analysis has shown that in Basilicata the integration between food production and restaurant and accommodation services is lower than in other Italian regions. But there also is much room for intensifying the interdependencies of the regional agri-food system with elements of the public administration (such as, for instance, public providing activities in school canteens or in hospitals). These market opportunities would be useful to improve final consumers' awareness of regional production peculiarities and might have long-term additional effects on the growth of demand addressed towards the regional production system.

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