

A Social Accounting Matrix model approach to appraise sectors with a zero deficit public budget

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The aim of this paper is to develop a mixed empirical methodology to identify sectors with capability of growth of output and employment, in a zero public deficit framework, considering also the environmental implications of each sectors production. The economic activities are ranked and selected following their output, employment and emissions multipliers. For empirical analysis, it is used a Social Accounting Matrix of the Spanish economy for 2008.

In the current context of economic crisis (although it is beginning to overcome), it is particularly necessary to determine which economic sectors have a special capability to develop the growth of output and employment, without forgetting the mandatory environmental commitment, in order to prioritize the destination of public spending. Thus, this paper proposes, as its principal novelty, an empirical way of determining sectors with greater potential of the economy in a zero deficit context, using different approaches that complement each other, with the idea of identifying those areas where a higher rate of return exist as well as those where reductions can have less impact.

The first of these approaches is a description of the economic structure of the country through classic output multipliers, to describe the general behaviour of the Spanish economy activities. The second one classifies industries according to their capacity to generate employment. This analysis is completed by evaluating for each branch of the economy their impact on environment, using as proxy their Greenhouse Gases (GHG) emissions.

For empirical analysis, we use a Social Accounting Matrix of the Spanish economy for 2008 (SAMESP2008) estimated by the authors. Since the last "official" Spanish symmetric table economy refers to 2005, this paper uses a symmetric matrix obtained from the latest published tables (at the time of its completion) of Supply and Use of the Spanish economy , referring to the year 2008. The symmetric table is obtained "industry by industry" and following the fixed product sales structure assumption), taking into account that detailed micro SAM contains 84 accounts: 73 productive sectors, 2 production factors (Capital and Labour), 3 institutional sectors (Households, Enterprises and Government), 3 accounts for taxes and subsidies, a Saving- Investment account and 2 accounts for the Rest of the World (European Union and Rest of the world).

In order to analyse the context of zero deficit rule, it is considered in this paper that Public Sector (Government account) is the only exogenous variable, assuming that all other industries and institutional sectors are working to meet their needs. This can imply a bias, especially because of the endogeneization of foreign sector, generating an overestimation of the multiplier effect and contravening the hypothesis of "small country". To solve this problem, it's proposed to use a special version of well-known linear SAM model, with a slight modification to maintain imports as exogenous, working with an extension of domestic technical coefficients matrix.

To evaluate the efficiency of public spending and identify areas that should be applied for attaining higher economic growth and employment, the previous calculations were performed, taken as exogenous variable the government account. This simple initial exercise should be taken as a mere qualitative and incipient indicator of this efficiency measure, without following quantitative values. There is a strong restriction for this: it should be borne in mind that an investment in any sector by the Government means, in times of austerity and deficit zero, a withdrawal of resources from other sectors, with the consequent negative impact on growth and employment. So, it is considered that maintaining a zero deficit as the public sector spends a monetary unit in a sector; public expenditure in other sectors is reduced, following four alternative criteria for select the sector of reduction.