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## The pattern of the spatial allocation of economic branches in Greece and the impact of economic crisis

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### Référence à la session / reference to the session

- F4 - Economic and productive transformations of territory
- D5 - Regional development differentiation

### Résumé / Summary

Abstract

The economic crisis of the recent years has affected every aspect of the economy and the society. The unbalanced development at different spatial scales from global to local, and the inequalities in wealth and

prospects within nations, regions and cities, generate new challenges in scientific research. The urban, local and regional impact of economic crisis constitutes one of the core issues for regional economic analysis during the last years, both in theory and in political practice.

On top of these developments, there is the impact of economic crisis in Greek economy and moreover, its negative repercussions to all Greek regions, with varying levels of intensity in each case.

The purpose of this article is to analyse the changes of the spatial allocation (in regional and prefectural level) of the economic branches during the economic crisis and to compare these changes with the respective spatial pattern of the pre-crisis period. In this framework, we explore the spatial allocation of economic branches in two separate time periods, the pre-crisis period which refers to the years 2000-2007 and the crisis period of the years 2008-2014. The variables used are employment and gross value added in the branches of economic activity, according to the classification of Hellenic Statistical Authority.

The methods used are Location Quotients and Shift-Share Analysis. Location Quotient is used to see the sectoral specialization of the spatial units. It estimates the share of an economic activity in a spatial unit compared with the corresponding share of this activity in the national economy. If the first is higher, the spatial unit is specialized in the specific economic activity. Shift-Share analysis is a structural method which is used in urban and regional economics, attempting to identify the causes of regional economic changes. It helps identify branches where a local or a regional economy has advantages over the national economy. A shift-share analysis takes the change over time of an economic variable, such as employment, within branches of a regional economy, and divides that change into various components. The traditional form of shift-share analysis (Dunn, 1960), which is used in this paper, is a comparative static model that splits regional changes into three components (Richardson 1978, Papadaskalopoulos 2000, Giannakis and Bruggeman, 2015): a) National growth effect or national share, b) Industry mix effect or proportional shift, and c) Local share effect or differential shift. The first component, is the portion of the change attributed to the total growth of the overall national economy. It equals the change in the regional variable had it increased by the same percentage as the national economy. The second component is the portion of the change attributed to the performance of the specific economic branch. It equals the change in the regional variable had it increased by the same percentage as the economic branch nationwide, minus the national growth effect. The last component is the portion of the change attributed to regional influences. It equals the actual change in the regional variable, minus the previous two effects. Other models have evolved that expand the decomposition into additional components, while some other have acquired a dynamic dimension (Arcelus 1984, Barff and Knight III 1988, Fotopoulos et al, 2010). However, they all identify the three main components that influence the variable changes (Esteban-Marquillas 1972, Fothergill and Gudgin 1979).

Finally, according to the size and also the sign of the two components (of proportional and differential shift), following the known classification of Boudeville (1966), we classify the spatial units into categories and we propose means of regional policy for each type of region.

The main results of the research show that in the first period, 2000-2007, the dynamic branches of economic activity are concentrated mainly in the metropolitan region of Attica, in the insular region of South Aegean (obviously, because of the existence of the tourism sector) and in a few other regions, while local advantages (according to the differential shift component) are shown in several regions except Attica. During the period of crisis, 2008-2014, where there is a general decline of employment (in all regions), Attica and South Aegean have lost their sectoral dynamism as well as some other regions, while few regions still resist. However, regarding the local share effects we observe that the more urbanized regions (Attica, Central Macedonia, Thessaly and Western Greece) show negative local shares. In contrast, the rest of regions are shown positive local shares.

Keywords: Shift-Share Analysis, Greek spatial units, economic crisis, dynamic economic branches, local share effects.

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