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The economic impact assessment of entrepreneurial ideas in the Smart Specialisation Policy: illustrative policy simulations in Baranya county

Unlike traditional place-neutral regional policies, the place-based Smart Specialisation Policy evaluates the possibilities of local growth based on local resources and capabilities. In this new approach, on the one hand, potential local development is promoted by a bottom-up learning and continuous evaluation process that involves all the necessary local stakeholders. The initiative encourages local actors to identify new market niches (EDP process), which might ensure long-run economic development and the structural transformation of the local economic system. On the other hand, however, due to scarce resources, all local ideas cannot be supported; thus, funds need to be concentrated to the most promising innovative areas (prioritization), creating critical mass and potential local spillovers, which is a key mostly top-down step of S3 involving the government. This selection between the entrepreneurial ideas must be based on a well-founded evaluation system that entails the assessment of the properties along different dimensions. Foray (2015) categorized the factors that need to be accounted for in the prioritization process into the following: 1) the novelty of entrepreneurial ideas, 2) regional spillover capacity, 3) economic effects. The complex evaluation of all of these aspects is not trivial. The individual features of different projects can be evaluated by field-specific experts, while spillover capacity is often approximated by network analysis (Varga et al., 2020b); however, the potential economic effects are rarely examined.

Although one of the goals of S3 is the promotion of economic growth, there is no consensus on the appropriate economic method that can estimate the expected economic effects of different S3 related interventions (Barbero et al., 2020). Only a few empirical works have attempted to apply economic impact assessment models for the evaluation of S3 policies (Barbero et al., 2020, Varga et al., 2020a, 2020b). However, the role of economic impact assessment in the prioritization process was only discussed in detail by Varga et al. (2020b). The main reason behind the lack of use of economic impact models is purely methodological since the evaluation of Smart Specialization causes unique modelling challenges (Varga et al., 2020b). First, a

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suitable economic impact assessment model has to incorporate the regional dimension since S3 is a regional policy. Second, since S3 is a sector-specific policy, the industrial dimension is also necessary. Third, the macroeconomic (national) dimension can also play a role in the policy and its potential economic effects thus models need to account for those aspects as well. Finally, S3 specific novel interventions (such as entrepreneurial and network policies) can create further methodological challenges.

In their paper, the authors used the GMR-Hungary model, which is capable of overcoming these methodological issues, to analyze the economic significance of different industries in Hungarian regions. As a potential extension of the prioritization process, they introduced a methodological framework in which already existing industries were selected (for S3 support) based on their regional spillover capacity (measured by the position in the local knowledge network) and their potential economic effects (measured by the GVA impact of different industry-specific investment supports).

However, Foray et al. (2021) further elaborated the prioritization process; the authors imagined the selection of potential entrepreneurial activities in a two-step process. In this framework, the first step can be identified as the standard prioritization, in which broader specialization areas (e.g., industries) are selected typically in a top-down manner using different methodological tools. In this step, economic impact assessment was shown as a useful tool of the selection mechanism to map the possibilities of regional development in the case of different industries (Varga et al., 2020b).

Past experience has shown that the priorities defined by S3 were not specific enough and that the priorities set were very broad, less focused and tangible, and that the bottom-up nature of the EDP was not really present. Thus, in the reimagined specialization the second step is identifying and selecting potential well defined entrepreneurial ideas (transformative activity/activities) within the broad specialization areas (selected in the first step) that can be developed into future activities that promote structural change. This process is imagined in a bottom-up manner served by the EDP. Another criticism of S3 was granularity. Although even early S3 works articulated the appropriate level of interventions (granularity), which does not mean the level of individual activities (ideas, projects) or the level of certain sectors, they did not clearly outline the appropriate level of implementation. In this respect, the new approach provides a more concrete way to define this, which can be a group of activities (a primitive cluster of activities). Ideally the appropriate selection of this group makes it possible to utilize the positive benefits of the linkages and spillover effects between each activity can be exploited.

The new approach therefore is based on the identification of priorities in a top-down way, within which the identification of the transformative activity as well as the implementation envisages in a highly decentralized way, based essentially on the bottom-up EDP.

Since new entrepreneurial ideas are typically not represented by existing industries in regions, the evaluation of potential economic effects must account for new, non-existing activities. This paper introduces an impact assessment framework to account for the potential economic impacts of new emerging local activities. Our illustrative simulations are based on the support of pre-selected entrepreneurial ideas in the Pécs region. We extended the GMR-Hungary model to integrate new ideas as new industries in the area, which requires a detailed survey of these innovative ideas of their economic dimensions (investment cost, input requirements, potential sales, etc.). Information was gathered by a detailed survey of the local entrepreneurial ecosystem in which we searched for potentially relevant innovative ideas in Pécs, the capital city of Baranya county. In this process, we identified a set of potential activities that are in line with the principles of S3 (local embeddedness, relatedness, etc.). Based on this, we selected the most promising ideas and assessed their technological and economic characteristics: their input and investment requirements, potential markets and their local and interregional relationships. Based on this database we were able to replicate these innovative ideas in the framework of the spatial computable general equilibrium block of the GMR-Hungary model and simulate their potential economic effects. By incorporating different ideas in the model, our simulation results allowed us to compare economic effects (employment, value-added, etc.) of the support of different transformative activities at the local and national levels and to perform cost/benefit analysis for various ideas.

By broadening the set of information that can be accounted for in the prioritization process, we believe that the prioritization process supported by economic impact analysis (and other complementary methods) can support and complement the bottom-up EDP process in the second step of specialization by providing information on the expected economic effects of different projects, that can be another aspect in the evaluation and selection of transformative activities. Economic impact modelling can effectively reduce the number of potential ideas, thus filter out activities that do not have real economic significance and improve the quality of regional strategies.

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