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EDITORIAL

Smart Specialisation on the move: reflections on six years of implementation and prospects for the future

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INTRODUCTION

Six years have passed since Smart Specialisation was incorporated in European Cohesion Policy and became the reference framework for innovation policy in European regions and countries. One year before the beginning of the new Cohesion Policy cycle, it is now the right time to strike a balance in the Smart Specialisation experience and support the design of the upcoming generation of policy strategies with sound evidence on what has worked and what not.

At the time of writing, the dreadful COVID-19 pandemic is sweeping the planet, causing severe health, social and economic hardship. Such difficult circumstances triggered the deployment of a wide array of policy initiatives at European Union (EU), national and regional levels to mitigate the COVID-19 economic and social crisis, along with the necessary health measures. Governments have made available a considerable set of initiatives and amount of resources to strengthen the welfare provided by the public, to halt employment and income losses, and to try to mend the scarring of the economic fabric. Rightly, this is where most political and social pressure is being applied at present.

However, the way out of the crisis is not just a matter of preventing the destruction of the economic fabric and restoring the pre-existent production capacity. A key for a sustainable post-pandemic recuperation is to discover and launch new and innovative activities that can provide high-quality growth opportunities and tackle the social and environmental challenges of our age. In that respect, the European institutions designed new stimulus packages, which will be supported by an unprecedented financial effort. The main goal is to steer the EU on a development path necessarily focused on environmental sustainability, territorial and social cohesion, with some of the key articulated objectives being the transition to a carbon-neutral economy, harnessing the possibilities of digitalization, fostering technological change in the context of globalization, and also contributing to strengthening European value chains and industrial capacity.

Against this background, within the future of place-based industrial and innovation policies, the Smart Specialisation approach can play a central role in supporting innovative activities that help territories discover new opportunities for more sustainable and inclusive economies. A necessary condition for this to happen is to make a critical examination of the Smart Specialisation experience starting from the processes deployed in the territories and using data on the real implementation of the policy.

The papers in this special issue identify and analyse five different challenges and opportunities that emerged during the implementation of the Smart Specialisation policy:

- Policy capacity and institutional factors that affect the governance of policy processes.
- Prioritization and selectivity of investment decisions.
- The design of incentive schemes to mobilize entrepreneurial forces.
- The analytical base in support of policy design.
- The potential of green growth.

This editorial is structured as follows. The next section provides a brief introduction to the genesis of the Smart Specialisation policy. The third section describes the content of the contributions included in the special issue.

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The fourth section concludes by providing recommendations for the future of the Smart Specialisation policy.

SMART SPECIALISATION IN EUROPEAN COHESION POLICY

The expression *Smart Specialisation* was coined in the context of the Knowledge for Growth expert group established by the former European Commissioner for Research, Janez Potočnik. Smart Specialisation initially advocated the concentration and specialization of research and innovation activities in ways that complement and enhance entrepreneurial and innovation processes. The initial thinking was largely aspatial in origin and nature (Foray et al., 2009; Foray & van Ark, 2007), but over time an increasing emphasis emerged on the regional and spatial aspects of these arguments (McCann & Ortega-Argilés, 2015). These became marshalled to challenge the tendency in Europe to spread public support thinly across regions and a wide spectrum of activities, or to copy or try to emulate successful experiences from elsewhere with no real regard for contextual matters, in both cases resulting in the proliferation of small-scale initiatives incapable of exploiting in full the benefits of agglomeration.

At about the same time as the Knowledge for Growth group was developing its reflections, a reform of the European Cohesion Policy was taking shape along the lines proposed by Barca (2009). The reform was geared towards implementing a place-based development approach in which the policy design and implementation are allocated among different levels of government. In addition, the reform promoted a more strategic and inclusive policy approach with a focus on performance and results, and the mobilisation of local actors.

The Smart Specialisation approach to research and innovation policy fitted this logic and was integrated in the renewed Cohesion Policy framework with the aim to support the evolution and change of national and regional economic structures by identifying and nurturing new *transformative activities* (Foray, 2018).

Smart Specialisation has two main characteristics. First, the transformative function of the policy is implemented through highly selective policy interventions focused on specific types of economic activities. The target activities for selective policy intervention are usually referred to as investment *priorities* or *priority areas*.

Second, the basis for the choice of the activities that will receive support should be the evidence collected through the interaction of entrepreneurial actors and policy-makers, with the aim to explore and assess prospective or emergent new activities and their possible development trajectories in terms of feasibility, benefits, risks and policy needs. In the context of Smart Specialisation, the search for and discovery of new activities is known as the *entrepreneurial discovery process* (Foray et al., 2009).

The entrepreneurial discovery process is essentially a learning process by which the actors progressively recognize new opportunities for socioeconomic development, become aware of their capacity actually to engage in new activities, and make themselves capable of articulating them into concrete roadmaps, actions and projects (Foray, 2018; Hausmann & Rodrik, 2003). The aim of the policy set-up will be to give support to those entrepreneurial-led activities that not only best fit with the challenges facing the local economic environment but also can be scaled up for the wider benefit of the locality. Much has already been written – including in this journal – on the uptake and performance of Smart Specialisation in different contexts, so we will not go over this ground again. Rather, the five papers published here throw a new light onto the various aspects of the Smart Specialisation debates that have as yet been somewhat underexplored, and taken as a group they therefore help us to advance the knowledge frontier in important ways.

THE CONTRIBUTIONS IN THIS SPECIAL ISSUE

The first paper by Trippl et al. (2019, in this issue), entitled 'Shaping Smart Specialisation: the role of place-specific factors in advanced, intermediate and less-developed European regions', explores how the different characteristics of the regional innovation system shape the configuration of the Smart Specialisation processes. Drawing on empirical evidence on 15 regions from 14 countries, the paper shows how the opportunities and barriers to the development of Smart Specialisation strategies vary depending on the level of development of the regions. On the one hand, the authors found evidence that Smart Specialisation supports learning processes that help to build regional innovation systems in less developed regions and contributes to the transformation and reconfiguration of the regional innovation system in more developed regions. On the other hand, they also find that identifying priorities for investment that exclude established production networks and sectors proved to be difficult in all regions largely due to political and cultural factors that favoured an inclusive approach to funding decisions over selectivity. The inclusion of a diverse range of stakeholders in the policy process was especially challenging for less developed regions. Reasons are to be found in unfavourable informal institutions and weak policy capacity and leadership.

The second paper by Crescenzi et al. (2018, in this issue), entitled 'Cohesion Policy incentives for collaborative industrial research: evaluation of a Smart Specialisation forerunner programme', performs an interesting impact-evaluation exercise of a programme of subsidies for collaborative industrial research co-funded by Cohesion Policy in less developed Italian regions in the period 2007–13. They apply a regression discontinuity design to firm-level data exploiting a discontinuity in the independent scoring of a project proposal between funded and non-funded projects. Although the programme was not originally designed as a Smart Specialisation intervention, and lacking the comprehensive framework and governance of a research and innovation strategy, the authors identified several programme characteristics that anticipated the spirit of Smart Specialisation intervention. The results show overall a limited impact of the programme on firm performance in

terms of additional investments, value added and employment. However, positive impacts emerged for firms active in low-tech sectors. Notably, collaborations with universities or other private firms produced limited or no impact. The authors argue that when collaborations are not the result of a free, autonomous search for the best possible partners, but are simply the product of public incentives, they may fail to generate positive impacts. Crucially, the entrepreneurial discovery processes that characterize the design of Smart Specialisation strategies may enable a more effective search for and emergence of collaboration networks that can be later supported. An important lesson for the future of Smart Specialisation and innovation policy in general is therefore that the collaborative dimension of projects should not be a default design feature, but rather requested only when there is a clear rationale for that. The paper is timely, since solid evidence on the returns to the Smart Specialisation approach to innovation policy is not yet available, and the analysis of Smart Specialisation 'forerunner' programmes can be a feasible way to inform key decisions on the future of EU policies after 2020.

The third paper by Montresor and Quatraro (2019, in this issue), entitled 'Green technologies and Smart Specialisation Strategies: a European patent-based analysis of the intertwining of technological relatedness and key enabling technologies', sheds a light on how Smart Specialisation policy can help regions move towards environmental sustainability by favouring the green diversification of regional technologies. They apply the lens of 'related diversification' to a patent-based panel of 240 European regions over 30 years to understand the factors enabling the emergence new green-tech specialization, and the role of key enabling technologies in supporting the environmentally friendly evolution of the production system. The authors find that green diversification draws on pre-existing technologies that are both green and non-green, while key enabling technologies soften such dependence and therefore favour in general the transition towards sustainable technologies. These results suggest that Smart Specialisation can be an effective vehicle to promote the transition to environmental sustainability, provided that the policy design incorporates the principle of related diversification in combination with investment in key enabling technologies. The paper helps to link Smart Specialisation to an increasingly prominent topic in the EU policy agenda, namely the transition towards more environmentally sustainable models of production supported by the European Green Deal priority of the current European Commission. In this context, a clear understanding of how to foster the regional transition towards the green economy that can be translated into sound policy-design principles is much needed.

The fourth paper by Dosso and Lebert (2019, in this issue), entitled 'The centrality of regions in corporate knowledge flows and the implications for Smart Specialisation Strategies', proposes and tests a mapping methodology designed to help regions position themselves in the complex, interregional knowledge network, supporting in this way the design of Smart Specialisation strategies. The authors use patent citations to proxy for knowledge flows between firms and regions and examine the structural and geographical patterns of the resulting network. They focus especially on the betweenness centrality of regions in the network to assess their capacity to benefit from and control many knowledge flows. The results of the empirical analysis prompt the authors to conclude that although the most important knowledge hubs are concentrated in a handful of regions, many regions embedded in the knowledge network can have a role in the creation of knowledge at local and global levels. This can, in turn, be supported by truly place-based and unique Smart Specialisation processes. In a time of an increasing need for in-depth, data-driven regional profiling able to uncover emerging structural features, as well as the constraints and opportunities for development, this study provides a tool for benchmarking regions according to their technological potential and relative positioning, and also to better map collaboration opportunities for the upgrading of technological and industrial capabilities in national and global contexts.

The fifth paper by Gianelle et al. (2019, in this issue), entitled 'Smart Specialisation: what gets lost in translation from concept to practice?', is one of the first to analyse data on the actual implementation of Smart Specialisation strategies across the EU. Based on 39 regional and national Smart Specialisation strategies in Italy and Poland, and 285 calls for proposals published in the period 2014–16 in Poland, Italy, Portugal, Czechia, Hungary, Lithuania and Slovenia, the paper sheds a light on whether and how the Smart Specialisation approach has been translated into strategic decisions and policy interventions. In order to do this, the authors analyse how investment priorities are defined in the strategies, what type of alignment mechanisms are put in place to guarantee that project proposals flow in the direction of the established priorities, and how the measures implementing the strategies are tailored based on the specific characteristics and needs of each priority area. The research finds that the regions examined tend to identify large sets of narrowly defined priorities, which contradict the Smart Specialisation principle of selective intervention. While the majority of interventions contain specific priority-alignment mechanisms, they are not generally customized to the need and specificities of each priority area. The authors interpret those results as the tangible signs that regions and countries have put in place mechanisms that can circumvent the very rationale of Smart Specialisation. They argue that this could be the result of several factors or combinations of factors, including lobbying activities, higher political returns from widespread public support measures, risk-averse attitudes on behalf of policy-makers, and a lack of adequate institutional and administrative capacity. However, these findings also suggest that a possible cause of these interpretation and implementation failures may be an ill-defined incentive structure embedded in the Cohesion Policy legislation, which from the outset did not fully support the intervention logic of Smart Specialisation.

CONCLUSIONS AND RECOMMENDATIONS FOR THE FUTURE

The key conceptual arguments and implementation systems underpinning the roll-out of Smart Specialisation have already been well established during the current Cohesion Policy programming period. The 2021–27 programming period, however, will provide a new and more challenging setting for upgrading and refreshing these policies in ways that better allow them to respond to societal challenges. Based on the results of the research collected in this special issue, we can identify five main lessons and actions that the policy-makers designing the new generation of policy strategies ought to pursue in order for the Smart Specialisation policy to respond better to the grand challenges ahead and to contribute effectively to a sustainable, post-pandemic recovery:

- To invest in building the policy capacity and capabilities of the institutional infrastructure to design and deliver these policies, and to leverage the resources from Cohesion Policy which are made available to regional administrations specifically to support these processes. Special attention should also be paid to the establishment of stable teams within the regional government responsible and accountable for innovation policy across administrative bodies and political cycles.
- To revise the incentive schemes at the basis of investment prioritization in order to shield the most experimental parts of policy intervention from vested interests, and support selectively only areas and projects that are most promising in terms of opening up new development paths. Hence, industrial policy should be conceived as constituted by two complementary pillars: one devoted to interventions across the board aimed at mending the scarring that the crisis has generated in the economic fabric; and the another devoted to a truly experimental policy, spearheading the exploration of innovation opportunities and opening new paths for a more sustainable development. This twin-track strategy will require new forms of experimental governance at national and subnational levels (Morgan, 2018).
- To pose renewed attention to the design of policy measures aimed at mobilizing entrepreneurial forces. Policy measures should be tested and evaluated based on their capacity to elicit private entrepreneurs' efforts in the search and discovery of new activities that are able to generate value added and to tackle the societal and environmental challenges of our age. Experimentation with new instruments or combination of instruments, pilot projects and 'soft' measures aimed at modifying rigid behaviours are all very much needed.
- To strengthen the analytical base in support of policy design, including also using the opportunities that new data mapping techniques based on complex network theory provide, as well as new sources of information, such as, for example, artificial intelligence algorithms applied to Big Data. The Smart Specialisation approach allows for the devising of specific policy solutions based on the unique characteristics and behaviour of local actors, and in order to realize such truly place-based dimensions of the policy, the bodies responsible for policy design should be open to the integration of novel analytical techniques. Again, the European Cohesion Policy provides the necessary resources for this exercise.
- To unleash the potential of green growth in all economic sectors. The transition towards environmental sustainability is a societal goal and at the same time an opportunity for economic development that should be pursued by all territories in the European Union. Smart Specialisation represents a suitable framework for coordinating investment in key enabling technologies, for supporting selected sectors and activities, and for exploring new productive niches which together can turn such goals into an achievement (McCann & Soete, 2020).

DISCLOSURE STATEMENT

No potential conflict of interest was reported by the authors.

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