Smart specialisation and the complex nature of governance: Perspectives from Portuguese regions for the Post-2020 Period

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By Manuel Laranja (ISEG-UL – School of Economics and Management, University of Lisbon), John Edwards (Research and Policy Officer at the European Commission's Joint Research Centre) and Hugo Pinto (CES – Centre for Social Studies, University of Coimbra)

Smart specialisation: A New Perspective in Policy Making?

Those readers with an interest in EU regional policy will undoubtedly have heard about smart specialisation. The concept was developed by scholars (Foray and Hall, 2009) and translated into a strategic approach for spending the European Structural and Investment Funds (ESIF) (McCann and Ortega-Argilés 2011). It became the most well-known of the new 'ex-ante conditionalities', whereby EU Member States and/or regions require a Smart Specialisation Strategy (S3) to spend the ESIF on research and innovation projects. As an example of a scientific concept informing policy on such a large scale – there are more than 120 S3 across Europe – smart specialisation has been the subject of many academic

papers, conferences and policy learning activities, both within the EU and around the world (Pinto *et al*, 2019). However, implementing smart specialisation in practice is challenging and this article discusses its application in one EU Member State, namely Portugal. Some of the issues identified are being tackled by the authors in European Commission projects on Targeted Support to S3 Implementation in Portugal, including the role played by higher education institutions.

Smart specialisation in Portugal: Challenges and Questions

Although innovation policies in Portuguese regions have been in place since earlier generations of RIS/RITTS (Regional Innovation Strategies / Regional Innovation and Technology Transfer infrastructures and Strategies) in the late 1990s and later in the Lisbon Strategy, smart specialisation represents a potentially significant change in innovation policy making. One of the main elements of this new approach is that innovation policies no longer rely on a top-down policy design process, facilitated by experts, and instead require public-private collaboration at the regional and/or national level for consensus on how to define boundaries and focus directions to search for innovation opportunities. A process known as "entrepreneurial discovery" promotes interactions amongst stakeholders and a joint search and choice of priorities to focus knowledge-based market opportunities as well as public policy support. In addition, smart specialisation also highlights different types of innovation activities, beyond earlier innovation policy approaches focused on R&D and technological innovation.

As place-based strategies, S3 establish priorities and policy mixes to suit the regional context, rather than following a one size fits all approach. Finally, whereas previous RIS tended to be overly focused on dynamics within the region, S3 are intended to be more outward looking by differentiating their priorities from other regions and situating them within global value chains.

Portugal was one of the EU member-states that implemented a multi-level governance system for the development of its Smart Specialisation Strategy. From the beginning there were two parallel but somewhat detached processes for the S3 development. At regional level, CCDRs, the regional agencies that manage the regional operational programmes were fast in adapting to the smart specialisation movement and adopting its principles to develop more or less

robust place-based strategies. At country level, national agencies, such as IAPMEI, FCT and ANI, tried to retain for themselves some control of the S3 process and presented a national strategy, the so-called ENEI – Estratégia nacional de especialização inteligente that worked to fulfil the ex-ante criteria for ESIF access during 2014-2020 in this member-state.

Regional S3s, even if deeper and consolidated, were presented as an appendix of ENEI. The vision of ENEI is based on four main pillars (digital economy; Portugal, a country of science and creativity; intensification of the technological capacity of industry; and, valorize endogenous differentiating resources) and it is anchored in five main domains (transversal technologies and their applications; industrial and production technologies; mobility, space and logistics; natural resources and the environment; and, health, well-being and territory). Today, key stakeholders in Portugal agree that some tensions in the S3 process emerged from that initial moment and that the multi-level articulation and governance needs revising.

Strategic policy thinking processes, that aim to bring enduring structural changes, as it appears to be the case with S3, need however to be informed by high quality insights. While looking at the panorama of current S3 in Portugal we see that despite previous experiences with innovation policy, Portuguese regions had some difficulties in focusing their priorities, identifying too many and resulting in low levels of demand for some. While the S3 framework sees this as a disadvantage of focus, it is typical of regions with scarce resources and preconditions to innovation, that want to escape the risk of being locked into low value added activities (Capello and Kroll, 2016).

There are a number of issues that might help to explain current challenges and questions for S3 implementation in Portugal (Table 1).

Mobilizing and engaging local actors	Improve “sense-making” skills and avoid excess of “factfullness"	EDP process lacks tools to enhance individual and collective capabilities for strategic thinking and sense-making	Develop and mature their local entrepreneurship capabilities	Different regional competences to act strategically	Limited range of instruments available to implement the priorities

Table 1. Problems in the Implementation of S3 in Portuguese regions. Source: Own elaboration.

First, some Portuguese regions appear to have difficulties in mobilizing and engaging local actors. This may be a direct consequence of lack of critical S&T mass and low business density or institutional thinness (Amin and Thrift, 1995). Lower engagement may also be related to the dominance in Portugal of SMEs with low absorptive capacity (Cohen and Levinthal, 1990), hence more reluctance to participate. Therefore, for some regions priorities and actions tend to be defined by a non-representative set of participating actors, those from Science and/or with closer relations to regional authorities (Capello and Kroll, 2016), favouring a STI innovation mode and neglecting DUI (doing-using-interacting). Another issues related to actor engagement, is that for smaller regional economies dominated by the presence of MNEs, identification of priorities and policies may be mitigated by the higher power of MNEs to influence what local activities of the international value chains, and what will actually take place in the territory (Berger, 2012).

Second, because a globalised world is more complex and turbulent, it is today more difficult to gather high quality evidence to inform transformative strategies. Hence, a major issue, for Portugal and possibly many other regions, is that regional actors need to improve their "sense-making" skills. Usually, economic indicators, indexes and rakings, alongside with expert opinions and SWOT based analysis dominate the S3 strategic process. However, as with any strategic thinking processes in complex environments (where patterns are not easy to identify), there are issues of "bounded rationality" (Simon, 1962). There may be excess of "factfulness" (Rosling, 2018) and not enough time and space for deeper participatory reflexive thinking, particularly with regards mapping and understanding the endogenous dynamics of local innovation communities. To a certain extent, the exclusive use of one kind of evidence for sense-making and "rational" ex- ante identification of domain-options and priorities may hinder the use of other kind of evidences, needed for "incremental" strategic thinking, framed by the Entrepreneurial Discovery Process (EDP). Sense-making skills must therefore include not just the ability to read economic indicators, indexes and rankings and make regional inventories of resource-assets attached to rational choice of domains, but also include other sense-making tools needed for participatory monitoring and deeper understanding of the dynamic responses at

the level of the local innovation ecosystems.

Third, another important issue is that the EDP process appears to lack the appropriate tools to enhance individual and collective capabilities for strategic thinking and sense-making. High quality insights need to inform truly transformative S3 can only come from a deeper understanding of the dynamics of the world and of the local community ecosystems. Even with high levels of participation, bringing actors together in thematic workshops does not necessarily provide better strategic insights. It also depends on the tools used to manage the process. Bringing actors together for co-sensing a consensualised vision of the future is a complex social process that needs a sophisticated set of tools for deeper learning, participatory-strategic-intelligence, monitoring and sharing.

Fourth, an often neglected issue is that despite significant improvements in recent years, Portuguese regions need to further develop and mature their local entrepreneurship capabilities. While the entrepreneurial discovery process provides a process of building collective intelligence informing policy design and monitoring, once actions and projects are discovered and supported by adequate policy instruments, regional actors still have a long way to go. Experienced entrepreneurial skills are needed for prototyping, testing, demonstration, validation of product and business models and, ultimately, for scaling to international markets, in order to have a significant regional structural effect. In S3, however, it is assumed that once specific (new) business ideas focused on the defined domain priorities are found/discovered, entrepreneurial-innovation processes leading to structural change would be more or less automatic.

The entrepreneurship literature suggest that it is more complicated (Audretsch, 2006). Only a small percentage of all new discovered business opportunities, may turn into high growth business and significantly contribute to regional structural change (as referred by NESTA, the vital 6%). This is because the entrepreneurial cycle of customer-discovery, and validation and market development (Blank, 2005), does not always lead to success. In fact, even at the more mature regional entrepreneurial ecosystems such as Silicon Valley, Tel Aviv or London, new business with high growth potential for structural change can be as low as 1% of all new businesses (see for example the Global Startup Ecosystem Report).

Finally, compared to other countries, Portuguese regions do not have the same

competences to act strategically and have a limited range of measures available to implement the priorities. While a multi-level governance system was designed to provide coherence, there have been difficulties in putting it into practice. The national S3 established a large number of general priorities, ostensibly on the basis of a SWOT analysis, but as in many other countries the real reason was to ensure that the national Operational Programme could fund projects in all areas of the economy. It also meant that there was little differentiation between the national and regional OPs, and in fact the calls for proposals have included funding from both. All calls have been technically linked to the S3 priorities since projects have to be linked to one of them to obtain funding. However, in addition to being a small element of the overall selection criteria, it prevents regions launching strategic calls in their selected priority areas – rendering the regional EDP less important which in turn naturally limits participation.

Complexity and Governance

The challenges for S3 in peripheral regions are even greater. One of these challenges regards obviously governance, as commonly institutional frameworks are not mature, relevant actors lack key capabilities, often there are actors or functions missing in the ecosystem, and there is a chronic lack of financial resources to implement an ambitious agenda for structural change such as any S3 can be. It is crucial to debate the possibilities for an effective multi-level shared governance in S3. A main question is how can multi-level governance systems be implemented for S3? Multi-level governance in S3 is characterized by a large number of actors, organizations, agendas and policies, at different levels, Local-Regional-National-European, needing to be coordinated in order to achieve a coherent strategy and implementation. This can be characterized as a complex situation. We lack the information and have an incomplete understanding about how S3 multi-level governance really works (often referred to in the literature as natural complexity) but the process also depends on the interaction of multiple variables over time (what is known as dynamic complexity).

To provide some insight on this subject, in the context of the JRC project on Targeted Support to Lagging Regions (LAGREG) project, 11 key stakeholders at national and regional level (in Centro region) were interviewed during the first half of 2018. Interviewees were members of the governance system with strategic responsibilities from the public and private sectors (the coordinators of the four innovation platforms were interviewed, Platform 1 – Sustainable industrial

solutions, Platform 2 – Valorization of natural endogenous resources, Platform 3 – Technologies for quality of life, and Platform 4 – Territorial innovation); members of the governance system with technical responsibilities namely from the CCDR-C; stakeholders involved in the governance system; and members of the national governance system, namely ANI and AD&C.

Based on the interviews' transcripts, a content analysis highlighted crucial challenges and dimensions to be addressed for the implementation of an effective S3 governance system. An exploratory connection circle is drawn below with these key ideas (Figure 1). Three challenges arise: first, the S3 to be absorbed by all regional actors as a real multi-level strategy for national and regional structural change; second, the need of a deeper reflection on the linkages between the priorities among the different levels of action and decision, in particular with the ERDF and S3; and third, the actual implementation of multi-level governance mechanisms – including EDP or monitoring – that are referred in the documents but not yet fully translated into action.

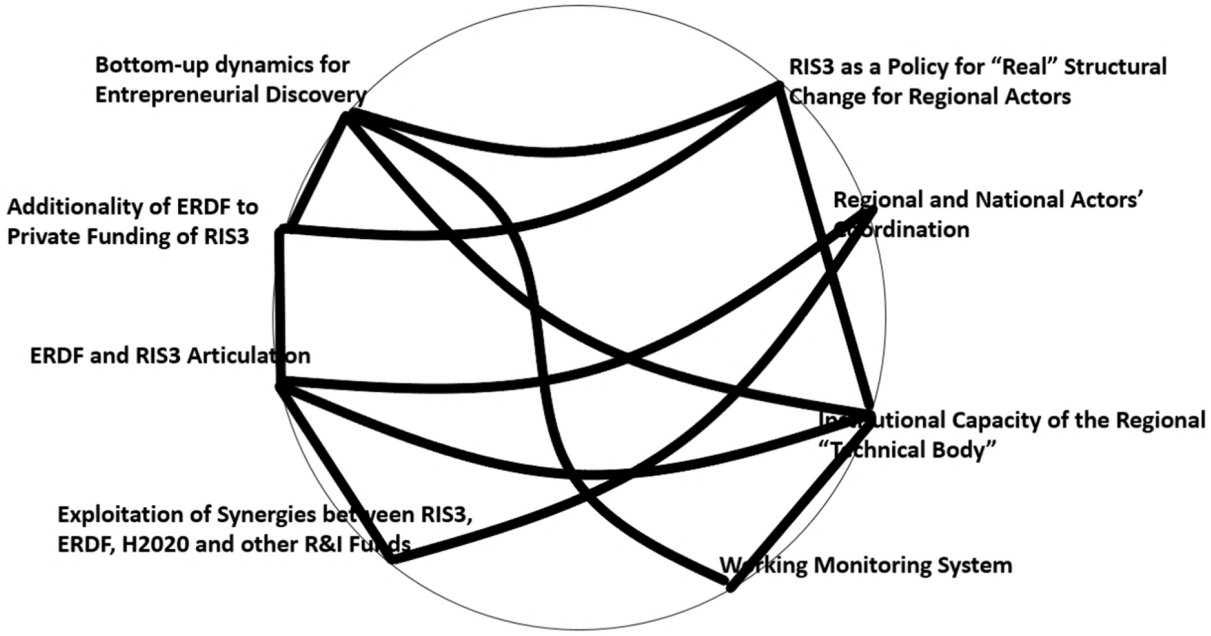

Figure 1. A Connection Circle for the S3 Governance in Portuguese regions. Source: Own elaboration.

The Way Ahead

There are no easy answers to these issues but stronger engagement of the

national government as well as all regions in policy learning activities could provide lessons from other Member States. One of these lessons is the importance of dynamic regional institutions that can help build some of the capabilities that have been discussed. While all types of institutions have an impact, both formal and informal, universities and other Higher Education Institutions can have a particularly crucial role to play in the context of smart specialisation, as explained in a previous issue of this e-zine. This may be the case particularly in Portugal due to the relative weakness of government regional institutions. In addition to their contribution to knowledge production, universities can provide analytical and knowledge management skills, potentially being central to the EDP. Furthermore, they can train graduates to be more entrepreneurial and more aware of regional needs, which is part of a broader place-based contribution that has not been given enough attention by the S3 approach (Edwards *et al,* 2017).

Smart specialisation is here to stay, having been strengthened in the Commission's proposals for the Cohesion Policy after 2020. This is good news for Portugal because despite the obstacles and challenges identified here, the S3 approach has given regions the opportunity to become more closely involved in innovation policy. For the country as a whole it can provide differentiated knowledge based between its regions, allowing them to become more competitive and thereby contributing to national economic growth.

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About the authors

Manuel Laranja mlaranja@iseg.ulisboa.pt is Professor at the ISEG – Lisbon School of Economics and Management – University of Lisbon, Portugal. His research interests regard innovation management and innovation policies, paying particular attention to entrepreneurial and industrial dynamics. He holds a PhD in Economic Policies for Innovation by the SPRU – Science Policy Research Unit University of Sussex, UK.

John Edwards John.EDWARDS@ec.europa.eu is a Research and Policy Officer at the European Commission's Joint Research Centre. He holds a PhD in Economic Geography from Newcastle University and a Master's degree in European Politics from the College of Europe in Bruges. His main interests are in regional innovation systems, the role of higher education institutions in smart specialisation, and the EU's policies for cohesion and innovation.

Hugo Pinto hpinto@ces.uc.pt is a Researcher at the Centre for Social Studies, University of Coimbra and Assistant Professor at the Faculty of Economics, University of Algarve (Portugal). His research interests are regional development, innovation systems, knowledge transfer, and smart specialisation.