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A foresight toolkit for smart specialization and entrepreneurial discovery

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ABSTRACT

Smart specialization strategies (RIS3) have exploded in number across Europe over the past couple of years, among others due to the European Commission's sustained effort – both conceptual and at the level of policy – to push this notion forward. What lies beneath the spate of recent RIS3s, in terms of specialization options as well as of the processes through which the latter were reached, is only now beginning to be examined in depth. Notably, the Commission did not offer a proper blueprint for RIS3-making, but opted instead to suggest a wide range of possible instruments. Based on our experience with the Romanian strategy-building process, in this article we outline a foresight-based toolkit for smart specialization and entrepreneurial discovery, though we too stop short of proposing a detailed full-fledged blueprint.

1. Introduction

'Smart specialization' is Europe's brand new policy template designed to bridge the three "mutually reinforcing priorities" of smart, sustainable, and inclusive growth that define the Union's development strategy (EC, 2010: 11). The smart specialization (S2) approach has been recently put to use by states and regions throughout Europe in the design of their research, development, and innovation (RDI) policies, among others in contemplation of the carrot of structural funds, for which RIS3 has served as an *ex ante* conditionality. Nevertheless, despite the wide deployment, "the first book on [this] new policy approach ... widely adopted in Europe and beyond" was published as late as 2015 (Foray, 2015: 2). While this is not to say that there is a dearth of literature on the topic, the belated publication of this relatively concise work does signal that the smart specialization policy template was deployed rather in a hurry, if not altogether "rashly" (Kroll, 2015a). Furthermore, this has taken place at continental scale and without a clear blueprint instructing states and regions working on their "research & innovation smart specialization strategies" (RIS3) on how to achieve the prescribed "prioritization of knowledge investments" in a few select fields with future economic potential, a move which lies at the heart of the S2 concept.

The absence of clear procedural guidelines is remarkable, among others because the smart specialization template is rather bold. This is so, first, because the notion of prioritization runs contrary to the by now seemingly well-established consensus that RDI policy should be horizontal, instead of 'picking winners' (an idea which S2 literature tries hard to

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re-legitimize in the new context and under a new guise). Secondly, the S2 policy template is bold especially in states, such as those in the Central and Eastern Europe (CEE), where the established policy routines are not well-suited for the 'entrepreneurial discovery' (ED) process at the core of RIS3 strategy-making. Specifically, under this approach governments are supposed to assume an active role in discovering and then betting on economic niches that "are new, aim at experimenting and discovering technological and market opportunities and have the potential to provide learning spillovers to others in the economy" (Foray, 2013: 58). The process, as noted above, goes as far as selecting and promoting "technologies, fields, sub-systems, even firms" (Foray, 2013: 57). In this light, deploying a so-called 'place-based' approach, one which is suited to careful, persistent entrepreneurial exploration, suggests that the RIS3-making enterprise should be a regional-level pursuit. This has indeed been advocated by the proponents of S2, among which the European Commission (EC) itself. It should be noted here, as a possible illustration of the speed with which the theory of smart specialization and entrepreneurial discovery was rushed to implementation, that many if not most countries in the CEE remained committed to a national-level process, which has likely been more palatable under the existing policy routines (Karo & Kattel, 2015).

Our goal in this paper is neither to probe the theory of smart specialization in any depth, nor to explore the ups and downs of its implementation in the latest round of pan-European strategy-making on research and innovation (Kroll, 2015a; Paliokaitė, Martinaitis, & Reimeris, 2015). Rather, we highlighted the absence of an S2/ED blueprint because we intend to propose herein the outline of such a composite instrument. This 'toolkit for smart specialization and entrepreneurial discovery' stops short of a full-fledged blueprint, but advances a more consistent, if also more limited, set of instruments than the Commission or S2 supporters have offered so far. We believe that the toolkit, at least in the context of an entrepreneurial discovery process, provides the premise for a more iterative, semi-continuous foresight project. In the next section we discuss in additional detail the importance of foresight in the process of prioritization known as entrepreneurial discovery. We continue by outlining the toolkit and by describing our experience with designing and developing parts of it. Most of the latter, but not all, were used in the elaboration (during 2013–2014) of Romania's own national strategy for RDI for the programming period 2014–2020.

2. Foresight for smart specialization

Undoubtedly the most important guidance to the making of RIS3s, alongside a series of conceptual papers whose substance was gathered in the recent book mentioned in the previous section (Foray, 2015), is the European Commission's own *Guide to Research and Innovation Strategies for Smart Specialisation* (EC, 2012). Yet, while this expansive document does a systematic job of explaining the policy concept, the desired outputs of the process, and the principles and criteria to evaluate the latter by, it falls somewhat short of providing a functional blueprint for the entrepreneurial discovery process supposedly underlying the selection of S2 priorities. The ED process represents a presumably complex, though also tentative procedure through which governmental or regional policy-makers "hold[ing] the knowledge about the local innovation systems" are supposed to mobilize economic and other actors "well positioned to develop a thorough understanding" of place-based opportunities, strengths, and challenges "towards a shared goal" (EC, 2012: 12). In lieu of such a blueprint, the *Guide* offers a broad survey of methods and instruments which might prove useful in designing an ED process. This set includes foresight and associated methods (such as Delphi, scenario building, cross-impact and morphological analysis, and others), but not a procedure. Indeed, the *Guide*'s six-step 'step-by-step approach to a RIS3 design' is limited to a rather generic participative strategy-making formula. Somewhat ironically, the 'prioritization step' seems to be the least developed of all.

It is understandable that the *Guide* shies away from methodological normativity, especially given the Commission's strong prescriptivism with respect to the goals of national and regional R&I strategies. However, this 'official' document, as well as most of the other literature published so far (implementation studies are only beginning to see the light of press), do leave a gap between theory and practice. Authors such as Kroll (2015b: 1) have lamented the fact that "policy practice . . . soon overt[ook] the ongoing conceptual development of the RIS3 approach so that it became increasingly difficult to disentangle what was core to the concept and what had evolved around it for practical policy-oriented reasons." Be that as it may, we feel that part of the problem resides precisely in the failure to provide a practical blueprint for entrepreneurial discovery capable of matching the 'core concept' of smart specialization. Admittedly, such a blueprint should only be offered as a model – ideally, one among others –, not as a standard procedure to be followed to the letter. However, a self-consistent toolbox may serve governments faced with the problem of designing an ED process better than a large assortment of methods and devices such as those identified in the *Guide*. The latter's mix-and-match six-step design, while a good summary of potentially relevant tools, is probably too eclectic to even approximately fit the square pegs of ED practice into the round holes of smart specialization theory.

The toolkit to be introduced in the following sections is built on foresight principles, which we find almost ideally suited for the entrepreneurial discovery process. The latter, and smart specialization as a whole, has an important 'self-discovery' rationale. As Foray (2015) himself clarifies, this notion is inspired by the developmental economics of Hausmann and Rodrik (2002). In their view, government intervention should be directed, among others, at helping both entrepreneurs and decision-makers discover new profitable products, not least by overcoming informational externalities which threaten low returns from innovation to the private entrepreneurs. As entrepreneurial knowledge is typically dispersed locally, Foray (2013: 61) argues that "[e]ntrepreneurs in the broadest sense (innovative firms, research leaders in higher education institutions, independent inventors and innovators) are in the best position to discover the domains of R&D and innovation in which a region is likely to excel given its existing capabilities and productive assets." This broad view of a more ambitious