Stakeholder engagement through entrepreneurial discovery? Lessons from countries and regions in Central and Eastern Europe

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Abstract: The article compares the process of designing and implementing EU research and innovation (R&I) strategies for smart specialisation (RIS3) in eight less developed European Union (EU) member states: Croatia, Czech Republic, Estonia, Latvia, Lithuania, Slovakia, Slovenia and Romania. The study additionally explores regional-national differences in governance structures and practices of the RIS3 by focusing on two regions: South Moravia and West Romania. It is argued that RIS3 processes can improve governance of the R&I systems in spite of the baseline quality of governance in the given country or region. An entrepreneurial discovery process (EDP) that is continuous and includes a broad range of actors and is closer to a multi-stakeholder approach can enable a learning trajectory and foster R&I governance. The case studies address i) whether the EDP resulted in engagement with a broad range of stakeholders, ii) whether it encouraged a process of creative co-design and iii) whether it continued into the policy implementation phase. The article offers insight into how learning can be fostered and how broader stakeholder engagement can be beneficial for improving the RIS3 policy framework.

Subjects: Policy Analysis; Public Policy; Public Administration Research Methods; Industry & Industrial Studies

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All authors are affiliated with the European Future Innovation System (EFIS) Centre, a not for profit policy research lab and think tank. Its mission is to promote an enhanced understanding of the performance and future development perspectives of European, national and regional innovation systems, particularly in response to societal challenges such as climate change, energy security, resource efficiency or ageing.

PUBLIC INTEREST STATEMENT

The European Commission is actively promoting stakeholder engagement in research and innovation policy making for the sake of better governance and more efficient use of EU funding in member states. The article analyses the role of stakeholder engagement in the EU’s smart specialisation policy in economically less developed EU member states. The research findings suggest that in spite of the typically lower quality of governance in such countries, promoting stakeholder engagement can foster better R&I governance by creating a climate of co-operation that characterizes learning regions. However, a more robust approach is needed on the part of the EU for stakeholder engagement to be meaningful and transformative in the policy process, rather than an exercise in checking boxes for the fulfilment of funding conditionalities.
Keywords: innovation policy; research policy; R&I governance; smart specialisation; stakeholder engagement; European Union

1. Introduction

During the 2014–20 European Structural and Investment Funds (ESIF) programming period, preparing a national or regional research and innovation strategy for smart specialisation (RIS3) in each member state was an ex ante conditionality for the use of funding under the thematic objective 1 (TO1): strengthening research, technological development and innovation (see Official Journal of the European Union [OJ], 2013). As opposed to the “mainly procedural budgeting model” (Cooke, 2016, p. 1494) in the economic development policies of the past, “Smart Specialisation … encourages institutional change, capacity-building and collective action” (Gianelle et al., 2019, p. 2). The Smart Specialisation policy has been put in place predominantly as a governance arrangement bringing policymakers and other stakeholders together to promote place-based development of European regions. As Foray et al. (2018, p. 4) argue, “RIS3 should be understood as a policy approach and a policy process rather than an innovation policy in its own right.” As such, RIS3 is “an opportunity for improving human capital and creating pockets of bureaucratic excellence in regional administrations” (Foray & Rainoldi, 2013, p. 9).

A core distinguishing feature of the RIS3 concept is the entrepreneurial discovery process (EDP), which foresees the involvement of various stakeholder groups in the policy process. The EDP “is about prioritising investment based on an inclusive and evidence-based process driven by stakeholders’ engagement and attention to market dynamics. The EDP is the motor of the S3 methodology” (Gianelle et al., 2016, p. 15). It “is considered a, if not the, feature that distinguishes the smart specialisation approach from innovation strategies of the past and the one that lends these approaches their more ‘bottom-up’ character” (Rodriguez-Pose and Wilkie, 2016, as cited in Gianelle et al., 2016, p. 15).

However, the specific characteristics of the EDP can vary across countries and institutional contexts. Marinelli and Perianez Forte (2017, p. 20) assert that the EDP has developed over the years into a continuous process, which does not stop after priorities for investments have been agreed upon. Nevertheless, as we argue in this paper, continuity of the EDP is not always guaranteed. Furthermore, the governance model of an innovation system based on the interaction between government actors, industry, and academia, i.e. the Triple Helix (see Etzkowitz & Leydesdorff, 1995) does not necessarily become a Quadruple Helix, where civil society organisations also participate in the EDP. Indeed, the Triple Helix model is still more common in the EDP than the Quadruple Helix (Marinelli & Perianez Forte, 2017, p. 21). Therefore, it is instructive to ask whether the EDP is a continuous process and whether it consists of three or four helices.

RIS3 and the EDP should, in theory, have beneficial governance effects. This paper investigates whether this happens in practice by examining the process of design and implementation of RIS3 in eight less developed Central and Eastern European (CEE) EU member states and regions. The main research questions addressed are i) whether the EDP resulted in engagement with a broad range of stakeholders, ii) whether it encouraged a process of creative co-design, and iii) whether it continued into the policy implementation phase.

The national cases examined are Croatia, Czech Republic, Estonia, Latvia, Lithuania, Slovakia, Slovenia, and Romania, as well as those of two regions: the Czech South Moravian region and the West Romania region.

The article explores how the RIS3 requirement of running the EDP affects R&I governance. The concept of governance in the RIS3 framework is understood to cover “how the whole process of designing and implementing S3 is governed, including who is involved, the structures that are put in place and how decisions are taken” (Gianelle et al., 2016, p. 37). In this study we focus mainly on
the issue of stakeholder engagement, starting with the assumption that including a more diverse group of stakeholders from all relevant sectors (government, businesses, academia and civil society) leads to better governance and policy outcomes. As such, the findings may be relevant for a broader set of regions than the ones the paper covers.

Building on the desk research we carried out for the eight selected countries, we conducted semi-structured expert interviews in four of them: Lithuania, Slovenia, Czech Republic and Romania. Based on an initial scanning of secondary sources, these countries were identified as being on a similar level of RIS3 governance, allowing for a comparative analysis of their EDP activities. Furthermore, case selection was influenced by the availability and accessibility of experts. We interviewed one expert in Lithuania, and two experts in each of the other countries, which makes altogether seven interviewees. Experts were defined as persons who have in-depth knowledge about the RIS3 policy process in their country and/or region, either because they have been involved in the design or execution of the policy, or because they researched it extensively. The specific experts were selected based on their publications (e.g., authors of policy reports) and through referrals from regional or national organizations that were involved in the RIS3 process. At the time of the interviews, the experts were engaged in local and national public administration, academia, government agencies or innovation agencies. In the cases of Czech Republic and Romania, we interviewed regional experts (South Moravia and West Romania) who offered insights both on regional and national R&I policy and governance. The interviews were conducted between December 2017 and March 2018.

The study draws on the learning region literature (see Boekema et al., 2000; Capello & Lenzi, 2018; Hassink & Klaerding, 2012) and the concept of multi-stakeholder governance to analyse the RIS3 and the EDP in the selected countries and regions. The research draws lessons on the way the EDP is designed and implemented for the next EU programming period 2021–27 and for Smart Specialisation 2.0.

We argue that RIS3 processes can improve the governance of R&I systems in spite of the baseline quality of governance of a country or a region. A prominent way in which such improvements of R&I governance are manifested is the continuation of the EDP after the policy design phase that encourages stakeholder engagement, and therefore contributes to the channelling of investments into priorities commonly agreed upon with non-governmental stakeholders (private sector, academia, and civil society).

Additionally, RIS3 also generates learning as a result of the EDP when changes in stakeholder behaviour and changes in governance start taking effect. As such, rather than copying ready-made organisational structures, the EDP is a process that enables learning, thereby facilitating changes in the governance of the R&I system. It follows that an EDP that is continuous, includes a broader range of actors and is closer to a multi-stakeholder approach, can enable a learning trajectory and therefore foster better governance.

Following this introduction, the next section discusses the EDP concept from the perspective of governance and learning. The third section presents the challenges for carrying out an EDP in less developed countries and regions of CEE. Section four analyses the RIS3 design phase in the selected countries and regions, and section five examines the policy implementation phase. Section six discusses the findings and the final section draws conclusions and makes recommendations for improving ex-ante conditionalities in EU Smart Specialisation policy.

2. EDP through the lens of governance and learning

The RIS3 and EDP have been found to have beneficial effects for governance and learning. The EDP is beneficial for building trust, engaging stakeholders in regional development, and improving public policy decision-making (Marinelli and Perianez Forte (2017, pp. 19–20). RIS3 may enrich innovation policymaking through the improvement of governance and behavioural changes of the
stakeholders as the ex-ante conditionality for RIS3 has induced reforms (European Commission [EC], 2017, pp. 16–19). Furthermore, “[i]nstitutional by-products of an EDP include not only new public-private governance approaches but also agents’ deepened understanding of an economy’s institutional context, higher institution-sensitivity of regional policies, and behavioural changes” (Benner, 2019, p. 1808). Kroll (2017, p. 120) found that an overwhelming majority of respondents to his questionnaire thought that RIS3 gave rise to novel governance arrangements. A positive feedback loop is reinforced through good governance, as it contributes to “the stability that makes learning possible over extended periods of time” (Gianelle et al., 2016, p. 55).

While the EDP enables the involvement of various stakeholder groups in identifying investment priorities for smart specialisation during the entire policy cycle, it does so with the purpose to “[a] llow governments to better know their territory” (Gianelle et al., 2016, p. 17). Even though the European Commission (EC) defines it as “an inclusive and interactive bottom-up process” ([EC], 2017), in reality, the quality of inclusiveness and interaction depends on the organizers of the EDP, which are often public authorities. Indeed, as Aranguren et al. (2019) point out, the EDP can become overly dominated by government actors and lack sufficient representation of other players of the quadruple helix, such as businesses and civil society. The EDP might also be prone to risks of vested interests and lock-ins, leading to suboptimal outcomes in terms of evoking the desired structural change in the economy, the ultimate goal of smart specialisation policy (Hassink & Gong, 2019). Hence, it is worth examining the extent to which the EDP facilitates a genuine multi-stakeholder approach.

The multi-stakeholder concept implies interaction among all relevant stakeholders (government, industry/business, academia, civil society) with an inherent goal of facilitating open and democratic governance on an equal footing and fostering inclusiveness, transparency and accountability. Multi-stakeholder processes are those “which aim to bring together all major stakeholders in a new form of communication, decision-finding (and possibly decision-making) on a particular issue. They are also based on recognition of the importance of achieving equity and accountability in communication between stakeholders, involving equitable representation of three or more stakeholder groups and their views. They are based on democratic principles of transparency and participation and aim to develop partnerships and strengthened networks among stakeholders” (Hemmati, 2002, p. 2). As a relatively novel approach to governance, there is no specific form or model that multi-stakeholderism might take. Broadly, however, it is characterized by open forms of engagement, loose engagement mechanisms, and striving for solutions through consensus (Meyer et al., 2016).

While the various modes of involving all relevant stakeholders in the EDP is an important perspective, there are likely to be differences in approach across countries or regions. Capacity and know-how of the public administrative bodies in involving stakeholder groups in policy processes is certainly an important aspect. Other factors also come into play, such as the willingness of government actors to foster genuine stakeholder participation and share control over policy and funding decisions. As such, the EDP may at one end of the spectrum become instrumentalized as a means to maintain the authority of governmental stakeholders, or at the other, it may be run as an open, inclusive and meaningful multi-stakeholder process. We expect the examined cases to be positioned somewhere in between these two poles.

The literature on regional learning processes is a useful framework for studying the context. Multi-level governance as well as learning from other countries or regions are important channels for policy learning in a regional context (González-López, 2019: 108). The concepts of “Learning Regions”, “Localized Learning”, and, more recently, “Learning in Space” have featured prominently in the literature. Learning Regions are those that enable the principal actors in an innovation system to design and implement innovation strategies at the territorial level (cf. Boekema et al., 2000, p. 12), which points to a link with the EDP. It is the process behind the learning that matters (Rutten et al., 2000, p. 246). Learning Regions need learning organisations, a climate of
cooperation, as well as the encouragement of participation in networks within and among enterprises fostered by the right institutional conditions (cf. Ashheim, 2007, pp. 219–220).

3. Challenges for the entrepreneurial discovery process in less developed regions of Central and Eastern Europe

In the CEE economies, the 1990s were a period during which “transition” policies were heavily influenced by the neoliberal Washington Consensus philosophy. Innovation policy-making institutions and systems only began to emerge during the “pre-accession” process from the late 1990s (see Radošević & Reid, 2006). The impact of this “Europeanisation” agenda accelerated from 2004 onwards when funding was made available for the first time for R&I policies through the Structural Funds (Suurna & Kattel, 2010). From the mid-2000s, the influence of the EU resulted in an increased role for the state. However, the strategies often adopted the linear model of innovation and fragmentation across policy-making agents increased through the ensuing proliferation of agencies (Suurna & Kattel, 2010, pp. 655–657). It remains an open question whether the R&I policy-making practice in the 2014–20 programming period is more decentralized and horizontal due to the promotion of good governance principles\(^6\) such as the EDP.

The CEE regions, with the exception of Estonia and the south-east of the Czech Republic, have weaker governance capacities than the EU average (see [EC], 2018) and are faced with a much bigger challenge than western and northern EU member states in improving their research and innovation systems.\(^5\) The vast majority of the regions within CEE belong to the category of less developed regions in the EU.\(^6\) According to Muscio et al. (2015, p. 168) “this constraint bites both at the strategic (priority setting) level, but especially at the programme implementation level.” Hence, CEE countries are more likely to face difficulties in the implementation of RIS3.

As the World Bank (1999) has shown, development is fostered by governance. Hence, a number of governance preconditions have to be in place, both at the level of the government and the practices in the innovation system for an EDP-based RIS3 to be effectively developed. Marques and Morgan (2018) posit that RIS3 rests on very ambitious assumptions related to governance (both in a region itself and regarding multilevel co-ordination between different government levels), the commitment of regional elites, the model of innovation (which can still be linear), and on the Triple Helix. According to Karo et al. (2017, p. 273), the EDP process may be more suitable for “consensual (or corporatist) and decentralized polities with explicit regional governance architectures and policies, established routines of close government–academia–business interactions, and coordination with sufficient policy space for policy experimentation and agility.”

A number of pertinent governance characteristics for RIS3 are presented in Table 1 for the selected CEE countries.\(^9\) Two of them illustrate the capacity of their governments to act effectively and efficiently: 1) state and centralisation, and 2) EU ranking for quality of governance/regional variations. Such capacity has been recognized as crucial in the RIS3 process, e.g., Karo and Kattel (2015) define it through the concepts of state, policy and administrative capacities. Characterisation of the state is taken from Bohle and Greskovits (2012), who graded six dimensions for each of the studied CEE countries: 1) macroeconomic coordination, 2) welfare state, 3) corporatism, 4) government, 5) democracy and 6) market. Neocorporatist regimes (Slovenia) on average had the highest scores on these six dimensions, followed by embedded neoliberal regimes, neoliberal regimes, and nonregimes in the end.

Furthermore, the RIS3 process depends on the prevailing specialisation in the types of innovation activities (better innovation performance tends to go hand in hand with more sophisticated innovation systems) and the linkages between agents in the innovation system, proxied by the university-industry research collaboration. Moreover, even if “dependence on ESIF limits the space for deploying more innovative instruments” (Reid & Maroulis, 2017, p. 314), in the CEE there is a greater incentive to engage with the RIS3 process as it is an ex ante conditionality for a sizeable share of funding to the R&I system, as indicated in Table 1. As the [EC] (2017, p. 17) underlines,
Table 1. Baseline factors influencing the potential for a country to design and implement a RIS3

<table>
<thead>
<tr>
<th>Country</th>
<th>State and centralisation</th>
<th>EU ranking for quality of governance/regional variations</th>
<th>Innovation performance</th>
<th>University/industry research collaboration&lt;sup&gt;iv&lt;/sup&gt; (rank in EU28)</th>
<th>ESIF allocated to TO1&lt;sup&gt;ii&lt;/sup&gt; per capita&lt;sup&gt;iii&lt;/sup&gt;/ranking (highest to lowest in EU28)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estonia</td>
<td>Neoliberal, simple polity (unitary, executive government driven)*</td>
<td>16/No regional variation measured (single NUTS2)*</td>
<td>Moderate innovator</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Latvia</td>
<td>Neoliberal, simple polity (unitary, executive government driven)*</td>
<td>21/No regional variation measured (single NUTS2)*</td>
<td>Moderate innovator</td>
<td>22</td>
<td>3</td>
</tr>
<tr>
<td>Lithuania</td>
<td>Neoliberal, simple polity (unitary, executive government driven)*</td>
<td>23/No regional variation measured (single NUTS2)*</td>
<td>Moderate innovator</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>Slovenia</td>
<td>Neocorporatist, compound (unitary, consensus based), but changing*</td>
<td>17/No regional variation measured (single NUTS2)*</td>
<td>Strong innovator</td>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Embedded neoliberal, somewhat decentralized (fading stakeholder power)*</td>
<td>18/Moderate regional variations (includes best CEE regions)*</td>
<td>Moderate innovator</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>Slovakia</td>
<td>Embedded neoliberal&lt;sup&gt;ii&lt;/sup&gt; centralized (from government finance)&lt;sup&gt;v&lt;/sup&gt;</td>
<td>20/small regional variations&lt;sup&gt;vi&lt;/sup&gt;</td>
<td>Moderate innovator</td>
<td>24</td>
<td>2</td>
</tr>
<tr>
<td>Croatia</td>
<td>Nonregime (weak state)&lt;sup&gt;vi&lt;/sup&gt;, strongly centralized</td>
<td>26/No regional variation&lt;sup&gt;ix&lt;/sup&gt;</td>
<td>Moderate innovator</td>
<td>27</td>
<td>11</td>
</tr>
<tr>
<td>Romania</td>
<td>Nonregime (weak state)&lt;sup&gt;vi&lt;/sup&gt;, strongly centralized&lt;sup&gt;x&lt;/sup&gt;</td>
<td>27/Large regional variations&lt;sup&gt;ix&lt;/sup&gt;</td>
<td>Modest innovator</td>
<td>23</td>
<td>18</td>
</tr>
</tbody>
</table>

Sources:
*Karo et al. (2017, pp. 275–6) and Charron et al. (2014); *Bohle and Greskovits (2012)
<sup>1</sup>The European Innovation Scoreboard (ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards_en)
<sup>ii</sup>AER (ec.europa.eu/erpr2017-weeks-focus-romania)
<sup>iii</sup>Charron et al. (2014)
<sup>iv</sup>Charron et al. (2015)
<sup>v</sup>The portion of European Structural and Investment funds (ESIF) allocated for Thematic objective 1 (TO1) out of the whole amount of structural and investment funds provided to a country (see cohesiondata.ec.europa.eu/themes/1)
<sup>vi</sup>Global Innovation Index (www.globalinnovationindex.org/analysis-indicator)
<sup>vii</sup>UCLG and OECD (2016)
<sup>viii</sup>Population data is from Eurostat (ec.europa.eu/eurostat) for 1/1/2013.
“the occurrence of reform-triggering [ex ante conditionalities] was substantially higher in the major (per capita) beneficiary Member States of the ESIF, which are also countries whose level of economic development is below 75% of the EU average.”

4. RIS3 in the design phase: pro forma exercises or transformative practice in the governance of innovation systems?

This section addresses the following questions: 1) did the EDP result in engagement with a broad range of stakeholders; 2) was the EDP run as a more formal top-down process or did it encourage a process of creative co-design? The first question is on the breadth of involvement in the EDP. The second question is about whether the stakeholder engagement was meaningful or carried out only to satisfy the preconditions of the RIS3 process.

By pursuing the EDP and ensuring the involvement of the business sector, civil society organisations and other new actors, CEE regions and/or countries may be able to develop a new generation of innovation strategies, even though their general governance capacity is lower than the EU standard. However, the EDP has gained ground only in some of the studied cases.

The stakeholder engagement was the broadest in the West Romania region, as suggested by the evidence from expert interviews. The West Romania region was intrinsically interested in developing a “spatially embedded” RIS3 and it orchestrated a learning process. Through the EDP, the West Romania region involved a diverse range of stakeholders in the policy process, and it also cooperated with international partners and experts (e.g., World Bank), which enabled knowledge transfer to the region. The main novelty in terms of composition of actors was that civil society became more involved than before (Expert 4, 2018a).

Romania’s national RIS3 design process was quite different from that of the West Romania region. Nationally, an extensive process of RIS3 design was organised, using advanced analytical and mapping techniques, but with a limited EDP that had inherent deficiencies in terms of narrow time frames, as well as direct and indirect political interventions that did not make room for allowing its extension into the policy implementation phase (Gheorghiu et al., 2017). The Romanian Ministry of Education and Research later on intervened in the process (Gheorghiu et al., 2017), essentially disregarding the guiding principles of the entrepreneurial discovery process.

Reid and Stanovnik (2013, p. 13) underline that in Slovenia it proved difficult to engage with civil society early on in the design phase. However, the Government Office for Development and European Cohesion Policy was finally able to mobilise civil society actors in the process (Polverari, 2016, pp. 26–27). Indeed, the later phases of the design process were characterized by a “wide-reaching and strong entrepreneurial discovery process” (Polverari, 2016, p. 32). Although the RIS3 process has changed the composition of the policy actors previously involved in the innovation strategy, the inclusion of different ministries was still found to be sub-optimal (Expert 1, 2017) even if a Quadruple Helix was pursued (cf. Polverari, 2016). Overall, Slovenia had broad stakeholder participation in the EDP.

In the Czech Republic “in some regions the effort to mobilise the representatives of the non-profit sector failed” (Government of the Czech Republic, 2016, p. 13) and the coordination of innovation strategies at the regional and national level was an issue (Srholec & Benedetti Fasil, 2017, p. 6). However, the South Moravia Region was an early-mover compared to other Czech regions, due to a relatively long tradition of “triple-helix” based innovation strategies and a pre-existing regional innovation agency. It is an exception not just in the Czech Republic (Srholec & Benedetti Fasil, 2017, pp. 5–6), but also one of the most successful EDP “showcases” in the EU (see Gianelle et al., 2016). The process was encouraged by the national authorities giving all regions the means to create their RIS3 strategies and manage them through the Smart Accelerator project, co-funded by ESIF (IEC, 2017, p. 25). Innovation policy in the South Moravia region is based both on political leadership and
continuity, fostering trust between the public and the private sectors. Over a span of 17 years, the RIS3 is the fourth generation of R&I strategies in the region. The RIS3 has changed the composition of policy actors through the direct involvement of industry in the process. The political leadership decided early on to “outsource” the development of R&I strategy by creating an independent innovation centre (JIC)\(^\text{10}\) and this move has facilitated a process of positive feedback and open discussion. The EDP worked well as a larger variety of stakeholders have participated in the RIS3 design phase, especially from the industry and academia. However, it has been difficult to include organized civil society groups, even if the South Moravian region aspired to comply with EC guidelines to extend to the Quadruple Helix (Expert 2, 2017, 2018; Expert 3, 2017).

Lithuania “had intensive consultation with the Smart Specialisation Platform,\(^\text{11}\) participated in the international peer-review process and performed a constant self-assessment procedure” (Reimeris, 2016, p. 1569). The RIS3 represented a new way of formulating strategy at the national level (Ibid., p. 1576). In terms of novel governance arrangements, the smart specialisation coordination group “brought positive changes in the dialogue taking place among innovation policy-making institutions” (Reimeris, 2016, p. 1579). Even so, “the drafting process involved a host of ministries and agencies, although there was no commensurate involvement of non-governmental organisations (NGOs) and business” (OECD, 2016, p. 22). This suggests that while there was increased co-operation among different governmental actors, non-governmental stakeholder groups (private sector, academia, civil society) were not included in the policy design process the same way.

Non-governmental stakeholders were less involved in other countries/regions. In Croatia, in spite of a number of stakeholders participating in the RIS3 design, there was otherwise very shallow contact with civil society organisations. Regarding international participation in the RIS3, international experts have been consulted, meetings with international actors were held and Croatia also participated in Peer-Review events (RIS3 HR, 2016).

In Slovakia, there were several deficiencies in the organization of the EDP. While the RIS3 was formally based on the Quadruple Helix and European Commission experts were consulted (RIS3 SK, 2013, p. 52), the main problem was “the lack of cooperation between public sector research institutions and businesses” (IEC, 2014, p. 22). Additionally, international cooperation was generally weak (see Balaz & Zifciakova, 2016).

The other two Baltic states, Latvia and Estonia, did not embrace the essence of RIS3 and EDP. Kattel and Stamenov (2017, p. 5) assert that Estonia’s selection process of the smart specialisation areas was top-down. In Latvia, non-governmental organisations (NGOs) promoting economic growth were part of the EDP (Latvian Government, 2013), but the governance around RIS3, with regard to management structures, breadth of participation and communication, has not been fully developed (Gemma & Bulderberga, 2017).

In terms of the EDP being run as a process of creative co-design, the West Romania region, the South Moravia region and Lithuania all seem to be closer to adopting this model. The RIS3 design process in the West Romania region was engaging and involved several stakeholder groups, including civil society groups (Expert 4, 2018a). The South Moravian region has been building trust among stakeholders for a number of years and together with the relatively small size of the region, this allowed for network arrangements to emerge (Expert 2, 2017; Expert 3, 2017). Lithuania has a centralized R&I system with regard to funding and governance (Paliokaitė & González Verdesoto, 2017, p. 3). Nevertheless, the Lithuanian RIS3 led to an agreement on priorities that was more systemic and was based on a higher degree of policy coordination than in Estonia and Latvia (Karo et al., 2017, p. 282).

At the other end of the spectrum, the Croatian R&I system has a centralized governance which dominates regional aspirations (Račić et al., 2017) and the RIS3 design phase followed a predominantly top-down approach (Polverari, 2016, p. 35). In Romania, at the national level, the
process suffered from a political influence and could not be designated as a co-creative one. In the Czech Republic, public policy in the RDI (Research, Development and Innovation) policy domain has been quite centralized, and innovation strategies at national and regional level have been poorly coordinated (Srholec & Benedetti Fasil, 2017, p. 6). Slovakia has exhibited a high degree of centralisation in the fields of innovation and R&D (Balaz & Zifciaková, 2016, p. 22), and had a top-down design of RIS3 (Polverari, 2016, p. 35). RIS3 in Slovenia “meant a transformation of the government’s role: from a source of financing to a facilitator of change” (Wostner, 2017, p. 96), but it nevertheless generally favoured a top-down approach to the design of RIS3 (Polverari, 2016, p. 35). As previously mentioned, Estonia ran a rather top-down RIS3 process (Kattel & Stamenov, 2017, p. 5), as was the case in Latvia.

To sum up, the RIS3 design process was relatively successful only in some countries and/or regions. EDP resulted in engagement with a wide range of stakeholders only in the West Romania region and in Slovenia, even though it was not always run consistently. In other regions/countries the RIS3 design process was narrower, often burdened with coordination and cooperation problems and this hindered the inclusion of all groups of stakeholders.

As for the question on creative co-design, the process was more encouraging in Lithuania and the regions of West Romania and South Moravia. The next chapter discusses whether the four countries/regions that either managed to involve a broad range of stakeholders in the policy process or had an EDP that triggered a process of creative co-design, were able to extend this process into the policy implementation phase.

5. Extending the EDP: evidence from the early phase of RIS3 implementation

Even where CEE countries have been able to use and develop new strategy development tools and involve new stakeholders in their strategy design, the EDP has proved to be difficult to continue during policy implementation.

The South Moravian region12 has a political leadership focused on R&I, with some of the key stakeholders consistently supporting the R&I strategy. It has demonstrated continuity in R&I strategy development and commitment to its funding. It is the Czech region with the longest standing innovation strategy, launched in 2001–2002. The South Moravian Innovation Centre (JIC), an association between public authorities and four universities, is responsible for the coordination and implementation of RIS3. The region and the City of Brno are represented on the Steering Committee, the key decision-making body in innovation policy that supervises the implementation of RIS3 in the region. The partnerships put in place during the policy design phase were extended into the implementation phase and relevant stakeholders have been involved in permanent working groups or the Steering Committee.

In the Czech Republic, there are no EU Operational Programmes (OPs) at the regional level—rather, OPs are managed at the national level and the funds are distributed through competitive calls. As a result, many projects that are part of the RIS3 in the South Moravian region are funded through other local resources. These are mostly, and quite significantly, the budget of the city or the region. Continuous development of R&I strategies and the commitment to financial support from the regional government have been one of the crucial building blocks of the South Moravian region’s success.

The triple helix in the South Moravian region has functioned well, meaning the involvement of academia and the private sector in the policy process, next to governmental actors. However, it has proved difficult to integrate civil society in the process since they lack either the interest, and/or the skills and knowledge for full-fledged participation.13

Working groups are tasked to discuss what they perceive as issues in RIS3 and to propose opportunities which can be developed into new projects. Industry has been continuously involved in the EDP and novel R&I support instruments have been implemented. There has been active
participation by representatives of the key private companies in working groups and steering committee meetings, which take place on a regular basis. Therefore, the EDP has been running continuously from the design phase into the implementation phase.

In terms of the overall governance of RIS3 in the South Moravian region, the core issue is coordination with the national government. For instance, if the region identifies that its workforce lacks a certain set of skills, they cannot ask the regional universities to introduce or adapt higher-education programmes, as it is the national government who decides on educational priorities at universities. Another example is visa requirements for foreign nationals, making it difficult for the region to set up international expert teams within a reasonable period of time.

Monitoring and evaluation of the RIS3 in the South Moravian region has been accompanied by an explicit indicator framework articulated with the RIS3 priority areas. However, no new techniques have been applied to support monitoring and evaluation, such as innovative uses of new data. Furthermore, the region does not use more novel policy measures such as living labs, and challenge funds/prizes to stimulate user-driven innovation. In addition, involvement of new actors in the EDP has not been tracked over time through indicators or novel monitoring methods.

The RIS3 process in the West Romania region\textsuperscript{14} strongly differed from the approach at the national level. The Western Regional Development Agency (WRDA) coordinates and implements RIS3 on their own initiative, without any official obligation or legal mandate to do so. Drawing on the EC’s S3 Platform guidance and workshops, the agency designed its RIS3 and started implementing it in the region. They received support from the World Bank in the form of technical assistance, such as help with statistical analysis and accessing datasets. The RIS3 process has helped to build mutual trust among the different stakeholder groups.

Romania is a strongly centralised country (see Table 1), which has influenced the ability of the West Romania region to conduct its RIS3. Namely, the main barrier in West Romania is that there is no dedicated budget for the implementation of RIS3 in the region. Furthermore, the WRDA is not formally mandated to take charge of the implementation. Even though in 2017 one of the funding priorities of the regional OP referred to RIS3, it is a marginal part of the strategy. The OP on economic competitiveness also has a reference to RIS3, but it is a condition for funding rather than a budget dedicated to RIS3 implementation. Therefore, the agency has raised awareness about the lack of funds for implementation and has applied for technical assistance to the European Commission (Expert 4, 2018b; Expert 5, 2018).

By involving a broad range of stakeholders in the design phase, the EDP has continued in the implementation phase in the West Romania region, although it is not a formalized process. Namely, the WRDA works together with a wide variety of private companies and also cooperates with two industrial clusters in the region. Furthermore, the agency is involved with the Enterprise Europe Network that helps them reach out to clients for the regional RIS3. There are private companies interested in technology transfer, which keeps the momentum going for the RIS3 implementation, as universities have been less interested in the strategy. Civil society organisations such as incubators and accelerators in the area of entrepreneurship support remain strong actors throughout the policy implementation phase. The EDP process in the implementation is not programme-based, but rather partnership-based.

Policy monitoring activities have been developing but are still in the phase of being set up at the time of writing this article. In 2013, the WRDA set up a RIS3 monitoring process that was less developed. Since 2017 the agency has been participating in the EU’s inter-regional co-operation programme (INTERREG https://www.interregeurope.eu/about-us/what-is-interreg-europe) project that helps develop and strengthen monitoring methods. At the moment, methods for supporting monitoring and evaluation are rather traditional but the region is trying to put them to use in the context of a transformative vision. Studies have been carried out on innovative policy measures to
stimulate user-driven innovation, or on the need for angel investors in businesses; however, no budget is available for the realization of these actions at the moment. The involvement of new actors in the EDP has not been tracked over time for monitoring and evaluation purposes.

In Lithuania, the RIS3 has been led by the Ministry of Education and Science and the Ministry of Economy, but there is a complex governance structure in charge of the RIS3 implementation for which funding agencies are responsible. It includes the Research Council of Lithuania, the Agency for Science, Innovation and Technology (MITA), the Lithuanian Business Support Agency, and the European Social Fund Agency. The government’s strategic STI Council is at the top of the hierarchy for RIS3 coordination, followed by the RIS3 Implementation Coordination Group, while the Ministry of Finance oversees financial aspects. Even though Lithuania only has a national-level strategy, regional actors such as higher education institutions and business support agencies have participated in its development. However, there was no dedicated consultation oriented towards regions. There is a dedicated budget for the implementation of the RIS3 in the OP.

The Lithuanian EDP has not proved to be continuous, as some partnerships formed in the design phase ceased to exist by the time the calls were published. The latter were published belatedly, i.e. only about 18 months after the RIS3 was adopted. Indeed, RIS3 implementation only started in spring 2017. Moreover, the implementation of the RIS3 is executed through programme-based calls rather than through strategic partnerships or innovation platforms of key actors. In spite of this, some partnerships found their own path, even without the ESIF funding. At the time of our interviews with experts (March 2018), the EDP has been relaunched because of the need for an interim evaluation by the Research and Higher Education Monitoring and Analysis Centre (MOSTA) and the Ministry of Economy.

In terms of policy monitoring and evaluation, Lithuania has installed an explicit indicator framework connected to RIS3 priority areas, and some new techniques have been applied to support the process. More innovative policy measures to stimulate user-driven innovation have not been extensively employed. An involvement of new actors in the EDP has not been actively tracked over time, although there was an attempt to do it with data from a social network.

Due to launching the calls for application only 18 months after the RIS3 was adopted, and the decision to structure funding schemes along the lines of the previous programming period, the implementation of the RIS3 has proved difficult in Lithuania. There was a consequent disenchantment with the process and a loss of investment by stakeholders in the process.

In Slovenia, the RIS3 has been led by the Government Office for Development and European Cohesion Policy (GODECO). Since Slovenia only has a national RIS3, the GODECO adopted a pragmatic approach towards the involvement of regional or local authorities in the RIS3 implementation. There is a dedicated budget for the implementation of the RIS3 and, in particular, “Strategic Research and Innovation Partnerships (SRIPs) have been established as pillars of the S3 implementation process” (Gianelle et al., 2016, p. 57). SRIPs “bring together companies, knowledge institutions, the government and other relevant stakeholders (e.g., NGOs)” (Wostner, 2017, p. 93). These SRIPs have been the main vehicle for structural changes to the system of governance ([EC], 2017, p. 25).

The Slovenian EDP has been continuous, as even though the SRIPs did not exist during the design process, they were established based on the RIS3. However, most of the institutions in charge of the management of SRIPs existed before. The governance structure has evolved and there is a clear indication of improvement. The SRIPs cooperate during the EDP by discussing new programmes (e.g., e-mobility), but the ESIF is distributed on a competitive basis, respecting the roadmap made by the SRIP. RIS3 has managed to change the behaviour of actors participating in the EDP, evidenced by companies from the steel and aluminium sector that have begun cooperation.
Table 2. An overview of the EDP in selected CEE countries and regions

<table>
<thead>
<tr>
<th>Country/EDP characteristics</th>
<th>EDP with a broad range of stakeholders?</th>
<th>EDP a creative co-design?</th>
<th>EDP extended into implementation?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithuania</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Slovenia</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>South Moravian region</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>West Romania region</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Political uncertainty in Slovenia has tended to disrupt the RIS3 process (e.g., parliamentary elections took place in June 2018). However, the SRIPs will exist until 2022 or longer, which is supposed to reassure stakeholders of the continuity of the process (Wostner, 2017, p. 93). Furthermore, as a result of the Slovenian Smart Specialisation Strategy, “the government’s innovation policy mix has improved and is improving constantly as: there is a much stronger institutional base that supports the policy-making ...; policies are increasingly adapted to the particularities of different priority domains and certainly more focused ...; given detailed coordination policy schemes in different policies are now mutually reinforcing ...” (Wostner, 2017, p. 95, emphasis original).

There are some innovative policy measures to stimulate user-driven innovation in Slovenia that are used in the RIS3 (e.g., open platforms of cooperation—see Wostner, 2017, p. 94). However, there are no new techniques supporting monitoring and evaluation, and the involvement of new actors in the EDP has not been analysed over time. Formally there is an indicator framework for monitoring and evaluation of the RIS3, but it does not function in practice.

6. Discussion

In Lithuania and in the South Moravian region the EDP has been relatively successful, yet it fell short of developing all three characteristics that we consider a crucial threshold for the improvement of the governance of the R&I system (see Table 2). Having a comparatively high quality of governance to start with, the South Moravian region did fairly well in terms of design and implementation of the RIS3. However, the EDP was not truly extended in scope to cover the Quadruple Helix. Given a history of continuity regarding innovation strategies, the South Moravian region can clearly learn from the experience. Lithuania has also experimented with novel governance methods, although it did not include all stakeholder groups, nor did it maintain a continuous EDP into implementation.

Regional learning has been facilitated by a continuous EDP that involved a broad range of stakeholders and that operated in a multi-stakeholder fashion, even when the initial quality of regional governance was comparatively not that high. This was found to be the case in the West Romania region which carried out the EDP to a high standard, in spite of having a low ranking for the quality of government, being a “moderate innovator” with a relatively unsophisticated innovation system and having centralized governance that creates obstacles for delivering on priorities. The region is clearly on a learning trajectory.

The conclusion of Karo et al. (2017) on the suitability of the EDP for certain kinds of coordination capabilities in a region or a country has been validated during our research. Hence, as expected, Slovenia has been relatively successful in managing the EDP (although the EDP has not been based on a creative co-design). The same goes for the South Moravian region, which shares many of the success factors these authors mention (even though EDP in this region was not fully inclusive). Understandably, the RIS3 process has been easier in more sophisticated governance environments.
To explain why the West Romania region fared well there is a need to understand the causality behind each of the factors listed in Table 1. One factor standing out is political commitment (cf. Marques & Morgan, 2018) that played a decisive role. The amount of ESIF funding allocated to TO1 per capita is not the perfect indicator for political commitment, but it certainly plays a role in the extent of stakeholder mobilisation. However, even with a political leadership focused on R&I (e.g., the case of the South Moravian region), there is no guarantee of success.

7. Conclusion
The RIS3 process does have the potential to enhance governance of the R&I systems in regions/countries with weaker levels of governance, as occurred in the West Romania region. However, RIS3 does not automatically lead to an improved governance of the R&I systems in the sense of engendering a continuous EDP or by encouraging multi-stakeholder governance. The improvements in R&I governance are far from straightforward and guaranteed. Moreover, the extension of EDP into the implementation phase is dependent on the structure of ESIF operational programmes adopted in each country. This is especially true in regions that cannot influence all aspects of the RIS3 process due to the strong role of national governments, such as West Romania and South Moravia. At the national level, constraining factors for a more inclusive and/or effective RIS3 implementation arise due to specific issues, e.g., political uncertainty for Slovenia or inter-ministerial “competition” in Lithuania. Even if RIS3 processes are run effectively and efficiently, they cannot alone overcome constraining factors at the regional or national level.

This suggests that Smart Specialisation 2.0, beyond 2020, should be based on a meaningful and active involvement of stakeholders that entails a multi-stakeholder approach to governance. This implies revising ex-ante conditionalities so that governance arrangements require a continuous EDP process to strengthen national and regional governance systems. The paper also reveals the need to align the ESIF operational programmes with the institutional realities of specific countries so that RIS3 partnerships at the regional level are given the space and means to foster more experimental policies and extend EDP into the policy implementation phase. The EC should pay more attention to the reinforcement of regional partnerships and agencies that are able to deliver tailored and operational instruments responding to specific needs and opportunities. Broad-based national programmes that ignore regional variations should be adjusted so as to ensure a greater coherence with regional operational programmes.

The EC should ensure there is a meaningful involvement of and interaction with all relevant stakeholder groups, including civil society next to the private sector and academia. This could include conditionalities on governance arrangements to facilitate the EDP, in particular addressing the discontinuity that occurs after the design phase, and encourage the development of a Quadruple Helix instead of the currently common Triple Helix. As many regions with weaker governance systems struggle to implement a triple helix EDP model successfully, the necessary extension to a quadruple helix will be challenging. The Commission could, therefore, consider a technical assistance facility to support the development of pilot actions and testing of methods adapted to different governance contexts in regions that request support to improve their integration of civil society actors.

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Notes
1. For a discussion on Quadruple Helix see e.g., Grundel and Dahlstrom (2016).
2. The acronym is used interchangeably with S3.
3. The list of questions that guided the interviews and the anonymized interview transcripts are available upon request.
4. Other factors, according to González-Lopez (2019, p. 108) are: experience and learning by doing, policy evaluation, technology assessment and forecasting, social and political participation as well as theoretical rationales.
7. To see European Innovation Scoreboard: https://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards_en
8. Less developed regions are those with regional GDP PPS per capita which is more than 25% lower than the EU 27 average (see https://ec.europa.eu/eurostat/web/regions/background).
9. According to the Quality of Government Index for 2017, the quality of government for the West Romania region is at the level of most of the Romanian regions and does not even reach half of the EU average. On the contrary, the NUTS 2 region in which the South Moravian region is situated is better than the EU average. Furthermore, the West Romania region is a modest innovator (Regional Innovation Scoreboard (RIS), 2017a), just like Romania. But the South Moravian region belongs to the Czech NUTS 2 region Southeast that is a moderate + innovator (Regional Innovation Scoreboard (RIS), 2017b).
10. JIC (www.jic.cz/en/about-us/) is an association of the SMR, City of Brno, Masaryk University, Brno University of Technology, Mendel University and University of Veterinary and Pharmaceutical Sciences Brno.
12. The case study of the South Moravian region is based on interviews with Expert 2 and Expert 3.
13. This is the perspective of our interviewed experts, who are not representatives of civil society organizations.
14. The case study of the West Romania region is based on interviews with Expert 4 and Expert 5.
15. The case study of Lithuania is based on interviews with Expert 6 (2018).
16. The case study for Slovenia is based on interviews with Expert 1 and Expert 7 (2018), if not stated otherwise.

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