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Smart Specialisation in Romania, the Growing Importance of the Regional Dimension

The main aim of this paper is to present how the importance of the Romanian regional smart specialisation strategies grew during the 2014-2020 programming period. Relevant milestones connected to the implementation of the Regional Operational Programme are presented, relying on the analyses of secondary documents. The process is interpreted based on the existing literature in order to additionally identify some bottlenecks faced by less developed regions in such processes. In the case of Romania the regional dimension gained importance mid period of the financial exercise, triggered by the need to fully meet the ex-ante conditionality applicable under Cohesion Policy. The atypical situation presented sheds light on aspects linked to lack of capacities, lack of coordination between national and regional levels and different degrees of experience at the level of regions. However, capacity gained by organisations responsible at the regional level can be capitalised on in the preparation for the 2021-2027 programming period.
Keywords: smart specialisation, Cohesion Policy, less developed regions, regional development, innovation policy.

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Introduction

Smart specialisation strategies developed on the national and/or regional level became an ex-ante conditionality for the use of European Regional Development Fund in research and innovation under Cohesion Policy starting with the 2014-2020 programming period (Foray 2015). The ex-ante conditionality appeared in the Partnership Agreement of all Member States and was applicable to 169 out of 205 Operational Programmes, in the vast majority of cases being a condition applied on the regional level, linked to the elaboration of regional programmes (Tolias 2019). Of the Member States, 12 have elaborated only national level strategies, 6 decided on developing only regional strategies and 10 countries, including Romania, have elaborated both national and regional strategies (Larrea et al. 2019).

In this context, however, compared to all other Member States, Romania presents a particular case, since, only the national strategy has been officially submitted as partial fulfilment of the ex-ante conditionality⁹, with the regional smart specialisation processes becoming interlinked with the use of funds only midway through the programming period (Szávics and Benedek, *forthcoming*). Additionally, this happened only in connection to the policy documents of the seven less developed regions and not in case of the capital region, Bucharest-Ilfov. Due to this particularity, the main aim of this paper is to present, as a case study, the evolution of the Romanian regional smart specialisation strategies in the context of Cohesion Policy, pointing out the most relevant milestones. Since seven out of the eight NUTS II development regions are considered less developed and five of those are also considered lagging regions, a subsequent objective is to identify bottlenecks that can be regarded as characterising such regions linked to the smart specialisation process.

The case study itself can contribute to the literature, since Romanian regional smart specialisation processes have not drawn attention in the literature, except for the case of the North East Development Region (Healey 2016) and in terms of transformations that were triggered by this process impacting regional innovation systems (Ranga 2018). Other

⁹According to Section 2.3of the Partnership Agreement of Romania approved by the European Commission on August 14, 2014, <http://www.fonduri-ue.ro/acord-parteneriat#varianta-%C3%AEn-englez%C4%83>.

contributions on Romania (Sandu 2012; Ionescu 2015; Drăgoiu, 2016) are focused on the national level. Additionally, the paper can bring some empirical evidence to the literature generally referring to problems and challenges faced by less developed or lagging regions linked to smart specialisation policy making. These challenges include lack of capacity of the institutions governing smart specialisation processes and of key actors participating in them and the low level of trust within the innovation system, hindering proper policy formulation (Tsipouri 2018; Kocziszy and Benedek 2018; Tripl et al. 2019; Pose and Ketterer 2019), as well as lack of appropriate multi-level coordination mechanisms (McCann and Ortega-Argilés 2016).

Besides its contribution to the literature, the paper can have some practical relevance, as well. According to a recent proposal, for the first time since Romania's accession to the European Union in 2007, all Romanian regions are preparing to elaborate and implement separate Regional Operational Programmes for the 2021-2027 programming period¹⁰. The assumption is that the smart specialisation processes implemented in the current programming period on the regional level have contributed to this decentralisation.

The paper starts with a literature review on smart specialisation in the context of Cohesion Policy, than continues with methodological aspects. After a short introduction to the general Romanian context, the following section will thoroughly present regional smart specialisation processes in Romania. The paper will resume with discussion and conclusions, indicating possible areas of future research.

Smart specialisation and Cohesion Policy

Smart specialisation strategies are interventions designed with the aim to facilitate economic transformation in a limited number of vertical priority areas, relying on economic assets and strengths, research capacities and use of new technologies, but at the same time on the results of entrepreneurial discovery processes, involving stakeholders with entrepreneurial knowledge in a continuous experimentation (Foray et al. 2011; Foray 2014; Foray 2015). The concept, proposed by Dominique Foray in the *Knowledge for Growth* Expert Group coordinated by the Directorate General for Research and Innovation, was transposed into an instrument of Cohesion Policy by the Directorate-General for Regional and Urban Policy, with smart specialisation strategies becoming an ex-ante conditionality for European Regional Development Fund (ERDF) expenditures made under Thematic Objective 1- *Promoting research, development and innovation* (Foray 2015). Transposal was favoured by the Cohesion Policy reform, generated by the Barca report (McCann and Ortega-Argilés 2011; McCann 2015), characterised by five important elements: a) a place-based logic with accent on the regional level, b) multi-level governance by involving partners and using a bottom-up approach, c) need for effectiveness through accent on results and impact in terms of social and economic development, d) focus on efficient use of funds through thematic concentration, e) use of ex-ante conditionalities for justifying interventions to be financed and ensuring their proper design (McCann 2015). The recommendations of this report also influenced the method of putting smart specialisation into practice in the context of Cohesion Policy.

¹⁰Decentralisation was first announced during November 2019, the Romanian Government adopting an Emergency Ordinance in this sense on February 4, 2020, but later on deciding on adopting the decision through a different normative act. Further information is to be found on the web-page of the Romanian Government and Ministry of European Funds: <http://mfe.gov.ro/referitor-la-unele-informatii-aparute-in-spatiu-public-in-data-de-29-noiembrie-2019-ministerul-fondurilor-europene-face-urmatoarele-precizari>; <http://mfe.gov.ro/cinci-ordonante-de-urgenta-in-spriinul-cresterii-eficientei-utilizarii-fondurilor-europene/>; <https://gov.ro/ro/guvernul/sedinte-guvern/informatie-de-presa-privind-proiectele-de-acte-normative-adoptate-sau-de-care-guvernul-a-luat-act-in-cadrul-edintei-din-4-februarie>.

To fulfil the ex-ante conditionality as stipulated in Regulation 1303/2013¹¹, institutions responsible for strategy elaboration could rely on the methodological guidance developed by the European Commission (European Union 2012). Based on this guidance, strategies should be based on a sound analyses of the socio-economic context and research and innovation indicators, should include priorities and a policy mix, as well as monitoring and evaluation mechanisms (ibid). However, the most important elements of good policy design are the involvement of stakeholders through entrepreneurial discovery, the vertical definition of a limited number of priorities, both depending on the quality of institutions responsible for and those participating in the process (Foray 2015). Involvement of stakeholders is not only to be assured through entrepreneurial discovery but also through the establishment of a governance structure, a Steering Group, gathering representatives of the most important stakeholders (European Union 2012). Additionally, when designing a strategy, policy makers should place themselves into the larger system to which they belong, *i.e.* national and/or European, depending on their territorial level (Foray 2015). This integrated character of the policy calls for coordination and cooperation between different levels, subject to their competencies, with the aim to create synergies, complementarities and to avoid fragmentation of efforts (Gianelle et al. 2016).

At the time Operational Programmes were adopted in 2014, the ex-ante conditionality was considered as partially fulfilled in the Partnership Agreement of 20 Member States (Tolias 2019), including Romania. For the next programming period, the same strategies represent an enabling condition for Policy Objective 1 – *A smarter Europe by promoting innovative and smart economic transformation* – requiring the fulfilment of seven criteria for declaring ERDF expenditure¹². To meet the criteria, existing strategies need to be redrafted and redesigned.

Since the beginning of the current financial exercise, the Joint Research Centre of the European Commission (EC) has been offering targeted support for smart specialisation in lagging regions¹³. In such regions the success of smart specialisation is crucial for development; however, along with less developed ones these are confronted with several shortcomings that hinder the impact of the policy. Lack of capacity at the level of institutions responsible with the process, especially in terms of experience with bottom-up processes (McCann and Ortega-Argilés 2016), weak innovation systems (Trippel et al. 2019) and tensions between approaches taken at the national and regional levels (McCann and Ortega-Argilés 2016) are some of the general bottlenecks mentioned in the literature as factors hindering proper policy formulation and implementation.

Methodological aspects

From a methodological point of view the research is based on the analysis of available secondary documents, as well as practical experience. In the category of documents analysed, all sources of information documenting the process on regional, and to a certain extent on national level were included, as well as outcomes of the process, *i.e.* legal acts, programming documents,

¹¹Annex XI of the Regulation (EU) No 1303/2013 specifies the following fulfillment criteria for a national or regional smart specialization strategy “a) is based on a SWOT or similar analyses to concentrate resources on a limited set of research and innovation priorities; b) outlines measures to stimulate RTD investment; c) contains a monitoring mechanism” accompanied by “a framework outlining available budgetary resources for research and innovation (...)”.

¹²Annex IV of the Proposal for a Regulation laying down common provisions, COM/2018/375 final - 2018/0196 (COD) sets as an enabling condition “Good governance of national or regional smart specialisation strategy” requiring the fulfillment of the following criteria: 1) “up-to-date analysis of bottlenecks for innovation diffusion, including digitalisation, 2) existence of competent regional / national institution or body, responsible for the management of the smart specialisation strategy, 3) monitoring and evaluation tools to measure performance towards the objectives of the strategy, 4) effective functioning of entrepreneurial discovery process, 5) actions necessary to improve national or regional research and innovation systems, 6) actions to manage industrial transition, 7) measures for international collaboration.”

¹³ Further information is to be found on the Smart Specialisation Platform:
<https://s3platform.jrc.ec.europa.eu/ris3-in-lagging-regions>

national guidance materials and publicly available information from the dedicated section on the web-page of responsible institutions and empirical studies. All documents analysed are related to the 2014-2020 programming period. Secondary documents mentioned were collected through desk research.

In line with the main research aim, this study is mainly descriptive, but at the same time has some explanatory and exploratory elements. Firstly, this is due to the fact that the objective is to point out the main milestones of the Romanian regional smart specialisation processes in relation to the use of European Cohesion Policy funds. Secondly, an aim is to identify some specific bottlenecks characterising the smart specialisation process in Romanian less developed regions. Thus generally, aspects of “who”, “what”, “how” and “when” will be looked into, answering research questions such as: when were the regional strategies elaborated, by whom and in what context; how was the process implemented, how did it evolve over time and under which circumstances? Specifically, emphasis shall be put on the connections between the regional smart specialisation processes and the implementation of the relevant Operational Programmes financed from Cohesion Policy funds. From this perspective the main link is represented by the ex-ante conditionality for Thematic Objective 1 (Foray 2015; Regulation 1303/2013; Toliaş 2019). Connected to examples of bottlenecks that less developed or lagging regions face in the process, special attention is given to the general problems already presented in the literature (Tsiouri 2018; Kocziszky and Benedek 2018; Trippl et al. 2019; Pose and Ketterer 2019, McCann and Ortega-Argilés 2016), reported to the main characteristics of a proper policy design (European Union 2012; Foray 2015; Gianelle et al. 2016).

Smart specialisation in Romania: State of Play

General context

Romania, one of the main beneficiaries of the Cohesion Policy budget, is now in its second financial exercise, preparing for the third one. Until now, the country had a centralised approach to programme management, Operational Programmes (OPs) being prepared and implemented centrally by designated line ministries, similarly to accompanying policies or strategic planning documents (Szávics and Benedek, *forthcoming*). The only partial exception was the Regional OP, with a separate budget for each of the eight NUTS II development regions, justified also with the Regional Development Strategies prepared by the Regional Development Agencies (RDAs) (*ibid*). Out of the NUTSII regions the capital region (Bucharest-Ilfov) is the only one considered developed. The other seven regions (North West, North East, West, Centre, South West Oltenia, South Muntenia, South East) are less developed. Five of the less developed regions (North West, North East, South West Oltenia, South Muntenia, South East) are also low-income lagging regions (European Union 2017).

RDAs, established at the level of these regions based on Law no. 315 from 2004 on regional development, are non-governmental organisations of public utility. Currently their main task is to act as Intermediate Bodies of the Regional OP. Additionally, they also elaborate, implement and monitor regional level strategies and manage their own projects financed from non-reimbursable funds. Though RDAs are not officially recognised as part of the national research and innovation system, they are the only regional level organisations with tasks connected to strategic planning on the regional level (Ranga, 2018). As such, some RDAs elaborated previous generations of Regional Innovation Strategies and, except for Bucharest-Ilfov RDA, are currently redesigning existing smart specialisation strategies. Strategy revision is strongly interconnected with the proposal to decentralise the Regional OP and with the fulfilment of the enabling condition under Policy Objective 1¹⁴.

¹⁴The intervention logic for Policy Objective 1 proposed by the Ministry of European Funds contains both national and regional level interventions, the latter being proposed to be part of the separate Regional OPs. Further information is to

The national smart specialisation strategy

For the fulfilment of the applicable ex-ante conditionality under TO1, the responsible line ministry¹⁵ started preparations in 2012, according to Memorandum 5551 from 2012. The document started to be elaborated in 2013 by the Executive Unit for Financing Higher Education, Research-Development and Innovation (EUFHERDI). Established based on Government Ordinance no. 62 from 1999, EUFHERDI is an organisation under the coordination of the line ministry and with a role in implementing national research-development and innovation policies. For the purpose of strategy elaboration EUFHERDI partnered with universities, research institutes, the Romanian Academy of Science, as well as two consultancy companies. The strategy was elaborated using foresight methods (Ranga, 2018) and based on consultation with organisations from the whole country, especially from the field of research. No entrepreneurial discovery focus groups have been organised and there was little involvement of the business environment and of RDAs in the process¹⁶. Encompassing four priority areas, the National RDI Strategy 2014-2020 was approved in 2014 through Government Decree no. 929.

As already mentioned, the document was referred to in the Romanian Partnership Agreement approved by the EC in August 2014, as representing partial fulfilment¹⁷ of the ex-ante conditionality “*A national or regional smart specialisation strategy is in place*”, applicable to the Competitiveness and Regional OPs. For fulfilment, Romania started to work on the inclusion of the regional dimension in the national-level document, supported by entrepreneurial discovery processes and through the establishment of a governance system¹⁸. The first two aspects were included by EUFHERDI in a project that received financing from the Administrative Capacity OP 2014-2020¹⁹. Implemented between 2016 and 2019, without the formal involvement of the RDAs, the project included the monitoring of regional innovation ecosystems, regional entrepreneurial discovery processes and workshops to integrate regional input to the national strategy. For the moment the National RDI Strategy 2014-2020 was not yet amended based on the outputs of the project. Governance of the strategy was undertaken by the

be found on the webpage of the Ministry: <http://mfe.gov.ro/minister/perioade-de-programare/perioada-2021-2027/>. The less developed regions will need to redraft their strategies, while Bucharest-Ilfov has to design a smart specialisation strategy.

¹⁵ Based on the Memorandum the National Authority for Scientific Research, an institution subordinated to the Ministry of Education, Research, Youth and Sports (currently the Ministry of Education and Research) was responsible for elaborating the strategic document.

¹⁶ The strategy has been elaborated in the framework of a project containing eight work packages. Their detailed description, as well as information on the consultations and organisations involved in the elaboration can be found on the dedicated webpage of the project: www.cdi2020.ro.

¹⁷ The Partnership Agreement explains that the strategy has smart specialisation strategic orientations that have been built on the guidance of the European Commission from a methodological perspective, taking into account the content of other strategic documents elaborated on the national level and using modern foresight methods. It adds that the strategy foresees measures to stimulate RDI investments that are based on the needs of enterprises.

¹⁸ Linked to ex-ante conditionalities that are not fulfilled or partially fulfilled the European Commission establishes action plans together with the responsible national institutions. Steps taken towards fulfillment are monitored by Commission services until conditionality is fulfilled. While the action plan itself is not available, one document of the Ministry of European Funds could be found linked to the subject: Memorandum on the fulfillment of ex-ante conditionalities foreseen in the Partnership Agreement and measures necessary for their fulfillment until December 2016, approved on February 24th, 2016.

<http://www.fonduri-ue.ro/images/files/legislatie/nationala/Memorandum.aprobat.24.februarie.2016.pdf>. Based on the text of the Memorandum, the fulfillment of ex-ante conditionalities linked to TO1 are receiving assistance through a project financed through the Administrative Capacity Operation Programme 2014-2020. The document continues by mentioning that the only action meeting difficulties in implementation refers to operationalisation of the National Committee for Competitiveness mentioned in the National Competitiveness Strategy, a body that should have been also invested with the responsibility to implement smart specialisation on the national and regional level.

¹⁹ The project is entitled “Developing the administrative capacity of the Ministry of Research and Innovation to implement actions set out in the National Strategy for Research, Technological Development and Innovation 2014-2020” and is presented on EUFHERDI’s official website: <https://uefiscdi.gov.ro/dezvoltarea-capacitatii-administrative-a-mci-de-implementare-a-unor-actiuni-stabilitate-in-strategia-nationala-de-cdi-2014-2020>.

National Council for Competitiveness established through Government Decision 236 from April 11, 2016 with the aim to monitor the implementation of the National Competitiveness Strategy 2014-2020.

Smart specialisation at the regional level

By the beginning of the current programming period, even if not linked to the programming process, some RDAs started to voluntarily develop smart specialisation strategies: North East region had its strategy adopted in 2014 (Healey, 2016; Ranga, 2018), West region finalised its own strategy in 2013, with the support of the World Bank (Ranga, 2018), while Centre region also had a strategy in place by 2014. In this latter case, the RDA relied on its own staff, while North East involved an external consultancy company. At the end of 2015 North West region also embarked in the smart specialisation process. South Muntenia and South West Oltenia, finalised their strategies in 2016 (Szávics and Benedek, *forthcoming*). These last two policy documents were also elaborated by consultancy companies. Though voluntary, the exercise also had some practical grounding. By the beginning of the programming period it had become obvious that in order to be able to attract sources of financing under Union Initiatives or the Interreg Europe Programme, regional smart specialisation areas had to be officially identified through a Smart Specialisation Strategy put in place. This was not only necessary for the RDAs to develop their own successful projects, but also for them to support different regional stakeholders that wished to apply for funds under these programmes. Forerunner regions generally followed the methodological guide of the EC, but entrepreneurial discovery processes were not fully operationalised and in some cases no governance structures were established.

2016 marked two important milestones linked to the regional level smart specialisation process. Firstly, North West and North East regions were selected to receive assistance from the Joint Research Centre of the EC in a pilot project called “*RIS3 support for lagging regions*”, financed from a Preparatory Action of the European Parliament (Ranga, 2018). Based on an initial needs assessment, the project concentrated on the operationalisation of the entrepreneurial discovery process providing assistance in the development of monitoring mechanisms and strengthening governance and capacity building of the RDAs (*ibid*). The project was finalised in mid-2018. As a result, North East region revised its initial strategy and North West region finalised its policy document (Szávics and Benedek, *forthcoming*). Nevertheless, one other main output of the project was an additional direct allocation of 50 m EUR budgeted for the two regions in order to finance innovation projects generated at the entrepreneurial discovery processes organised with the methodological support of the Joint Research Centre. This was marked through the amendment of the Regional Operational Programme 2014-2020 approved by the Directorate-General for Regional and Urban Policy in March 2018²⁰.

The second milestone was represented by another modification of the Regional Operational Programme, as of March 2016, concerning Priority Axis 1 of the OP (Promotion of technology transfer), with a budget available only for less developed regions (Szávics and Benedek, *forthcoming*). Based on this amendment RDAs were requested to elaborate regional Concept Notes or Framework Documents for smart specialisation (*ibid*) in order to support the implementation of two operations under the priority, financing mainly infrastructural investment in technology transfer offices and scientific and technological parks. To underpin this task, relying on the official EC Guide, the Managing Authority of the programme elaborated a methodological framework, putting stress on establishing a governance structure for the process, on the organisation of entrepreneurial discovery focus groups, and on proper identification of priority areas, including their harmonisation with the national smart specialisation priorities

²⁰The amendment concerned Priority Axes 1 – *Promotion of technology transfer* - of the Regional OP 2014-2020. Besides the already existing three types of operations to be financed, a third category has been introduced referring to projects generated at the regional level at entrepreneurial discovery processes.

(MRDPA, 2018). As an outcome, all less developed regions elaborated Concept Notes. Relying on the Framework Document, South East and North West finalized their strategy and Centre region updated its existing policy document (Szávics and Benedek, *forthcoming*). In most regions Concept Notes were elaborated by the RDA's own staff, similarly to the strategy update. Only South East region cooperated in this sense with external consultants.

In 2018 the Joint Research Centre started to implement the second stage of the project, rolling it out to all Romanian regions, including Bucharest-Ilfov, the developed capital region (Ranga, 2018). Activities of the project coordinated by DG Regio take into consideration the differences on the level of regions, *i.e.* the higher experience of North West and North East regions, where the project was piloted in its first stage, the existing experience in all other less developed regions, and the need for the initiation of the process in the capital region (*ibid.*). Presented in detail by Ranga (2018), the main elements of the project include further support in conducting entrepreneurial discovery processes, assistance in strategy monitoring and in strengthening governance, including regional-national coordination, as well as capacity building of RDAs and that of key actors. In both stages of the project, targeted RDAs have been included in horizontal activities implemented by the Joint Research Centre, further supporting European lagging regions in smart specialisation related capacity building (*ibid.*).

Discussion and conclusions

The aim of this paper was to present, as a case study, the evolution of the smart specialisation process in Romania's less developed regions, and to identify main milestones of the process in the context of Cohesion Policy. Additionally, one other objective was to bring empirical evidence linked to specific bottlenecks encountered in the process by such regions.

As has been shown, for the 2014-2020 programming period Romania officially submitted a national strategy, linked to the ex-ante conditionality for Thematic Objective 1, partially fulfilling it. Even though the elaboration of smart specialisation strategies started in some regions at the beginning of the financial exercise - firstly in North East, West and Centre regions, then in South West Oltenia, South Muntenia and North West regions – this was rather a voluntary exercise, without formal connection to the use of Cohesion Policy funds. However, by the midst of the programming period, regional level strategies started to gain importance and became interlinked with the use of funds. This happened in connection to the implementation of one of the two OPs selecting Thematic Objective 1.

The first important milestones of this process are linked to year 2016, when the Joint Research Centre started its pilot project in North East and North West regions and when the Regional OP was amended, triggering the start of the smart specialisation process in all seven less developed regions. 2018 brought the following landmark, when all less developed regions from the country had their strategy in place and the Regional OP was amended again, earmarking a separate allocation for the smart specialisation projects of North West and North East regions. A connection between regional smart specialisation strategies and processes and the use of funds was triggered by the EC, requesting the elaboration of regional strategies after a review of the programming documents and based on the concern that the national strategy excluded the regional territorial dimension (Healey, 2016). This idea is reinforced by Ranga (2018), mentioning that the design of regional smart specialisation strategies was undertaken as a responsibility by the RDAs in order to meet the ex-ante conditionality for ERDF.

One major benefit of the process is that regional smart specialisation strategies became strongly interconnected with the use of ERDF under Cohesion Policy, at least connected to the Regional Operational Programme, even if to a different extent, *i.e.* in the case of North East and North West Regions, not only connected to technology transfer operations but also linked to smart specialisation projects generated at entrepreneurial discovery focus groups. Another benefit is that the necessity to elaborate the regional Concept Notes brought about a methodological harmonisation in the process, as well as a certain level of coordination of the

regional processes that ran separately until then. Additionally, this resulted in a correlation of the regional smart specialisation priority areas with those defined at the national level. While the importance of the regional strategies grew in the context of Cohesion Policy, on the country level steps were taken in the same direction, *i.e.* towards incorporating the regional dimension in the national strategy. Nevertheless, the processes at the two territorial levels run rather in parallel than converged (Ranga, 2018). This can be partly due to the atypical situation itself, meaning that regional strategies became interlinked with the use of funds by the mid-point of the programming period and in a step-by-step process. Additionally, the lack of any formal relationship between the RDAs and the institutions involved at the national level in management of research-development-innovation policies has also contributed to this situation. This lack of coordination and cooperation between territorial levels is one of the characteristics of such processes in less developed regions (McCann and Ortega-Argilés, 2016) and might represent a challenge to be overcome in the preparation for the next programming period.

Linked to the future exercise, it is hard to tell to what extent the enforcement of the regional dimension of smart specialisation in the context of the Cohesion Policy contributed to the decision to decentralise the Regional OP. This needs to be interpreted based on information gathered through further research, including other aspects deriving from the implementation of the Regional OP that can potentially point towards the same direction. Nevertheless, what can be concluded is that the experience gathered by the RDAs during this process will most probably be exploitable during the regional programming process for 2021-2027. However, regions do not embark in this experience from the same level. North West and North East are more experienced due to their selection in the first stage of the pilot project implemented by the Joint Research Centre, all other less developed regions having less experience in this sense (Ranga, 2018). Variance between the levels of experience at the regional level can be identified as one other characteristic of the smart specialisation process in Romania's less developed regions. This is not only connected to the fact that not all regions were involved in the pilot project of the Joint Research Centre from the beginning, but also to the fact that they started the smart specialisation process in different years. North East, West and Centre regions were forerunners in this sense, followed by South West Oltenia and South Muntenia, then by North West, the South East region being the last embarking in this process.

Another indicative that became apparent is connected to the lack of capacities at the regional level. With the exception of Centre and North West regions, all RDAs involved external consultancy in the design of their strategy (West, South West Oltenia, South Muntenia, South East) or its first version (North East). This finding can be completed with the information presented by Ranga (2018), mentioning that the competencies of the RDAs, except for North East region, are limited, with small teams of 3-5 people being involved in the design and implementation of smart specialisation strategies while also having other tasks. Finally, as concerns at least the beginning of the process, lack of experience with bottom-up processes and in establishing regional governance mechanisms for stakeholder involvement (McCann and Ortega-Argilés, 2016) can also be identified. As has been shown, in the regions embarking first in the strategy elaboration process less emphasis has been put on entrepreneurial discovery processes and on setting up governance structures.

However, some of these bottlenecks can be regarded as having been at least partially overcome in the last years by Romanian regions. This is due to the connection of regional smart specialisation processes with the use of Cohesion Policy funds and to the continuation of the Joint Research Centre pilot project. Experience gathered during 2014-2020 can generally be capitalised on by regions during the preparation for the next programming period. However, the ones that finalised or updated their strategies after the elaboration of the Concept Note will certainly be favoured in this process. The actual extent of capacity enforcement at regional level as a result of the smart specialisation experience so far can only be captured through interviews with stakeholders. This can bring valuable qualitative information that is missing from the present case study and could contribute to formulating more articulate conclusions in line with

the research aims. The limitation of the present study can represent a next step in further research along with an analysis of the results of regional smart specialisation processes.

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