SMART SPECIALISATION IN THE LESS ADVANCED REGIONS. WHAT ARE THE KEY CHALLENGES?

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Abstract: *A new element that Cohesion Policy brings for 2014-2020 is the need for states and regions to draw Research and Innovation Smart Specialisation Strategies (RIS3) as a pre-condition to access EU funds. The novelty and the flexibility (due to the diversity of the regions from EU) of the concept of Smart Specialisation makes it ambiguous and can lead to a lack of understanding among the regional policymakers. Also, there are questions related to the purpose of the RIS3 for the Cohesion Policy and to the adequacy of the RIS3 precondition for less advanced regions that lack capacities to deliver innovation policies. This article aims to explore the role of the Smart Specialisation concept in the context of the new Cohesion Policy and to analyze the possible implications of RIS3 in the less advanced regions. The analysis is conducted using the economic development approach and the policy perspective. The research method includes a content analysis of 12 preliminary versions of Smart Specialisation Strategies presented by regional policy makers within the Smart Specialisation Platform (a network created by European Commission in 2011 with the aim to provide information, methodologies and expertise to the states and regions).*

Keywords: innovation; smart specialization; regional development

Introduction

Smart Specialisation, a concept born as a reaction to EU-US productivity gap, is now a core element of the Cohesion Policy 2014-2020. Is the Smart Specialisation a bridge between innovation and cohesion or it just subordinates the equity to efficiency? One reason for the hegemony of innovation discourse is the "coalition" between cohesion and competitiveness. At the same time, it seems that competitiveness dominates and cohesion loses the institutional support at the European level. Even if the notion of Smart Specialisation is quite new and the academia still discuss its opportunity and possible implications in terms of relating with other policy areas, European Commission made the absorbtion of Cohesion funds dependent on the designing of Research and Innovation Strategies for Smart Specialisation (RIS3).

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The official definitions is provided in the Regulation No. 1303/2013, the legal basis for European Structural and Investment Funds: *"smart specialisation means the national or regional innovation strategies which set priorities in order to build competitive advantage by developing and matching research and innovation own strengths to business needs in order to address emerging opportunities and market developments in a coherent manner, while avoiding duplication and fragmentation of efforts; a smart specialisation strategy may take the form ok, or be included in, a national or regional research and innovation (R&I) strategic policy framework"* (art.2 of Regulation no. 1303/2013)

Like all the new concepts, there are arguments and critics raised by the academia. Specifically, the subject concerning the opportunity of Smart Specialisation in less advanced regions represents an important issue. A possible source of inequity is the lack of administrative capacity for less developed regions to design and implement proper innovation strategies. Also, RIS3 tool could favor the advanced regions and increases the competitiveness gap between the EU regions. The convergence as a consequence of economic integration depends on the patterns of industrial and trade specialization (Pascariu and Tiganasu, 2013).

Thus, the article aims to explore the role of the Smart Specialisation concept in the context of the new Cohesion Policy and to analyze the possible implications of RIS3 in the less advanced regions. In the first place, the literature on Smart Specialisation will be reviewed especially with focus on challenges and possible impact on cohesion. In addition, 12 preliminary versions of RIS3 strategies presented by more developed and less developed regions within the Smart Specialisation Platform will be analyzed in order to find what are the problems identified by the regional policy makers related to the implementation of these measures.

Literature review

The emergence of the Smart Specialisation concept

The Smart Specialisation concept was proposed by a group of experts, Knowledge for Growth (K4G), created in 2005 at the initiative of the Commissioner for Science and Research. The argument for the Smart Specialisation represents the EU-US competitiveness gap and the need for a better prioritization in the allocation of the regional resources. Smart Specialisation is defined by the authors as the "regional prioritization of a group of economic sectors and technology areas potentially competitive in international markets and generators of new activities with competitive advantage over other locations" (Foray *et al.* 2007). OECD's definition is "smart specialisation is an industrial and innovation framework for regional economies that aims to illustrate how public policies, framework conditions, but especially R&D and innovation investment policies can influence economic, scientific and technological specialisation of a region and consequently its productivity, competitiveness and economic growth path" (OECD, 2013). Also, it is stressed the difference between Smart Specialisation and Smart Specialisation

Strategy (RIS3). The first notion is defined as "a virtuous process of diversification through local concentration of resources and competences in a certain number of new domains that represent possible paths for transformation of productive structures", and the second means "putting in place a political process aimed ad facilitating this dynamic when it cannot develop spontaneously" (Foray, 2014). The diversification plays an important role for the convergence, being the next phase after specialization and sustaining the growth and economic convergence at regional level in long term (Pascariu and Tiganasu, 2013).

Foray, one of the authors of the concept, argues that Smart Specialisation is a tool for any regions in the context of a broader interpretation of innovation. The RIS3 has the mission to connect the R&D and innovation to the sectoral structure of economy and this process is applicable worlwide (Foray, 2011). According the Giannitsis (2009), the concept of smart specialisation demonstrates a capacity of policy adjustment for development of innovative competitive units, cluster and/or regions; and involves public interventions for concentrating resources and financial mechanisms which can create positive social externalities in the future. Ortega-Argiles (2012) claims that the Smart Specialisation concept is important for both leading regions and for followers, but the first ones are advantaged because of the capacity to accumulate bigger resources and the research and economic infrastructure. Consequently, a legitimate discussion was started about the opportunity of Smart Specialisation as a tool for Cohesion policy.

One of the reasons to include the Smart Specialisation in the regional policy lies in the stated role of Cohesion Policy for 2014-2020, that of contributing to the achieving of the Europe 2020 objectives: to deliver smart, sustainable and inclusive growth. The argument is that Smart Specialisation will lead to a European economy based on knowledge and innovation, will support the transition toward a resource-efficient, low-carbon economy, will strengthen territorial cohesion and create economic opportunities for better jobs and social innovation (Foray *et al.*, 2012). Also, another argument for Smart Specialisation is related to its potential regarding both stronger and weaker regions. For the less developed regions, the approach is to build on the regional strengths and to achieve a long-term impact, for the more developed regions that already have comparative advantages, the approach is to target specialized diversification and smart upgrading through general-purpose application technologies (GPT) or other innovation activities (Foray *et al.*, 2012).

The challenges of Smart Specialisation

Morgan (2013) identifies three types of challenges related to Smart Specialisation: the conceptual, the operational and the political one. In the first place, the conceptual challenge consists of the ambiguity of the concept and what it implies for the theory and regional policy. In addition, the operational challenge concerns the translation process from theory into policies. Equally important is the political challenge, meaning the way to ensure that the different levels of governance is mobilised to put the Smart Specialisation in practice.

Pessoa (2014) is questioning the new paradigm for regional policy in European Union, with the Smart Specialisation as a key element. Moreover, he analyzes the relationship betwenn innovation and cohesion (efficiency vs. equity) concluding that Smart Specialisation is not a bridge between these two because innovation policy implies "creative destruction" and divergence, while cohesion involves convergence. Also, the pre-condition to design Smart Specialisation Strategies (RIS3) could represent a „bureaucratization" of the idea. An already observed effect is the „copy-paste" process of designing strategies by some regions with less innovative capacity (Pessoa, 2014). On the other side, some regions "have all the necessary elements for such a strategy, but have not felt the need to encompass this within a formal documents" (Charles *et al.*, 2012, p. 8).

Iacobucci (2012) provides an analysis of the preliminary strategies presented in the Smart Specialisation Platform and concludes that there are at least three sources of uncertainty that characterized RIS3: its scope, the variety versus specialisation discussion, the top-down versus bottom-up discussion. The first one regards the question whether Smart Specialisation implies just R&D and innovation or represents an extensive development strategy. If we look at the actual discourse of EU regional policy, we can notice that RIS3's focus is on innovation, technology and science. Benner (2013) considers that this orientation narrows the potential of Smart Specialisation in the regions that are not associated with the high-tech industries and that can build comparative advantages in industries like tourism or retail. The second one points to the contradiction between the specialisation targeted by the RIS3 and the industry variety that is needed in promoting innovation. The third source of uncertainty represents the approach in designing the strategy, top down or bottom-up. Even if the policy guidelines indicate the "entrepreneurial discovery" that is a bottom-up approach, the same guidelines ask for creating a vision and objectives, a process specific for the top-down approach (Iacobucci, 2012). This issue is pointed also by McCann and Ortega-Argiles (2011, p.21) indicating "the fact that in the original policy concept it is the entrepreneurs and not the regional policy-makers who are assumed to be best equiped for identifying the smart specialisation opportunities therefore also poses an additional policy-design challenge".

Therefore, the need for European Commission is to examine the contributions of the academia and the first steps of the regional and national policy makers in order to identify the problems and to adapt or clarify the policy guidelines. In the following sections I will analyze the regional policy makers' side to see what are the key issues raised by them regarding the implementation of RIS3.

Method

This article aims to explore the role of the Smart Specialisation in the context of new Cohesion Policy and to analyze its possible implications in the less advanced region. The analysis is conducted using the economic development approach and the policy perspective. The research method includes a content

analysis of 12 preliminary versions of Smart Specialisation Strategies presented by regions within the Smart Specialisation Platform (a network created by European Commission in 2011 with the aim to provide information, methodologies and expertise to the states and regions). I have chosen to include in this analysis 6 documents submited by less developed regions (GDP/capita below than 75% of the EU average) and 6 documents submited by more developed regions (GDP/capita higher than 90% of the EU average) in order to group the data collected and to find if there are particularities in approaching the RIS 3 for less advanced regions in comparison with the more developed ones. The 12 proposals that are listed in the Annex 1 were chosen from a list of 38 documents presented in various peer learning meetings in the 2012-2014 period. From this list, just 19 of them have explicitly indicated the key challenges of which I chose 6 documents from less developed regions – Algarve (Portugal), Centru (Romania), Moravian-Silesian region (Czech Republic), Nord-Est (Romania), Pomorske (Poland), Sicily (Italy) and 6 documents from more developed regions – East Sweden, Centre Region (France), Emiglia-Romagna (Italy), Lower Austria, Mazovia (Poland), Piemonte (Italy). The small number of analyzed preliminary versions of RIS 3 doesn't allow the generalization, but indicates some trends and common issues, centered on 7 groups of key challenges: 1) issues related to SMEs; 2) diversified economy; 3) weak cooperation between R&D and business; 4) placing innovation on the market; 5) financing RIS3; 6) lack of skills (technology and international marketing); 7) governance of RIS3.

Results

Even if the analyzed documents are just preliminary versions of RIS3, they are useful to identify the problems emerging in the design process of Smart Specialisation Strategies. Along to the fact that most of the regions selected very broad areas of specialisation (e.g. ICT), there is no analysis of relations between these chosen areas and these areas are not put in the context of neighboring regions.

The results show a noticeable difference between the two groups regarding the claimed key challenges. The main issues of the less developed regions are the weak cooperation between the R&D institutions and firms and the financing of the strategy, while for the more developed regions the problems are related to the SMEs and the diversified economy.

For the less developed regions the major challenge is the realization of a better connection between the business and R&D institution, as well as with the universities. Another problem faced by these regions is related to the financing of the strategy, from both public and private resources, a problem which extends to even a more general aspect as the financing of the research-development field. Also, other key-challenges are the lack of competences in technology and international marketing and the governance of the strategy without any formal mechanisms to ensure its application.

Table 1. Key challenges in the design process of Smart Specialisation Strategies

SMEs		
*development of SMEs in medium-sized companies; **domination by very small companies; ***need to improve participation of SMEs in R&D programs*	++++	
Diversified economy		
*diversified economy without strong leadership; **no strong sectorial specialization; ***fragmentation of productive system*	+++	
Weak cooperation between R&D institutions and business		
*poor connection between RIS actors; **need for closer links between Higher education, public research and regional economy;*	+	++++
Placing innovation on the market	+	
Financing RIS3		
*stimulation of private investments in the RIS3 process; **setting up a sustainabile financig system to support RIS3; ***R&D expenditure (public and private)*		+++
Lack of skills		++
*technology; **international marketing*		
Governance of RIS3		++

In the case of the more developed regions, the diversified economy issue, whithout a sectorial specialisation in some cases or with a fragmented production system in other cases, confirm the question posed in theory about the specialisation vs. variety and the need for these regions to rather focus in technology areas, not on the economic sectors. An interesting finding is the issue of SMEs in some more developed regions, were the economies are strongly dependent on SMEs, which don't have the capacity to invest in research, to create innovation and to become competitive on the global market.

Conclusions

Analyzing the policy guidelines and the documents produced by the European Commission or at its initiative, Smart Specialisation seems to be the most powerfull and most appropriate instrument that can help the states and regions to use their full growth potential. But beyound the discourse from Brussels it is important to review the literature and regional documents to see what are the foreseen problems and challenges that can occur in the implementation phase of Smart Specialisation Strategies.

For instance, one of the main characteristics of the Smart Specialisation concept is the bottom-up approach, the "entrepreneurial discovery" that involves the firms, universities and research institutions with the aim to find the regional strengths and to build comparative advantages on them. But one of the issues raised

in theory and by policy makers from some less developed regions is the weak cooperation between academia and business sector. The questions here is if RIS3 will contribute to overcome this problem or the Smart Specialisation will be just a form without substance in most of the less advanced regions.

The flexibility of the concept allows decision makers at the regional level to select the economic sectors or technology areas and the measures and tools to build the Smart Specialisation. At the same time, even if it is flexible, the RIS3 represents a "bureaucratization" of the idea of specialisation that implies the risk of "copy-paste" in the strategy development process and the less advanced regions trying to imitate the innovation leaders.

Another issue raised in the literature and noticed in the proposals of strategies is related to the scope of the Smart Specialisation. The question is whether Smart Specialisation implies just innovation and research or represents an extensive regional development strategy. If it is just about innovation and R&D, there is a risk to be ineffective for some less advanced regions that don't have high tech industries and their comparative advantages can be built in tourism or retail sectors. But if it is a broader regional development strategy, its essence will be altered and it will overlap with other programmatic documents of the regions.

Moreover, the discussion about the innovation vs. cohesion raises a question about the opportunity to use the Smart Specialisation as one of the main tools of the Cohesion policy. Nevertheless, the critics from the academia side and the challenges presented by the regional policy makers must serve to improve the Smart Specialisation instrument.

When we compare the key challenges raised by the more developed and by the less developed regions we can see important differences. On the one hand, the more developed regions claim a strong dependence of their economies on SMEs and diversified economy. On the other hand, the less devloped regions raise the issues regarding the weak cooperation between R&D and firms and the strategy financing. These problems influence the designing and implementation phases of Smart Specialisation and need to be addressed in order to obtain the best prioritisation of resources.

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Annex 1 - The list of analyzed documents

No.	Document	Region	Source
1.	"Centre Region – France Towards a RIS3 strategy" (Pisa, September 2012)	*Centre Region*, France	*Smart Specialisation Platform*. Available on the Internet at : http://s3platform.jrc.ec.europa.eu/cases Accessed 07.01.2015
2.	"East Sweden Region"	*East Sweden*, Sweden	*Smart Specialisation Platform*. Available on the Internet at : http://s3platform.jrc.ec.europa.eu/cases Accessed 07.01.2015
3.	"Emiglia-Romagna: Towards a RIS3 strategy" (Strasbourg, December 2012)	*Emilia-Romagna*, Italy	*Smart Specialisation Platform*. Available on the Internet at : http://s3platform.jrc.ec.europa.eu/cases Accessed 07.01.2015
4.	"Lower Austria: Development and implementation of RIS3 priorities" (Norrkoping, April 2014)	*Lower Austria,* Austria	*Smart Specialisation Platform*. Available on the Internet at : http://s3platform.jrc.ec.europa.eu/cases Accessed 07.01.2015
5.	"Mazovia: Towards a RIS3 strategy" (Potsdam, November 2013)	*Mazovia,* Poland	*Smart Specialisation Platform*. Available on the Internet at : http://s3platform.jrc.ec.europa.eu/cases Accessed 07.01.2015
6.	"Towards a RIS3 strategy – Piedmont Region"(Vaasa, May 2013)	*Piemonte,* Italy	*Smart Specialisation Platform*. Available on the Internet at : http://s3platform.jrc.ec.europa.eu/cases Accessed 07.01.2015
7.	"Algarve: Towards a RIS3 Strategy" (Faro, July 2013)	*Algarve*, Portugal	*Smart Specialisation Platform*. Available on the Internet at : http://s3platform.jrc.ec.europa.eu/cases Accessed 07.01.2015
8.	"Schita detaliata strategie de specializare inteligenta"	*Centru,* Romania	*ADR Centru*. Available on the Internet at : http://www.adrcentru.ro/Lista.aspx?t=StrategiaSpecializareInteligenta Accessed 07.01.2015
9.	"The Moravian-Silesian Region, Czech Republic: Towards a RIS3 strategy" (Crete, September 2013)	*Moravian-Silesian,* Czech Republic	*Smart Specialisation Platform*. Available on the Internet at : http://s3platform.jrc.ec.europa.eu/cases Accessed 07.01.2015
10.	"North-East Region of Romania" (Novi Sad, April 2014)	*Nord-Est,* Romania	*Smart Specialisation Platform*. Available on the Internet at : http://s3platform.jrc.ec.europa.eu/cases Accessed 07.01.2015
11.	"Pomorske Region: Towards a smart specialization?"	*Pomorske,* Poland	*Smart Specialisation Platform*. Available on the Internet at : http://s3platform.jrc.ec.europa.eu/cases Accessed 07.01.2015
12.	"Sicily … towards a RIS3 strategy" (Faro, July 2013)	*Sicily,* Italy	*Smart Specialisation Platform*. Available on the Internet at : http://s3platform.jrc.ec.europa.eu/cases Accessed 07.01.2015