

IS SMART SPECIALIZATION POLICY A VIABLE SOLUTION FOR THE ECONOMIC DEVELOPMENT OF THE EUROPEAN UNION REGIONS?

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Abstract: Launched in 2008 by the K4G (Knowledge for Growth) Expert Group at the request of Janez Potočnik, the concept of smart specialization evolved extremely rapidly, from an academic discussion to an agreed, endorsed and enforced regional development policy by the European Commission through the thematic ex-ante conditionality 1.1 Research and Innovation. The extremely short period associated with the process of developing, understanding, and implementing this concept has generated many challenges for both policy makers as well as the private sector. In an attempt to clarify the concept of smart specialization, the present article addresses in its first part a structured presentation of the concept, principles, objectives and stages of implementation. In the second part I critically analyze the main weaknesses, the dilemmas and deficiencies of the policy and the impact of these challenges in our country. A series of conclusions and recommendations are presented at the end.

JEL classification: M21, M38, M48

Key words: smart specialization; entrepreneurial discovery; research and innovation; areas of intelligent specialization; conditionalities

1. INTRODUCTION

The global economic crisis that strongly affected the EU Member States along with the social challenges (strong migration waves, terrorism and environmental issues - global warming, environmental deterioration or resource scarcity) have highlighted the vulnerability of economies and governments to the crisis, but also the weaknesses of the development strategies promoted and implemented at European level.

By the time the Europe 2020 Strategy was drawn up, the strategic development objectives were too general, horizontal and sector-oriented, with the decision-making process on investment destination being more top-down. However, the reality and the new global challenges generated the need for change and the development of an innovative, intelligent and coherent approach to the new local and global context. Thus, the Europe 2020 Strategy proposed a new approach to ensure that the Community will develop into a smart, sustainable and inclusive economy. In the context of limited financial resources, the difference in development will be made by those decisions that efficiently allocate the resources towards investments with potential for growth, job creation and added value.

The European Commission, through Europe 2020 strategy, endorses and introduces a new concept - smart specialization - to identify the areas with real development potential at local, regional and even national level.

Smart specialization evolved rapidly from a simple academic concept developed in 2008 by K4G to a supported regional policy, endorsed by the European Commission both as a key element of the Innovation 2020, but especially as a Reformed Cohesion Policy instrument - by introducing the ex-ante 1.1 conditionality for the development of Smart Innovation and Specialization Strategies.

2. OBJECTIVES

The present article aims to reach two objectives:

1. Clearly define and understand the concept of smart specialization, its objectives, principles and practical stages of implementation
2. Critically analyse the challenges associated with the implementation of the smart specialization development policy.

3. METHODOLOGY

The content of the article is based on the secondary data. In order to accomplish this work I have consulted and analyzed secondary data sources represented largely by specialized scientific literature as well as Community documents, regulations and reports.

4. ANALISES

4.1 SMART SPECIALIZATION: CONCEPT, PRINCIPLES, OBJECTIVES AND KEY STAGES OF IMPLEMENTATION

Smart specialization is a local/regional process of identification and entrepreneurial discovery of unique features and a portfolio of assets (infrastructure, human capital, social, etc.) of each area/ region, highlighting the competitive advantages and attracting stakeholders into a collaborative and partnership process designed to develop a vision of the future based on excellence. It also means strengthening regional innovation systems, maximizing knowledge flows and spreading the benefits of innovation across the regional economy.

Another quite comprehensive and explicit definition is presented by Midtkandal and Sörvik and is a “*strategic approach to economic development through direct support to R & D. It involves a process of developing a vision, identifying local areas with strategic potential, developing governance mechanisms through stakeholder involvement, setting strategic priorities and using smart policies to maximize a region's knowledge-based development potential, whether strong or poorly developed, high technology or not.*” (Midtkandal & Sörvik, 2012, p.2)

The new architecture of the regional innovation strategy maintains the traditional and somewhat neutral traditional approach to developing the general framework of regional conditions and capabilities by adding a new concept of smart specialization. The concept of smart specialization addresses vertical, non-neutral intervention through a process of transparent identification and selection of intervention areas that generate a competitive advantage for the region (Foray & Goenaga, 2013, p. 2).

Territorial regions at EU level are characterized by accentuated heterogeneity characterized by divergent economic development levels, diverse natural, material and

financial resources, as well as governance systems characterized by diverse administrative capacities. Global economic crises, along with the implementation of long term ineffective development policies, global competition and other external phenomena, more or less predictable (international terrorism, global warming and extreme weather conditions, waves of migration etc.) generated a enormous pressure both at European and national level on identifying strategic solutions to support the economic recovery of EU Member States by ensuring sustainable growth. For small under-developed regions characterised by insufficient expertise and capabilities, the proposed solution was smart development through specialization and the concentration of limited financial resources in areas of activity with growth potential.

The mentality “One size fits all” needs to be changed in the context of implementing smart specialization strategies, as the principles underpinning this policy underlines the specificity of each region and the development of a mix of policies and support tools in line with the capabilities, experience, expertise, the innovation capacity and the level of knowledge, specific to each region (McCann, Ortega, 2016, p.1410). Conservative / limitative or imitative approaches should be avoided, and regions are encouraged “*to concentrate their resources and focus on the development of distinct and original areas of specialization*” (Foray & Goenaga, 2013, p. 2).

Smart specialization should not only be associated with innovation but with those innovative activities that generate structural changes in the regional economy, such as the transition from an obsolete activity / field of activity, without any potential to relaunch to a whole new field, with major impact on the economy (in terms of jobs, income, etc.) or the modernization of a traditional field of activity through the renewal, diversification and upgrading of GPT (Generic purpose technology and tools) increase productivity and quality of products / services. Diversification at the regional level and the emergence of a completely new field of activity represent other models of structural transformation of the regional economy, transformations pursued through the smart specialization policy (Foray, David, Bronwyn, 2011. pp. 2-6).

Unlike other development policies that support either a centralized, bottom-up or top-down approach, smart specialization policy proposes a bi-directional, interactive approach that complements the bottom-up dynamic process of entrepreneurial discovery with government intervention through the development and implementation of public measures to support smart specialization policy (Foray et al, 2011). The implementation of such an innovation policy calls for the endorcement, support and development of innovative microsystems in various sectors of activity, specific to each region, a highly expensive but also risky policy (Foray, 2016).

Principles of smart specialization policy

Dominique Foray, together with Xabier Goenaga, outlines five basic principles that characterize smart specialization policy (Foray & Goenaga, 2013, pp. 3-8) in the summary of the Smart Specialization Policy submitted to the European Commission in 2013: “Intelligence Specialization Objectives”:

Principle 1 – Granularity

According to this principle, smart specialization policy needs to identify, select, support and evaluate development priorities at a non-too high (sectoral) or too limited level (a low-impact, insignificant innovation for the regional level). The optimal level to select intelligent specialization fields / priorities must ensure: an active involvement and firm commitment of a large and varied number of actors in the chosen domain / priority;

opportunities to exploit new market opportunities, including the development of new technologies; generating significant added value and structural changes at regional level (Foray & Goenaga, 2013).

Principle 2 - Entrepreneurial Discovery

The term entrepreneurial discovery was introduced for the first time by Hausmann and Rodrik in "Economic Development as Self-Discovery" (Hausmann, Rodrik, 2003).

Entrepreneurial discovery is an active and interactive bottom-up process involving local actors (innovative and development-oriented companies, universities and research institutions, NGOs, researchers, etc.) in the discovery of "the areas of research, development and innovation where the region has chances to excel, given its capabilities and resources" (Foray & Goenaga, 2013, p. 4).

Prioritization and selection of specialization areas should no longer be a state / government-driven process but a private-sector process through active involvement and collaboration between key actors, their commitment, "the government has a role to assess the potential of proposed activities and empower those actors capable of realizing this potential" (Foray & Goenaga, 2013, p. 4).

One of the most frequent mistake associated with the right choice of one or more areas of specialization is the presumption that the government is all-knowing and ex-ante possessing all knowledge of what needs to be done, in which field to invest, and which mechanisms are best suited to being implemented (Foray, 2016). Foray makes a distinction between discovery and innovation. Innovation is a concept supported by horizontal policies, while discovery is a process that generates "*more than a mere*" technological innovation "*but rather a structural evolution of the entire regional economy*" (Foray & Goenaga, 2013, p. 6).

Principle 3: The priorities emerged today will not be endlessly supported.

The activities and areas of specialization identified at time t_0 need not be endorsed and financially supported by the smart specialization strategy for more than 3-4 years, regardless of the results it generates. After an interval of 3-4 years, the activities are no longer new and the economy, the regional system must generate, through the process of entrepreneurial discovery, other activities/ areas of specialization.

Principle 4: Intelligent specialization strategy is inclusive.

The Smart Specialization Strategy proposes an inclusive approach and recommends the implementation of the entrepreneurial discovery process not only in the most dynamic and productive areas of the economy but also in the less dynamic areas where structural changes are so necessary. Integrating less dynamic areas into the strategy of smart specialization does not mean supporting weak and / or inefficient projects, but providing equal opportunities to be included in the strategy of all sectors, including the least dynamic ones.

Principle 5: Experimental nature of policy and need for evaluation

Due to the intensive experimental nature of the policy, one of the key responsibilities is the development and implementation of an effective monitoring and evaluation system that sets and keeps track of a number of clear performance indicators and criteria. In the absence of an effective monitoring system containing measurement units and "*indicators as well as regular data collection, the patterns of smart specialisation strategies will not be discernible and policy makers will be unable to track progress, assess structural transformations and compare strategies.*" (Foray & Goenaga, 2013, p. 10).

Objectives of the smart specialization strategy

Established by the promoter of smart specialization concept, Dominique Foray, the three strategic objectives are:

- i. facilitating the emergence and early growth of new activities which are potentially rich in innovation and spillovers;*
- ii. diversifying regional systems through the generation of new options;*
- iii. generating critical mass, critical networks, critical clusters within a diversified system” (Foray & Goenaga, 2013, p. 9).*

Practical steps in implementing smart specialization policy

In the document titled "Intelligent specialization programs and their implementation", Dominique Foray, the initiator of the Smart Specialization concept, together with Alessandro Rainoldi, European Commission representative, develops a series of practical suggestions on concrete ways to implement smart specialization policy, in a relatively general manner, the sequence of programs to be designed and implemented as key elements of smart specialization policy.

Building on the five principles of smart specialization as well as the overall objectives, the proposed programs¹ must pursue three operational objectives:

- “i) maximising public-private entrepreneurial discoveries;*
- ii) providing operational facilities for continuous observation, detection and evaluation;*
- iii) supporting early growth of the prioritised activities” (Foray, Rainoldi, 2013, p. 2).*

The practical steps recommended by Foray have been largely translated by the European Commission into the methodological Guide to Research and Innovation Strategies for Smart Specialization (RIS3), a document that Member States use as a roadmap in developing their own strategies. In short, the practical steps of implementation are:

- “1. the analysis of the national/regional context and potential for innovation;*
- 2. the set-up of a sound and inclusive governance structure;*
- 3. the production of a shared vision about the future of the country/region;*
- 4. the selection of a limited number of priorities for national/regional development;*
- 5. the establishment of suitable policy mixes;*
- 6.the integration of monitoring and evaluation mechanisms” (European Commission, 2012, p. 5).*

4.2. CHALLENGES, DILEMMAS, WEAKNESSES AND OPPORTUNITIES OF INTELLIGENT SPECIALIZATION POLICY

Like any development policy, smart specialization policy is subject to intense criticism, expressed both at academic and political level. The most frequently criticized aspects range from the underdeveloped conceptual framework, the unclear and difficult concepts and their implementation process, the high implementation costs and the minimum local capabilities required to ensure effective implementation that generates results until the endorsements of the concept by the European Commission within a much shorter timeframe without allowing prior piloting and appropriate maturation. There was

¹ In Dominique Foray's vision, the program is defined as "a specific policy proposal aimed at directing the economic system towards a specific objective." (Foray, Rainoldi, 2013, p.1)

no pilot project demonstrating the applicability and effectiveness of this new concept, which is deficient in the coherence of smart specialization policy.

Smart specialization policy is extremely costly and risky because of its experimental nature but especially difficult to understand and implemented in practice.

“Many statements and arguments about smart specialisation have not been yet based on a sound base of empirical work so that the plea in favor of smart specialisation and the tools and instruments to support a smart specialisation strategy are made of more wishes and hopes than of empirical (stylized) facts” (Foray et al., 2011, p.2).

R & D investment does not automatically generate spillover effects, this process being largely dependent on the existence of specific capacities and resources (supply chains, knowledge, skilled human resources, services, etc.). In the top regions (leader) these capacities exist, are available and easy to access by other SMEs, being offered (directly or indirectly) by the main innovation actors. In less developed regions, the capabilities and resources required by a spillover process are insufficient, difficult to access or even nonexistent. In such a context it is extremely difficult for entrepreneurs, even those financially supported by non-reimbursable funds, to succeed and generate sustainable economic efficiency and growth (Foray, 2016).

The European Commission is a strong supporter of this policy and has directly contributed to its dissemination by introducing the ex ante thematic conditionality 1.1 Competitiveness and Innovation, which compelles each Member State to apply this concept in national regional policy. As Dominique Foray himself acknowledges at a conference organized by the Directorate-General of the Committee on Regional Policy in partnership with the European Science Association in March 2016, *“if the Commission would not have implemented the conditionality and only have suggested the idea of smart specialization, probably nobody would have implemented it”* (Foray, 2016).

The transfer by the European Commission of an academic concept to a regional development policy *“occurred in a rather swift , even hasty manner, leaving little room for the in-depth exploration of the implications of the concept and the diverse potentials that it might harbour and, more importantly, how to articulate and communicate these properly”* (Kroll, 2015, p. 1).

The commitment of Member States to the development and implementation of smart specialization strategies is more conditional, imposed by the ex-ante conditionality criteria of the European Commission² which, if not fulfilled, generate restrictions to ESI Funds accession, financial sources which are of extreme importance to some regions, even the only available funding source for some undeveloped regions.

The challenges and the main difficulties associated with the smart specialization policy are manifested especially at the stage of the entrepreneurial discovery process and the identification of the fields of specialization, namely in the implementation phase of projects (policies) supporting and investing in selected fields in so that they can generate

² The European Commission imposed a series of mandatory criteria for all Member States to access structural and investment funds by means of Council Regulation 1303/2013 of 17 December 2013 - Annex 2 - Ex-ante conditionalities. The obligation to develop a smart specialization strategy is governed by the very first criterion: 1.1. Research and innovation: The existence of a national or regional smart specialization strategy in line with the National Reform Program that balances private spending with research and innovation and is in line with the characteristics of effective national and regional research and innovation systems

those structural changes and transformations of economic micro-systems that generate growth and economic efficiency. If the stages of analyzing, identifying and selecting smart specialization areas with a common strategic vision development and even setting up monitoring indicators are the first steps taken by decision policy makers, *“it is necessary to move beyond benchmarking and to consider the fundamental aspects driving the local regional system in order to design the optimal mix of policy tools, actions and interventions”* (McCann, Ortega, 2016, p. 1409).

In Romania, each development region has developed a smart specialization strategy, largely respecting the stages of analyzing the specific local context, capabilities, resources and advantages held locally. The implementation of the entrepreneurial discovery process and the selection of smart specialization fields through consultation with various local actors, however, are deficient in implementing the priorities identified by the superficial approach of the implementation stage (the concrete elaboration of the mix of tools and public-private instruments to support the implementation of the strategy) as well as the monitoring and evaluation phase. It is imperative to continue the process by developing programs (policies) that put the identified priorities into practice.

The development of the smart specialization strategy through the development of inter-regional cooperation and partnership relations (especially between regions of different Member States) is addressed in the analysis by Jens Sörvik et al. in 2016. The main conclusions drawn from this research identify an increased intensity of collaboration in the early stages of implementing the smart specialization policy, namely the analysis of the local context, the elaboration and design of the strategy, and less in the implementation stage (Sörvik et al., 2016). The lack of evidence of collaboration and partnership in the implementation phase of smart specialization strategies is due firstly to the failure or recent start of the implementation phase by most regions in the Member States of the European Union. Under Regulation 1303/2013, the deadline for fulfillment of ex-ante conditionalities by the Member States was December 2016, with the possibility of extending this deadline for unaccomplished conditionalities, on the basis of negotiations with the European Commission and the endorsement of action plans with precise deadlines and specific responsibilities. Thus, not only at the time of the research, but even today, smart specialization strategies are more limited to a set of official documents developed by Member States / regions eligible and endorsed / agreed by the Commission.

Another result of research shows an increased interest to collaborate with regions outside the national boundaries and the involvement of public development agencies, research institutions and universities in partnerships, and a much lower interest in private R & D organizations, NGOs or companies (Sörvik et al., 2016).

Research data highlights a *“change in the behavior of development regions and member states through an increase in inter-regional collaboration”*, over 67% of respondents acknowledging an increasing evolution of collaborative effort over the past 2 years (Sörvik et al., 2016, p. 23).

Although the challenges associated with inter-regional (transnational) cooperation are still numerous, characterized primarily by lack of resources, insufficient political and private engagements or socio-cultural differences, the potential benefits of transnational cooperation are much more numerous and more valuable, become prerequisites for the effective development and implementation of smart specialization strategies, especially for those underdeveloped regions that need expertise and external expertise.

Transnational cooperation and the resulting benefits (knowledge transfer, partnerships between entities, joint development of strategies for growth, innovative projects, etc.) is an objective that Romania did not address with the same intensity in the current programming period compared to 2007 - 2013. A concrete example is found at the level of the operational program human where transnational cooperation was explicitly excluded in several calls for projects, such as *“Transnational partners are not eligible for this call of projects”*. In addition to such direct measures to exclude transnational partnerships, another indirect measure of excluding collaboration with external experts and promoting knowledge transfer and examples of good practice is capping salary income for international experts and drastically reducing their level compared to the previous programming period. Thus, at the level of the Human Capital Programme, the maximum level of remuneration of an international expert with a expertise of over 10 years decreased from 144 lei / hour to 85 lei / hour. These salary's values directly discourage the involvement of external experts for whose expertise there is insufficient financial incentive and, at the same time, discourages transnational partnership and cooperation in a sector of major importance - human capital development.

The regional smart specialization strategies elaborated at our country level are deficient in the development of a mix of public - private policies and instruments, ensuring the implementation, monitoring and evaluation of the smart specialization strategy. If, for the most part, these strategies address as much as possible the stages of analyzing the local context, the application of the entrepreneurial discovery process and the establishment of a common strategic vision agreed at the stage of implementation (elaboration and application of a mix of specific policies and instruments, coherent but also clear and available sources of funding) and monitoring and evaluation, the approach becomes vague and rather superficial, including general, nonspecific measures, with no concrete funding sources, precise deadlines or firm commitments from responsible / interested actors. Beyond the very high level of the chosen domains (sectoral), a level that does not exactly respect the principle of granularity of politics, the involvement of local actors in the discovery, but especially the entrepreneurial discovery of the smart specialization fields/areas identified in the regional strategies seems to stop before the policy implementation phase. However, the smart specialization policy should not be seen as a *“one-way process, only needed to meet ex-ante conditionality, but rather a continuous process of governance and updating of development policies”* (McCann, Ortega, 2016, p. 1422). A frequent mistake made by political decision makers is sectoral choices, or rather, support as a field of smart specialization of a whole sector. The concept of smart specialization policy supports the selection of specialization areas at as small / specific / granular as possible and recommends exclusive support for the actors directly involved in structural transformation and entrepreneurial discovery rather than the entire sector (Foray, 2016).

At the level of the South-West Oltenia region, from the available data, I did not identify in the Regional Strategy for Innovation for Intelligent Specialization concrete measures to involve local actors in the implementation and evaluation phase of the smart specialization strategy. The importance of cooperation and development of local and regional partnership networks is indeed highlighted within the strategy, but there are no concrete measures / actions and examples of projects to achieve this. With regard to the proposed sources of funding for the implementation of the Smart Specialization Strategy, in most cases they are limited to the funding opportunities offered by the European Structural and Investment Funds (ESI) through the various operational programs or

financial instruments of other European policies (European Research Policy). Banks are also mentioned as potential lenders, but neither the ESI nor the private lending instruments constitute safe sources of funding for areas of smart specialization. Access to the ESI is achieved through a competitive process that awards projects with the highest score. In order to develop a good financing request with real chances of funding, the applicant must either have sound expertise in writing a grant application or have the financial resources to acquire outside expertise. If for the developing / developed regions these resources are more or less at hand (own or outsourced), the same can not be said about the undeveloped / developing areas (eg localities, communes) that most need financial resources to support their economic development, be it smart one.

5. CONCLUSIONS

Smart specialization policy is a mere theoretical concept, insufficiently developed and untested/unpiloted, difficult to understand and grasp by political decision-makers and private actors and even more difficult to implement due to the high cost and high degree of risk involved .

The endorsement and promotion of this concept by the European Commission and its transposition within a very short timeframe in the regional development policy, mandatory to be implemented through the introduction of the ex-ante conditionality, can generate in the medium and short term unsatisfactory results on regional economic development. Although the European Commission has worked on both the clarification of the concept (through the development of informative materials and guidelines for the implementation of smart specialization strategies, the organization of debates and consultations, etc.) as well as the provision of free technical assistance to Member States through the Platform for Intelligent Specialization (Platform S3 - <http://s3platform.jrc.ec.europa.eu/home>), there is a risk that these smart specialization strategies remain at the stage of official documents without effective implementation in practice. The relatively high level of interest of the regions / Member States in the new concept / policy of smart specialization may be undermined by a conditional and not a voluntary commitment of the Member States.

As a final conclusion, without a direct and active involvement of the European Commission in the effective implementation, evaluation and monitoring of smart specialization strategies that will insure more coherent and practical results, the implementation of smart specialization policy (especially in the East European countries) will resume to official strategic documents well-arranged in the drawers of the regional development agencies (the case of Romania) or the encharged ministries.

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