THE INVOLVEMENT OF UNIVERSITIES IN SMART SPECIALIZATION OF REGIONS

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Abstract: *This article explores the role of universities in the process of designing and implementing smart specialisation strategies. It is need to mobilize universities the capacities of Europe's universities to contribute to regional economic and social development and this will be a very important factor for the success of the Smart Specialisation Strategy (RIS3). The education oriented towards the assimilation and the application of knowledge and/or the generation of new knowledge through research, accompanied by innovation and entrepreneurship is the accelerated way towards wealth and prosperity. A university who takes such a path becomes an entrepreneurial university. A such university university is a vector for smart specialisation for a region. Universities efforts need to be embedded into a broader economic strategy that develops the universities portfolio over time, enhances the general business environment to benefit all firms, and integrates specific and cross-cutting activities into a coherent overall value proposition for the location. universities can contribute to local knowledge creation and its translation into innovative products and public and private services. Universities are a vital partner for regions in the design and implementation of successful RIS3. It is a general consensus about the importance to include all relevant stakeholders in the definition and implementation of an RIS3 strategy. The main agents of the triple helix – government, universities and industry – should sit down together.*

Keywords: *smart specialisation, university, strategy, region, innovation*.

Introduction

The strategy "Europe 2020" identifies three key drivers for growth, to be implemented at EU and national levels: smart growth (through knowledge, innovation, education and digital society), sustainable growth (production more competitive, more efficient resources) and growth for inclusion in the labor market (greater participation in the labor market, combating poverty)[1].

[1] Strategiy of EU. 2014-2020

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Smart specialization has many definitions and interpretations. A brief overview of smart specialization is required.

Smart specialisation has arisen out of recognition of the central role of innovation in sub-national growth and EU cohesion policy.

Smart specialisation is a regional policy framework for innovation driven growth.

Smart Specialisation strategies or RIS3 (Research and Innovation strategies for Smart Specialisation) is a strategic approach to economic development through using the research and innovation.

Smart specialisation is considered a key element in achieving "smart growth" as set out in the European Commission's (EC) Europe 2020 Strategy (2010)[2].

Smart specialisation relies on an entrepreneurial process of discovery that can reveal domains of economic activity where a country or region excels or has the potential to excel in the future. It empowers entrepreneurs who are able to combine the necessary knowledge about science, technology and engineering with knowledge of market growth and potential in order to identify the most promising activities.

The idea or concept of "smart specialisation" is based on long standing economic theories and empirical evidence and mobilises well tested policy instruments. As a regional and place-based growth policy framework it aims to improve the allocation of public investment in R&D and innovation related investments, in order to stimulate competitiveness, productivity and economic growth through entrepreneurial activities[3].

Smart specialisation is described "*a process of developing a vision, identifying competitive advantage, setting strategic priorities and making use of smart policies to maximise the knowledge-based development potential of any region, strong or weak, high-tech or low-tech*"[4].

The smart specialisation approach suggests regions, especially those regions which are not leaders in any of the major science and

[2] Europe 2020: A European Strategy for Smart, Sustainable and Inclusive Growth 2010, European Commission

[3] *Dominique Foray et al.,* Guide to Research and Innovation Strategies for Smart Specialisations (RIS 3), 2012

[4] EU Commission smart specialisation platform web site , http://s3platform.jrc.ec.europa.eu/home.

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technology domains, to investing in R&D and innovation on few key priorities.

Smart specialisation is a systematic approach to prioritisation and intervention management that is most widely applied in an iterative and mutually reinforcing six stage process outlined in the European Union's (EU).[5]

The concept of Smart Specialisation builds on the accumulated knowledge from working with regional innovation strategies.

Smart specialisation is about maximising the knowledge-based development potential of a region based on an evidenced-based assessment of a region's competitive advantages.

The key features of a smart specialisation strategy, which are:

- Encouraging knowledge producers and users to discover what best to do by working together;
- Mobilising distinctive local resources/assets (firms, people, geography, institutions (especially universities));
- Promoting the generation of local ideas and maximising intra and inter regional knowledge spillovers (e.g. by upgrading supply chains, enhancing higher level skills).

The European Commission has established an "S3 platform" based in Seville to support regions and member states to develop smart specialisation strategies. This has facilitated the transition of smart specialisation from a wholly sectoral concept to one that is applicable to regional policy with local and regional smart specialisation strategy entailing:

- A process of "entrepreneurial discovery" to discover regional strengths with potential for experimentation, innovation and growth;
- The seeding of intellectual capital ;
- Strengthening of local innovation "ecosystem(s)" and building local capabilities to enable and support this process ;
- Stimulating local supply chains to invest and collaborate ;
- Catalysing and leveraging the differing opportunities of social innovation ;
- Positioning and branding places as credible centres of smart specialisation opportunities to target private and public sector audiences.

[5] Guide to Research & Innovation Strategies for Smart Specialisation (RIS 3)', European Commission, May 2012

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Smart Specialisation is a relatively new approach to regional innovation which is receiving with a big attention in divers fields.

Smart Specialisation is a strategic approach to economic development through targeted support to reasearch and innovation. It will be the basis for Structural Fund investments in R&I for the period 2014-2020[6].

1. Analysis of the regional context and potential for innovation,
2. Achievement the governance structure,
3. Integrated of production in a shared vision about the future of the region,
4. Selection most important Priorities for regional development,
5. Establishment of adequate policies that create synergies
6. Integration of monitoring and evaluation Mechanisms.

Fundamentally, smart specialisation calls for evidence-based identification of competitive advantages around which inputs of regional stakeholders and resources can be concentrated. On top of this, it asks for measures to strengthen regional innovation systems in order to maximise knowledge flows and spread the benefits of innovation throughout the entire regional economy.

Overall a six step process is identified for the creation of a smart specialisation strategy as demonstrated in Figure 1.

[6] Guide to Research & Innovation Strategies for Smart Specialisation (RIS 3)', European Commission, May 2012.

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Figure 1: Key Steps for Delivering a Smart Specialisation Strategy
(Guide to Research & Innovation Strategies for Smart Specialisation (RIS 3), European Commission, May 2012**)**

This article contributes to Stage 1 of the process of developing a smart specialisation strategy, but can also assist in supporting of a vision for a region, providing justification for broad areas of investment and suggesting potential policy interventions.

Stage 1: Production of a high level SWOT analysis of innovation in a region. Detailed summaries and SWOTs of key economic activity areas to enable selection of potential S3 portfolios of activity Online business survey to enrich desk-based research Series of entrepreneurial discovery workshops, interviews and focus groups to triangulate and Bilateral interviews and discussions with key stakeholders for S3 propositions.

Stage 3: Provision of evidence and analysis to support a visioning process in a region. Employing an action-research and action-learning approach capable of generating, initiating and developing a collaborative network focused on the acquisition, sharing and the management of knowledge for regional foresight. *Action-research*

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workshops focused on screening and foresight of innovation challenges in the context of changes.

This stage consists in the next activities:

1.Elaborating the criteria of selection and selecting of the regions under focus.

2 Conception and elaboration of the screening and foresight action-research plans

3 Conception and elaboration of the learning from experience meta action plans

5 Establishment and preliminary training of working groups

6 Organising of the workshops

7 Elaborating of screening and foresight reports.

A creative shaping of future means future advantage, a main component of competitive advantage.

Stage 4: Agreement on and justification of broad areas for investment, and of 'smart' focuses within these. Provision of evidence and analysis to justify the selection of a potential portfolio of areas of economic activity to be the initial focus for investment.

Stage 5: A coherent mix of policies, roadmaps and action plans for progressing the priorities. Initial recommendations for potential policy interventions based on review of national industrial strategies and stakeholder input.

Stage 6: Establishment and capacity building of a strong performance management, evaluation and review framework for S3. Assure clear performance management, evaluation and review processes are in place and feedback into regional intelligence system.

For to initiate the process for smart specialisation in one region is necessary[7]:

Initiate the self-assessment process and identify the relevant stakeholders in the enterprise sector and the science, knowledge & creative sector.

Prepare for the self-assessment: contact relevant stakeholders, distribute the guiding questions and organise necessary steps and milestones.

Perform an assessment of each sector by stakeholders stemming from the respective sector.

[7] OECD, Înnovation-driven growth in regions: the role of smart specialisation, p. 199

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Perform an assessment of each sector with a mutual outside view (*e.g.* stakeholders from the enterprise sector assess the science and the government sector and vice versa).

Prepare a first SWOT analysis as starting point for the RIS3 process. Use identified strengths, weaknesses, opportunities, and threats for the development of a shared vision.

The real involvement of universities

Universities have substantial and varied experience in working with industry and business partners both at the level of technological development, new skills development through innovation hubs and other new modes such as collaborative doctoral programmes. Greater dissemination and communication of these experiences of promoting entrepreneurial spirit in universities will be a crucial requirement to fulfil their engagement in contributing to regional development in the context of RIS3.

It is important to note that in the less-developed regions universities have fewer opportunities to engage with the business sector which is often much smaller and less diverse. In these cases universities may provide knowledge that is used elsewhere. Each university needs to assess its local and national contributions on a case-by-case basis.

An entrepreneurial university is a natural incubator that tries to provide a supportive environment in which the university community can explore, evaluate and exploit ideas that could be transformed into social and economic entrepreneurial initiatives. Entrepreneurial universities are involved in partnerships, networks and other relationships to generate an umbrella for interaction, collaboration and co-operation. Also, a university is a vector for smart specialisation for a region.

The universities can provide a core toolkit to engage with and develop sectors of the economy in which a region has a significant position. They have the ability to guide the concentration and integration of economic policies around specific areas of the economy.

Six leverage points for universities are used in Smart Specialisation Strategies. The universities provide significant value to S3[8]:

[8] Report on joint EUA- REGIO/JRC Smart Specialisation Platform expert workshop: The role of universities in Smart Specialisation Strategies, 2014, pp.9-11.

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a. Prioritization: Methods to identify these fields can benefit from quantitative and qualitative approaches used in universities and can be used as inputs into the prioritization process;

b. Integrated policy mixes: S3 involves the design of smart policy mixes, i.e. the effective combination of policy instruments, from different policy areas, that target the market or system failures in the specific activity domains. The diversity in universities policies implies diversity in their potential contributions to S3 policy mixes. There are universities policies which may be of support to the S3 process, but not for the design of integrated policy mixes; at the other universities policies are closer S3 policy mixes;

c. Smart, evidence-based policy-making: Lessons from universities evaluations can be used to fine-tune policy portfolios. Even if the availability of robust and impact-oriented evaluations are still limited, the newer methods at play, focusing on universities dynamics and trends, are potential inputs for iterative Smart Specialisation.
Strategies, which need periodically to revise strategic choices and policy mixes to support domains selected for smart specialisation;

d. Multi-level governance: how to align policies across national, regional, EU levels? Policy instruments from universities rely most often on sources of funding from different origins. With respect to public funding it is crucial to achieve synergies, rather than duplications between these various sources, and to align goals pursued by the various authorities. Some universities have long-term experience and these lessons can inform S3.

e. Cross-border dimension: what is the appropriate territory to design a S3 and how to conduct policies that conform to it? Reinforcing the international dimension of the universities and the domains of smart specialisation is a most pressing challenge: Europe needs universities of worldwide excellence rather. Internationally competitive S3 domains are unlikely to correspond to regional boundaries: S3 requires trans-border strategies, building on complementarities. The lessons from universities in the EU Regions of Knowledge programme, with its strong transnational dimension, are useful to address this challenge;

f. Sustained stakeholders engagement: how to promote participation, engagement and commitment of the variety of stakeholders? Strategies to involve stakeholders in all phases of the S3 policy cycle, in order to ensure a bottom-up design and implementation

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of S3, wide and deep endorsement of the strategy, and its visibility to the outside world, can rely on existing platforms established in the context of universities.

The universities provide important leverage points for S3 but they are cannot be equated to S3: the former policies are among the possible policy tools in a S3 policy mix, but Smart Specialisation Strategies have a broader remit. Universities efforts need to be embedded into a broader economic strategy that develops the universities portfolio over time, enhances the general business environment to benefit all firms, and integrates specific and cross-cutting activities into a coherent overall value proposition for the location.

Conclusions

Smart Specialisation is a strategic approach to economic development through targeted support to R&I. Smart specialisation is about identifying areas of competitive advantage and supporting those activities with evidence-based interventions and embracing theories associated with complexity economics and evolutionary economic geography, smart specialisation is also about building an innovation system (firms, people, physical innovation assets etc) that are experimental, flexible and adaptable to new and emerging technologies, industries and market opportunities.

Smart Specialisation provides an opportunity for universities to be engaged constructively, together with other stakeholders, including the private sector, in identifying areas of potential specialisation in regions and Member States.

Smart Specialisation involves developing a vision, identifying competitive advantages and setting the priorities for research and innovation at a specifically regional level. Universities have a central role to play in furthering Smart Specialisation Strategies.

In conclusion, a set of recommendations is necessary:

- recognition of the role of universities as a key partner in taking forward successful Smart Specialisation;
- ensuring the sustainability of Smart Specialisation Strategies
- the need for Smart Specialisation in any region, including the unique contribution of universities;
- active dissemination of Research and Innovation Strategies for Smart Specialisation to motivate participation of key stakeholders;

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- the role of universities for coordination of regional/national/European RTD and innovation programmes;

- local firms and universities to work collaboratively;

- maximising use of generated knowledge through university-business dialogue.

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