

Leveraging smart specialisation strategies (RIS3) with service-based innovation: the case of the Canary Islands

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Policy Letter

Service based economies face significant challenges to drive innovation. These are even larger for distant and isolated regions, suffering from different market failures due to such circumstances. Capitalizing on smart specialization alongside with the transformative power of services, through the deployment of large-scale demonstrators, could be a sound policy option for many regions to turn structural weaknesses and threats into strengths and opportunities. The specific case of the Canary Islands, an outermost European region, is discussed in the context of its RIS3 Smart Specialisation Strategy.

Keywords. Outermost Region, Tourist Region, EU Regional Policy, Structural Funds, Service, Innovation.

1 Introduction

The Canary Islands is one of the Outermost Regions (ORs) of the European Union (EU). Such regions are specifically addressed by the EU Treaties in order to deal with particular drawbacks due to remoteness, small size, territorial fragmentation, difficult topography and consequent economic limitations. The Canary Islands was incorporated to the Crown of Castille by the end of the XV Century, as Spain was developing as a modern state. Nowadays, with a local population of 2.1 million inhabitants, it is one of the main touristic destinations in the World, hosting more than twelve million visitors every year. Nevertheless this booming touristic development, carried out mainly since the late 1960s, has come with a cost: the whole economy spins around a basic sea-and-beach tourism model, with a lack of complementary high added-value activities, and an extremely low presence of industry and knowledge intensive services. Moreover, tourism and construction turned out to be a powerful feedback loop, not always driven by quality and natural environment preservation, but by a mindset focused on the quest for an easy and fast return on investment. Hence, the economy grew not wealthy, but featuring many shared attributes with other regional economies also doomed by the well-known “curse of resources”. In the case of the Canary Islands such resources are a gorgeous nature and weather, with land never far from the beach and the countryside. With this setting, the impact of the financial crisis in terms of unemployment and destruction of economic activity and opportunities has been, simply, huge.

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On the other hand, the European Union has been actively promoting the development of a knowledge-based economy with the capacity to overcome the gap in economic competitiveness, productivity and innovation with the USA, at least since 2000 with the Lisbon Strategy. In 2010 the previous Lisbon Strategy was replaced by the current (Europe 2020) strategy, with an overall similar goal but with a somehow different approach. By recognizing the fundamental role of European regions in order to fulfil the ambitious challenges of (Europe 2020), the revised European Cohesion Policy has introduced Research & Innovation Smart Specialisation Strategies (RIS3) as a key element to foster knowledge-based regional development across the EU (Foray 2013).

RIS3 strategies should provide excellent opportunities to base regional economic growth on solid and wealthy roots, by taking into consideration the specific situation of every European region and aiming achievable yet ambitious economic goals for the mid- and long-terms. European structural funds will leverage public and private investments towards this end. Obviously, the role of service innovation in promoting knowledge-based economic competitiveness and productivity is paramount. And it is the only feasible way to proceed for regions, such as the Canary Islands, which lack a strong industry sector and whose economies are currently based on non-sophisticated services. Even more so for ORs, whose structural constraints weaken any attempt to develop a traditional industry sector.

In this paper a critical discussion is presented on RIS3, as a practical policy tool to promote regional economic transformation based on knowledge and service innovation. The case study will be the Canary Islands, whose specific features can also be of interest not only to other ORs, but to isolated and small regions in search of policy models to boost their economic growth. First an introduction to the concept of research and innovation smart specialisation strategy (RIS3) is presented. Then the main economic, social and geographic features of outermost regions and, in particular, of the Canary Islands are introduced. Third, the RIS3 of the Canary Islands (RIS3 Canarias 2014) and the role of service innovation in it are described, as theoretically intended by the policy makers following the recommendations from the European Commission services. Then some practicalities are discussed, focusing the spotlight on those usually unaccounted facts (mainly sociological and political) that quite often make sound policies fail. Finally some conclusions are provided. Formal evidence is mainly drawn from statistical authorities, and authoritative academics and policymakers, either individuals or organizations, and properly cited. Yet some of the practicalities come from my own implementation experience as the coordinator of the RIS3 elaboration process in the Canary Islands and, as such, they are endowed with a more subjective, though fully motivated, content.

2 What's a RIS3 Strategy?

RIS3 strategies have been conceived (Foray et al. 2012, Foray et al. 2013) as location-based holistic socioeconomic transformation agendas at the hard-core of (Europe 2020). To this extent they address the key regional priorities, as related to knowledge economy, taking into consideration evidence-based real regional potential for global competitiveness based on innovation and local capacities. Both technological and practice-based innovations are promoted, and every relevant stakeholder is to be fully involved. New economic activities should only be promoted by public policies as they stem from the socioeconomic regional reality and taking into consideration their transformative power. Hence a so-called entrepreneurial process of discovery is fostered, so that the full energy of unknown entrepreneurs can be fully leveraged beyond the most acquainted players. As with any sound public policy, monitoring and evaluation schemes must be put into place in order to assess overall policy outcome

and specific outputs and, consequently, to enhance the policy deployment.

Even though RIS3 strategies are to make an important impact on the three (Europe 2020) priorities, i.e. smart, sustainable and inclusive growth, they were first conceived as an instrument for smart growth. Nevertheless their use in achieving sustainable (Landabaso 2012) and inclusive (Huysentruyt et al. 2013) growth has been encouraged. Moreover, in order to promote RIS3 strategies across the EU, they are considered an ex-ante conditionality for EU member states and regions to access to part of the EU Cohesion Policy structural funds. It must be stressed that RIS3 strategies go much beyond Cohesion Policy: they are truly integrated cross-sectoral transformation agendas. Structural funds simply provide an incentive to leverage additional public and private investment and to aim the overall targets of (Europe 2020) at the regional level as prescribed by the RIS3 strategies.

In order to fulfill the ambitious goals of RIS3s (Foray et al. 2012) proposed a six-step approach to develop them, which has been followed by regions across Europe:

1. Analysis of the regional context and potential for innovation,
2. Set up of a sound and inclusive governance structure,
3. Production of a shared vision about the future of the region,
4. Selection of a limited number of priorities for regional development,
5. Establishment of suitable policy mixes,
6. Integration of monitoring and evaluation mechanisms.

3 The Canary Islands: A European Outermost Region

Past experience has clearly shown that *one-size-fits-all* approaches to regional innovation policies are doomed to failure. This comes as no surprise, since identifying and exploiting competitive advantage has mainly to do with taking advantage of the unique strengths and opportunities that every region has, while overcoming its specific weaknesses and threats. Hence, the first step in the development of a RIS3 is to carry out a thorough regional analysis, with a broad participation of stakeholders.

3.1 European Outermost Regions (ORs)

According to Art. 349 of the Treaty on the Functioning of the EU (TFEU):

Taking account of the structural social and economic situation of Guadeloupe, French Guiana, Martinique, Réunion, Saint-Barthélemy, Saint-Martin, the Azores, Madeira and the Canary Islands, which is compounded by their remoteness, insularity, small size, difficult topography and climate, economic dependence on a few products, the permanence and combination of which severely restrain their development, the Council, on a proposal from the Commission and after consulting the European Parliament, shall adopt specific measures aimed, in particular, at laying down the conditions of application of the Treaties to those regions, including common policies.

Where the specific measures in question are adopted by the Council in accordance with a special legislative procedure, it shall also act on a proposal from the Commission and after consulting the European Parliament.

The measures referred to in the first paragraph concern in particular areas such as customs and trade policies, fiscal policy, free zones, agriculture and fisheries policies, conditions for supply of raw materials and essential consumer goods, State aids and conditions of access to structural funds and to

horizontal Union programmes. The Council shall adopt the measures referred to in the first paragraph taking into account the special characteristics and constraints of the outermost regions without undermining the integrity and the coherence of the Union legal order, including the internal market and common policies.

Even though according to European Law some policies are modulated for ORs, it must be stressed that ORs are fully integrated in the EU and in its borderless single market. In fact, the EU policy towards ORs has evolved, over the years, from a purely compensating scheme to another one where, in addition to overcoming structural difficulties, their unique assets are identified and leveraged (EC DG Regio, 2010). Since the early 90's the EU developed specific support programmes for the ORs, and since 2004 the EU had an integrated strategy for ORs based on active partnerships between EU institutions, member states (MS) governments and ORs in order to fulfil three priorities: making the ORs more accessible, more competitive and more integrated with the countries around them. This strategy has been renewed with the view that ORs are not only fragile regions facing severe drawbacks, but also important assets for the EU as a whole and for the surrounding countries. The 2008 Commission policy paper "The outermost regions – an asset for Europe" elaborates on this idea in order to exploit the unique regional assets to boost economic development, with particular focus on sectors with high added-value, such as the agri-food industry, biodiversity, renewable energy, astrophysics, aerospace, oceanography, volcanology, seismology, and to promote the regions' role as outposts of the EU in the world (EC COM 642, 2008, EC COM 507, 2007). A notorious clue of the new approach to leveraging the unique assets of ORs is the special issue of the Research*EU Focus magazine (Research*EU Focus 2010). For example, ORs have the largest share of terrestrial and marine biodiversity in the EU, active volcanism and geothermal energy is present in several territories, the European Space Agency has a launching centre in French Guiana and the Canary Islands host the main astronomical observatories on European soil.

Former European Commissioner and Spanish Minister of Agriculture, Economy and Finance, Mr. Pedro Solbes was commissioned by the European Commission in 2011 to develop a report with a thorough analysis and a set of proposals for ORs (Solbes-Mira, P., 2011). The weakness of the ORs' economies is made evident by main indicators performing much worse than EU average, with much higher rates of unemployment and much lower GDP per capita. In fact, it is their lack of integration, both with the EU mainland and with their surrounding territories, what hampers mobility and competition and results in several market failures. Since this is the outcome of structural limitations, mainly due to geography, some of the acceptable measures to overcome them could be permanent, such as for example, some state aids for the mobility of persons and goods, including information and energy. Mr Solbes recommends active policies to strengthen integration within the single market as well as with their regional environment, and to fully implement Europe 2020.

As a short summary of the socio-economic situation currently faced by ORs (as of 2012 for sake of comparison, 2013 for unemployment, data from EUROSTAT), some figures are presented in the next table, where percentages for each OR population and GDP are taken with respect to their respective Member States (MS) and such percentages for each MS are taken with respect to EU-27.

Table 1. Socio-economic situation currently faced by ORs

	Population	Density	GDP	Unemployment	R&D/GDP
EU 27		116,92		10,40%	2,12%
Spain	9,2%	92	8,5%	25,00%	1,34%
Canary Islands	4,6%	283	3,9%	33,7%	0,60%
Portugal	2,1%	114,5	1,4%	15,70%	1,50%
Madeira	2,5%	333,7	3,0%	18,10%	0,25%
Azores	2,3%	106,3	2,1%	17,00%	0,40%
France	13,0%	103	15,8%	10,30%	2,34%
Guadeloupe	0,7%	264,5	0,4%	26,20%	N/A
Guiana	0,4%	2,8	0,2%	21,30%	N/A
Martinique	0,6%	347	0,4%	22,80%	N/A
Rèunion	1,3%	333	0,8%	28,90%	N/A

3.2 The Canary Islands

Even though ORs share very significant features, they are also very different from each other. As for the Canary Islands, it has evolved over the last decades as one of the main tourism destinations in the World. The (IMPACTUR 2013) report on the economic impact of tourism in the Canary Islands show the following findings:

- **Number of visitors:** 12.1 million (10.6M international + 1.5M mainland Spain). As a reference, current resident population is 2.1M. After a minimum in 2009, the current number of visitors is above the pre-crisis level.
- **Contribution to total GDP:** 31.2% (20.8% direct + 10.4% indirect). Its evolution was 29.5% (2008), 27.1% (2009), 28.1% (2010), 29.5% (2011), 29.7% (2012). As a reference, contribution for Spain is 10.9% (2013).
- **Contribution to total employment:** 35.2% (24.8% direct + 10.4% indirect). Its evolution was 33.9% (2008), 31.7% (2009), 32.7% (2010), 34.0% (2011), 34.4% (2012). As a reference, contribution for Spain is 11.9% (2013).

These figures clearly show an enormous economic bias towards tourism, which pulls from the whole economy and contributes to *some* recovery from the financial crisis. Nevertheless it must be noticed the low labour productivity of tourism and the high overall unemployment, which remains huge at 32,4% (2014). The story is simple: tourism developed in the Canary Islands mainly as a low value-added activity, entangled with a surge in construction to make it possible. Receiving millions of visitors boasting a wonderful weather and nature is not very difficult, even more when commercialisation, transportation, investment and most products offered to the tourists come from somewhere else. A bubble of wealth disguised what actually was a clear case of “curse of resources”, produced not by oil but by a nice weather and environment. Industry or trade have not had any chance to develop, other than focusing on the local opportunities provided by tourism and construction, while protected by distance, fragmentation and some custom and fiscal provisions. Even more dramatic, unemployment has grown more during the crisis among scientists and technologists than for the average population (RIS3 Canarias 2014). This is an aggravated version of the overall Spanish scenario, which holds a more diversified economy but also many difficulties to allocate high added value activities carried out by qualified workers.

Even though one might consider the previously mentioned situation as very negative, there are also real opportunities and strengths: a reasonable education system, including two large universities, which goes along with competitive research centres; a good health system; good infrastructures and civil facilities, including a network of airports, seaports, and telecommunications, with several international submarine

telecommunication cables connecting with Europe, Africa and America,... And, of course, loads of visitors willing to tour the Islands every year, as well as world-class resorts, nice weather, beautiful environment and closeness to developing Africa.

4 RIS3 and Service Innovation: the case of the Canary Islands

Once a down-to-earth assessment of the current situation, as well as of potential for change, is done (step 1), a social discussion has to be carried out. A transformation agenda has to be embraced by the society itself, not only by policy makers. Hence a governance structure promoting both informal and formal participation with stakeholders and the general public has to be set up (step 2). It is of paramount importance not to lose the momentum provided by dynamic (and young) entrepreneurs, so the governance system has to address an entrepreneurial process of discovery that brings to surface those unknown talented people and SMEs. A realistic vision has to be shared for the long-term, so that the society not only dreams it to come true but also strives for it (step 3). This step is not to be underestimated, as it is essential to nurture the required social mindset. In the RIS3 of the Canary Islands the vision can be simply summarized as the result of taking advantage of knowledge in the economy (so that young educated people have job opportunities), innovating the tourism to make it genuine, with competitiveness based on quality and difference, and leveraging the Canary Islands as a transatlantic trade and cooperation hub.

Then a few priorities are to be agreed and public policies are to be designed to pursue them. The regional economy should be steered towards such priorities, identified as global niches for competitiveness (step 4). The selection is always tough, since influential groups are not to be allowed to bias them in their own interest. A toolbox of policy instruments is then designed to render a comprehensive policy mix (step 5). For the Canary Islands the policy mix was largely inspired by drafts from (Saublens, 2013), as SMEs and entrepreneurs play a crucial role in the whole setting. Finally, output monitoring and outcome evaluation instruments are proposed to assist the whole governance system (not only the policy makers) to assess the RIS3 and update it whenever necessary (step 6).

For the sake of brevity, only the priorities of the (Canary Islands RIS3 2013) are depicted next, and discussed as related to service innovation. The transformative power of service innovation has been identified as a key driver to revamp the whole economy, by upgrading and innovating traditional economic sectors and industries into more productive, competitive and higher value-added business eco-systems (EU Expert Panel on Service Innovation, 2011). In order to capitalise such power, large-scale demonstrators were recommended, if possible at market level with a cross-sectoral conception instead of small prototypes, as a means to test policies to deal with modern societal challenges. The European Service Innovation Centre (ESIC) was commissioned by the European Commission to provide expert advice to six European regions on this matter, being one of them the Canary Islands (ESIC-Canary Islands, 2013). As acknowledged by ESIC:

“Canary Islands represent the best laboratory to effectively test the transformative power of service innovation to tackle societal challenges and to then replicate this approach in regions with similar conditions”.

The concepts of smart specialisation and of the transformative power of services turned out to be highly synergic and, in fact, the large-scale demonstrator approach should be fertile soil to capitalize on both.

4.1 The Canary Islands RIS3 Priorities

From the previous analysis, alongside with discussion with many stakeholders, five priorities were selected:

Smart tourism leadership: tourism is deeply rooted in solid grounds in the Canary Islands. The challenge is to turn it into a higher-added value sector, providing not only better jobs but also cross-sectoral synergies. This priority is composed of two utterly indissoluble components:

1. Enhance the competitiveness of the tourism sector through innovation: the destination must be genuine, providing experiences beyond conventional “sea, sun and sand”. This includes natural, cultural sporting, wellness and gastronomic experiences. For example, nature is a huge asset, with many opportunities for trekking, bird watching, star gazing, diving and, of course, sea bathing. In cultural terms, the Canaries are midway America and mainland Spain with its own history, folk and artistic features. Wines from regional grape varieties, cheeses and produce from local distinctive agriculture and livestock provide a different taste experience. Innovation should also encompass market and organizational activities, with ICTs being an extraordinary means to manage the experience both with the visitor at destination and at home. Green labels will be a hefty distinction for attracting visitors respectful with the environment, which demand for sustainable energy, water and waste management.
2. Capitalise on tourism for economic diversification: hosting a visiting population over twelve million tourists every year, satisfying them with the experiences they expect and (positively) surprising them with the experiences they don't, is by no means an easy task. There is a huge array of business opportunities in this specific niche, in so diverse areas such as ICTs, sustainable technologies (energy, water, waste, construction,...), logistic, gastronomy, leisure, marketing or organizational consulting to name a few. Knowledge of tourist preferences and closeness to the activities are relevant assets, not only to provide many of the services from the Canary Islands but also to export them to other tourism destinations worldwide. It's a door wide open to diversification from the sector itself, which has not been much transited by regional businesses.

Smart Atlantic hub: capitalise on the geostrategic location of the Canary Islands by its promotion as an international trade, logistic and business hub for its regional area. This includes a huge array of opportunities considering the nearness of developing Western Africa, and the close relationship with Europe and America. For example, the industrial adaptation and deployment of renewable energy and water management technologies for Africa, as well as Kyoto-inspired clean development mechanisms, or cooperation for development programs could be reinforced by locating activities in the Canary Islands.

Socioeconomic Valorisation of R&D: this is to be accomplished in two ways. On the one hand, by the concentration of efforts on specialised areas, such as astronomy, marine sciences and biodiversity. On the other hand, by the promotion of activities devised to deal with the specific challenges of the other priorities.

The third and fourth priorities are the development of the **information society** and of **environmental sustainability**. While both are cross-sectoral priorities over the whole EU, they have specific traits in the Canary Islands. For example, distance and fragmentation is cause for some market failures both in ICTs and energy. For example, wind and sun bounty must supply energy to electrically isolated islands. This is a technical challenge shared not only by islands worldwide, but also by continental areas with weak or sparse electrical grids.

5 Some practicalities (or lessons learnt the hard way)

Boosting an economic transformation agenda requires active policies that leverage public and private efforts. In the current financial situation of the Canary Islands, ORs and other EU regions, it is difficult to expect any public funding other than that arising from the EU Cohesion Policy Structural Funds. Some remarks must be made:

- According to the Treaties, EU policies must conform to the so-called principles of subsidiarity and proportionality for the sake of decentralized multilevel government. This means that policies must be implemented as much as possible by member states and regions, instead of by the European Commission. At the same time Structural Funds must be managed by member states according to the principle of additionality, by which EU funding must be additional to structural national and regional funding. In other words, member states and regions are not supposed to use EU funding to carry out public policies that they would anyway deploy. Moreover structural funds are reimbursed by the EU once the activities have been carried out. Hence they are not given in advance. Tight budgets and the current harsh limitations for public debt make it very difficult to allocate financial resources to fulfil the principle of additionality while promoting truly innovative policies with the momentum to leverage societal transformations. This has proved a significant drawback for Structural Funds during the EU period 2007-2013, which will remain for 2014-2020 unless it is properly addressed.
- The management of EU Structural Funds is cumbersome, to say the least. While their legitimate use must be assured, the administrative burden should be kept as low as possible for the sake of overall efficiency. The resulting bureaucracy not only overloads administrative services, but also SMEs with excessive red-tape.
- The integration of the short-time urges faced by Governments with academically-oriented strategies, in the presence of harsh financial situation, alongside the principles of subsidiarity and additionality and the administrative complexity to manage the funds is a daunting task. Even more if one considers that regions in need of structural funds usually have less efficient organisations and a social mindset worse tuned to the needs of the knowledge economy. Hence the kind of innovation that is needed first is the most difficult to achieve, organisational innovation, which in the public sector requires the leadership of innovative politicians with broad social support. Such a challenge!

6 Conclusions

This paper discusses the suitability of using smart specialisation and the transformative power of service innovation to boost knowledge-based economies. Attention is paid to EU ORs and, in particular, to the Canary Islands, but possibly the main ideas can be extrapolated to some other regions. Tourism is the main driver for cross-sectoral service innovation, the challenge being to evolve from a conventional sun, sea and sand tourism model with low productivity, to a genuine high value-added one, capitalising on every knowledge-based possibility and not only on natural factors. This approach should deliver opportunities for diversification stemming from the tourism sector itself. Nevertheless, properly addressing societal and political issues is much more complicated than designing sound policy strategies. Some remarks are also given on these facts.

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