Challenges in S3-Implementation

Dominique Foray, Chair of Economics and Management of Innovation and Dean of the Management School at EPFL - Swiss Council for Science (SWR)

Interreg Alpine Space – S3-4AlpClusters

Policy Briefing – March 13th 2019 – Venice, Italy
3 - Smart Specialisation: The Concept

Dominique Foray13, Paul A. David10 and Bronwyn Hall17

This brief introduces the basic concept of "Smart Specialisation" (SS) which has been a leading idea of the Knowledge for Growth expert group (K4G). The concept is spelled out in more detail in Policy Brief N°416 in relation to globalisation. Other K4G Policy Briefs that refer to the concept are those on Catching-up Member States (N°5) and on technology and specialisation (N°3).

Rationale for invigorating the R&D specialisation policy discussion

Addressing the issue of specialisation in the R&D and innovation is particularly crucial for regions/countries that are not leaders in any of the major science or technology domains. Many would argue that these regions/countries need to increase the intensity of knowledge investments in the form of high education and vocational training, public and private R&D, and other innovation-related activities. The question is whether there is a better alternative to a policy that spreads investment thinly across several frontier technology research fields, some in biotechnology, some in information technology, some in the several branches of nanotechnology, and, as a consequence, not making much of an impact in any one area. A more promising strategy appears to be to encourage investment in programs that will complement the country’s other productive assets to create future domestic capability and interregional comparative advantage. We have termed this strategy “smart specialisation.”

Smart specialisation is expected to create more diversity among regions than a regime in which each region tries to create more or less the same in an imitative manner. The latter would almost certainly result in excess correlation and duplication of R&D and educational investment programs, which in turn would diminish the potential for complementarities within the European knowledge base. It is both an idea and a tool to help regions or countries to answer this critical question about their respective (and unique) positions in the knowledge economy.

13 Chair of Economics of Innovation, College of Management at EPFL – Switzerland, and Vice-Chairman of the "Knowledge for Growth" Expert Group.
10 Professor of Economics at Stanford University; Professeur Titulaire of Innovation & Regulation in the Digital Economy at Ecole Polytechnique and Telecom Paris Tech.
17 Professor at the University of California at Berkeley and Professor of Economics of Technology and Innovation at the University of Maastricht, Netherlands.

Reports and Policy Briefs of the K4G expert group are to be found at: http://ec.europa.eu/research/invest-in-research/mobilizing-knowledge_en.htm
S3 is not a policy tool but a policy approach

- Implementation is challenging!
  - No recipe, no 12 steps to be followed!
  - A script – a set of rules similar to those given to an actor who is asked to improvise on a particular theme
- This requires understanding of why we do it?
  - To transform the structures of the economy, develop competitive advantages in a few domains, build on regional-specific strengths and opportunities
- ..and buying into a few principles
  - Focus instead of coffee for all
  - Focus not on structures (clusters, industries) but on modes of transformation of structures
  - Level of operations – neither a sector nor one big project but a transformative activity:
    - A collection of related projects and actors all engaged in the same direction of changes
    - A collection of projects covering many issues (not only R&D but also human capital formation, management capacities..)
  - Entrepreneurial discovery, monitoring and flexibility
### Three phases - S3 methodology

<table>
<thead>
<tr>
<th>What priorities = what goals in terms of structural transformation</th>
<th>It is likely that some Regions will share similar priorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Translation of a goal into a transformational roadmap</th>
<th>Differentiation occurs because each Region has specific capacities and specific opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who and what?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pertinent level – neither sector nor one big project but a set of related projects – Transformative activities</th>
<th>Differentiation continues because instruments and programs are also specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action plan for the development of each transformative activity</td>
<td></td>
</tr>
</tbody>
</table>

| How? | 

| Coordination of funding instruments, EDP, monitoring & flexibility | 

| Inter-regional cooperation | 

---

- Public-private dialog – evidence based - centralized decisions
- Decentralization – investment boards Discovery
- Decentralization – boards – active project management Entrepreneurial discovery

Stratégies de Spécialisation Intelligente
The three phases and the deliverables

Feedback: poor projects invalidate the choice of a priority

What priorities = what goals in terms of structural transformation

Why?

Translation of a goal into a transformational roadmap

What?

Pertinent level – neither sector nor individual project but a set of related projects - TA (density, direction)

A few goals in terms of transformation (priorities)

A transformational roadmap for each priority

The 4 Ds

Differentiation
Density
Direction
Discovery

An action plan for each transformative activity

Action plan for the development of each transformative activity

How?

Coordination of funding instruments, EDP, monitoring & flexibility
Inter-regional cooperation

Many regions tend to stop here – but then the RIS3 is not completed
S3-4AlpClusters

- A great example of bottom-up/decentralized process of knowledge and best practices development and sharing among a few Regions
- Acted as a catalyst for interactions between academic scholars and policy makers: a great collective learning process!
- This results today in a sound and unique policy design – of high value:
  - for academic policy research,
  - for current policy discussions at the EU level on future programmes,
  - for practical policy elaboration and implementation in EU regions..
  - ..and beyond
A sound and unique innovation policy design

Thank you!