

Technical University of Denmark



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Publication date:
2014

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Citation (APA):

Tanner, A. N., Piirainen, K., & Alkærsig, L. (2014). Smart Specialisation: 'All roads lead to Rome'. Poster session presented at 5th International Conference on Future-Oriented Technology Analysis, Brussels, Belgium.

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European Commission

5th International Conference on Future-Oriented Technology Analysis (FTA)
Engage today to shape tomorrow
Brussels, 27-28 November 2014

Smart Specialisation: 'All roads lead to Rome'

How do regions develop new industries?

The concept of 'smart specialisation' has come to play a major role in supporting the Europe 2020 jobs and growth agenda. All member states and regions who aspire to receive funding through the EU Cohesion and Structural Funds for the current programming period (2014-2020), are required to develop 3rd generation Research and Innovation Strategies (RIS3), called 'Research and Innovation Strategies for Smart Specialisation'.

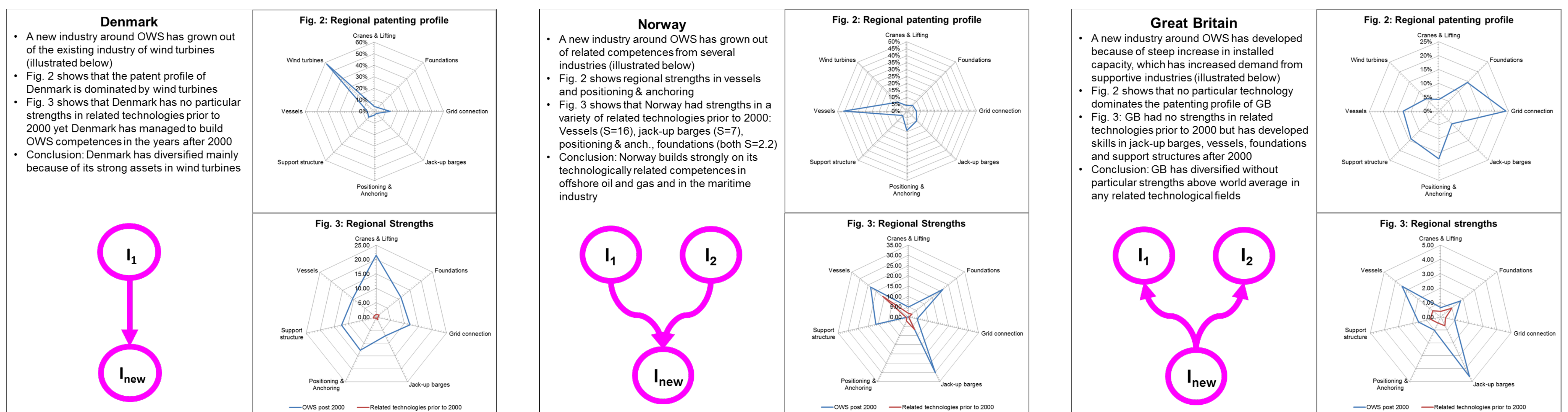
The novelty of RIS3 lies in the 'smart specialisation', i.e. requirement to build on each country's or region's strengths, competitive advantages and potential for excellence. Therefore there is an urgent need to increase our understanding of how regions can build new industries through RIS3. This poster explores how different regions can approach the same goal – develop the same industry – by following different paths.

The case of offshore wind servicing (OWS)

The study builds on data collected during EU FP7 project ECOWindS (see www.ecowinds.eu). In the project, four regions were mapped to identify their specialisation in offshore wind servicing (OWS) around the North Sea. OWS is defined as a distinct subsector within the value chain of wind energy production and supply. It encompasses the processes of assembly, installation, operation and maintenance of offshore wind turbines.

Method and data

Patent data is used as a surrogate to map regional technological competences. The assumption is that patents are an indirect indicator of knowledge and competence development. The OWS-relevant patent classes were identified based on International Patent Classifications as follows: cranes & lifting, foundations, grid connection, jack-up barges, positioning & anchoring, support structure and vessels.



Results

Based on the patent data, two measures were developed to describe relative competences and focus:

1. **Regional patenting profile:** distribution of all wind energy and OWS-related patenting activity
2. **Regional Strengths (S):** Compares the number of patents of the region to the world average. Values > 1 indicate a higher concentration of patent activity in the given region.

The analysis confirms that regions diversify based on preexisting related competences. However, the analysis also reveals how regions diversify into the same industry in very different ways.

1. Denmark based on its competences in wind turbines
2. Norway based on technologically related skills from maritime and the offshore oil and gas industries
3. The United Kingdom based on an increased geographically bounded demand that has appeared concurrently with increased installed MW capacity

Conclusion:

The implication of the results to smart specialisation is that as each of the regions have responded to the growth of offshore wind and OWS industries, they have developed from different sets of initial conditions. We tentatively propose three mechanisms:

1. Diversification as a direct evolution of an existing industry (DK)
2. Diversification as a process of recombination of pre-existing related competences (NO)
3. Diversification based on an increased demand (GB)

The results suggest that there are multiple pathways to achieve smart specialisation through new technologies and industries. Consequently, the findings support the fundamental idea of developing RIS3 – that each country or region has to build on its own competitive advantage and potential for excellence.

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