Industrial Transformation in Bulgaria

First results POINT Review

Ruslan Stefanov, ARC Fund
Patries Boekholt, Innovation Policy Matters
Some background to Bulgaria

R&D expenditures – sources of financing

Source: National Statistical Institute
Innovation performance of Bulgaria’s regions

<table>
<thead>
<tr>
<th>Region</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>BG31 - Severozapaden</td>
<td>32.64</td>
</tr>
<tr>
<td>BG34 - Yugoiztochen</td>
<td>37.41</td>
</tr>
<tr>
<td>BG33 - Severoiztochen</td>
<td>39.05</td>
</tr>
<tr>
<td>BG42 - Yuzhen tsentralen</td>
<td>39.42</td>
</tr>
<tr>
<td>BG32 - Severen tsentralen</td>
<td>40.21</td>
</tr>
<tr>
<td>BG41 - Yugozapaden</td>
<td>56.79</td>
</tr>
</tbody>
</table>

Source: Regional Innovation Scoreboard
The first review meeting

- Total of 43 participants
- Distributed in 8 groups of stakeholders
- All groups well represented with less focus on consumers though
- Different business representatives: most from ICT but also from mechatronics (drones), venture capital, agriculture, clean-tech
- Government/public sector the most widely represented group
Some preliminary takeaways (1)

• Business:
  • **Depopulation** => lots of free space => **automation** => but to do this we need to tie IT to the real world => need of **PhDs**
    • ... but also creates signals to employers – standard of living of some Bulgarian engineers higher than those in UK and even Germany
  • **Education** (quality and quantity) is a critical challenge; digitalization should start at school; businesses step in, e.g. in IT
  • Give us a clear **strategy** to follow

• Public sector:
  • **Silos** not only between ministries but also within, e.g. between education and science
  • Reliance on **OP** funding though moving from infrastructure to science – business links... but attitude is “keep calm, and give subsidies”
  • **Digitalisation** emerges as a unifying topic across ministries and regionally; DIHs helpful but only two in the country
Some preliminary takeaways (2)

• Knowledge supply and intermediaries:
  • Unrelated to the business world
  • Focus on fundamental science and no incentives to commercialize
  • International companies are not embedded enough in the local economy

• Consumers
  • Low sophistication and purchasing power => very high reliance on exports, including for IT
  • No public procurement strategy from the government to pull industrial transformation in S3 areas
  • Could be afraid of transformation/transition, e.g. job loss; Brussels bashing appearing, e.g. Horizon 2020 rules and participation
The thematic area
Bulgaria’s RIS3 Priority areas 2014 -2020

<table>
<thead>
<tr>
<th>Thematic areas:</th>
<th>Original Proposal for Point review Thematic Area</th>
<th>Focus for Point case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informatics and ICT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechatronics and Cleantech</td>
<td>![Checkmark]</td>
<td></td>
</tr>
<tr>
<td>Industries for a healthy life and biotechnology</td>
<td>![Checkmark]</td>
<td></td>
</tr>
<tr>
<td>New technologies in creative and recreational industries</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

... in the context of Industry 4.0
Growth in different niches of ICT sector

- ICT services growing fast
- Mainly outsourcing by foreign companies -> added value created elsewhere
- Coding on basis of client specifications
- Manufacturing of electronic and optical products on the rise (mechatronics)

**Figure 40.** Annual revenues in the ICT sector, 2010 – 2018, EUR thousand

Source: Companies' financial data, Orbis Europe database, Bureau van Dijk, 2019.
Focus of the thematic case Bulgaria

- Governance & Joined up Strategy
- Industry 4.0
- ICT Sector
- Digitalisation
- Education & Skills
- Mechatronics
- Clean Tech
<table>
<thead>
<tr>
<th>Tentative SWOT for Bulgarian case</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strengths</strong></td>
</tr>
<tr>
<td>Orientation and planning</td>
</tr>
<tr>
<td>Resource mobilisation</td>
</tr>
<tr>
<td>Production</td>
</tr>
<tr>
<td>Demand</td>
</tr>
</tbody>
</table>
Next Steps

• Write Chapters 1 & 2 in January / February
• Drafting Chapters 3 & 4 February /March
• Discussion with JRC and Bulgarian partners
• Have a second more focused stakeholder meeting early Spring
• Finalising the report
For further info please contact:

ruslan.stefanov@online.bg

info@boekholt-ipm.eu