Place-based Innovation Ecosystems: Different routes to success?

A comparative analysis of five case studies

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Motivation

• *Investigate territorial conditions on PIE, in particular non-tangible assets and proximity effects*

• *Understand key enablers of successful innovation ecosystems, despite differences in*
  • origins and varying starting conditions
  • 4H implementation levels
  • interrelation with RIS3
Methodology

Methodology
• Comparative analysis of five PIEs w/diverse orchestrator types (local govt., univ., RTO, large company, CSOs)
• Cases: Espoo (Finland), Barcelona (Spain), Gothenburg (Sweden), Ljubljana (Slovenia), Boston (USA)

Methods
• Definition of a conceptual framework
• Local mapping of ecosystem orchestrators and key actors
• Structured interviews with selected stakeholders

Theoretical Background
• Triple / Quadruple helix concepts
• Smart Specialisation and Entrepreneurial Discovery Process
• Innovation models (open innovation, absorptive capacity, international chain-link, system integration, etc.)
Conceptual framework

- Entrepreneurial Discovery Process (Foray, 2015)
- Integrated approach (Oksanen and Hautamäki, 2014)
- Entrepreneurial innovation & Context relevance (Autio et al., 2014)
- Case-specific:
  - Entrepreneurial universities
  - Digital social innovation (DSI)
  - Research & Technology Orgs (RTOs)
  - Business-driven innovation
  - Urban-driven innovation
## Case Studies: 4H Landscape

<table>
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<tr>
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<th>Gothenburg</th>
<th>Ljubljana</th>
<th>Espoo</th>
<th>Barcelona</th>
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<tbody>
<tr>
<td><strong>Academia/RTOs</strong></td>
<td>RTO</td>
<td>RTO</td>
<td>Entrepreneurial University</td>
<td>Universiti</td>
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<tr>
<td><strong>Industry</strong></td>
<td>Large</td>
<td>StartUps</td>
<td>Large, SMEs, Startups</td>
<td>DSI Startups</td>
<td>Large, SMEs, Startups</td>
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<tr>
<td><strong>Government</strong></td>
<td>Local Regional</td>
<td>Regional National</td>
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<td>Regional Local</td>
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<tr>
<td><strong>Civil Society</strong></td>
<td>Consumers</td>
<td>Young Entrepreneurs</td>
<td>Entrepreneural students</td>
<td>DSI spaces, prosumers</td>
<td>Community spaces</td>
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This table illustrates the distribution of stakeholders across different locations, highlighting the presence of RTOs, industry, government, and civil society sectors in each case study.
Case Study: 4H Drivers

Academia/RTOs

Civil Society

Industry

Government

Boston

Espoo

Gothenburg

Ljubljana

Barcelona
Large Industry-driven PIE

- high capacity of attracting talent, funding and other companies to the region
- dense relationship between the actors in terms of joint research and development projects
- state-of-the-art R&D infrastructure (laboratories, test beds, reality / living labs, etc.)
- internationally linked PIE
- existence of industry-specific clusters
- trust culture between the stakeholders enabling for risk sharing projects
- co-evolution and co-specialization patterns
RTO-driven PIE

- focus on the creation of innovative start-ups
- tension between co-operation and competition
- citizens’ involvement still in its infancy
- coordination of the ecosystem is largely in the hands of the government
- vibrant start-up ecosystem developed on its own
- progressively integrated into the broader RDI system thanks to TPL and other innovation intermediaries
Entrepreneurial University-driven PIE

- highly-skilled human capital
- excellent research infrastructure
- reforms of public programmes and law
- efficient multi-level governance system
- firm political commitment of all administrations
- long-standing and trustful collaborative culture amongst the actors
- shared strategic vision on open innovation
- well-functioning entrepreneurial education that meets bottom-up and top-down requirements
- strong orchestrator
Digital Social Innovation-driven PIE

- local culture of active citizenship, collaboration and 'open innovation'
- diversified mix of 4H actors involved (DSI centres driven by non-profits, firms and universities, plus the administrations feeding the model's cohesion)
- the existence of networks of different cross-cutting nature
- the establishment of programmes to promote social innovation projects
- a commitment by the regional and local administrations
Urban planning-driven PIE

• Mature PIE, based upon a long-standing collaboration between top high-education institutions and entrepreneurial actors
• Strong commitment by the local and state (Massachusetts) authorities
• No single orchestrator, but the municipal leadership and a reduced number of influential key actors have a strong influence on fostering innovation, business creation and urban development
• civic-led spaces enabling grassroot collaboration and cooperation
## Critical System Elements

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<tr>
<td><strong>Integrative Leadership</strong></td>
<td>LARGE</td>
<td>RTO</td>
<td>UNI</td>
<td>CSOs</td>
<td>Local Govt</td>
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<td><strong>Balance (top-down / bottom-up)</strong></td>
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<td><strong>Entrepreneurial, risk-taking culture</strong></td>
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Policy-enabling Factors

• *From "co-existence" over "co-evolution" to "co-specialisation"*
  • an innovation ecosystem is more competitive when there is a high interlink of different actors

• **Value Networks able to assume collective risks**
  • density and quality of the network relationships
  • trust between stakeholders

• **Towards a professionalised orchestration**
  • Key role where spontaneous spill-overs on a local scale are less likely due to a lack of proper supportive local governance
Conclusions

- Each case study represents a particular type and complex innovation ecosystem at different levels of 4H collaboration.

- Orchestrators are essential in innovation ecosystems as enablers across the actors through integrative leadership.

- Successful Innovation ecosystems do:
  - Attract and retain talents
  - Have an entrepreneurial and risk-taking culture
  - Have a state-of-the-art R&I infrastructure
  - Show complementary system stakeholders
  - Are internationally oriented
Case Analysis Model

PLACE-BASED INNOVATION ECOSYSTEM

- Openness towards external stakeholders - talent attraction and retained
- Policy impacts and learning ability
- Implementation level of the 4H Model
- Policy-mix tailored to a context mix
- Relations with EDP and RIS3
- Orchestration through integrative leadership
- Balancing top-down and bottom-up dynamics
- Entrepreneurial and risk-taking culture
- Openness to global policy agendas, like the SDGs, and investments
Thank you!

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