



## Stakeholders and policies that drive innovation and job creation

Since the industrial revolution the regions in Europe have become increasingly dependent on innovation to foster economic growth.<sup>1</sup> As a result, the policymakers shape the environment in which innovation can occur through national/regional policies, by engaging stakeholders that operate and contribute to innovation and business environment, capitalising on local capabilities, connecting to international knowledge pipelines etc.

Given importance of innovation for job creation and technological transformation, the current document discusses some key stakeholders and policies that drive innovation, namely...

- Triple helix;
- Spinoffs;
- Cluster policy;
- Entrepreneurship and innovation policy;
- Multinational enterprises and innovation;
- Smart specialisation strategy.

### 1 Triple helix

The triple helix model of innovation refers to collaboration between academia, industry and governments to foster development of the knowledge economy.<sup>2</sup> The concept has been developed by Henry Etzkowitz and Loet Leydesdorf in the 1990s.<sup>3</sup> The triple helix model emphasises the importance of academic research for the development of new products/services by industries and for the evidence-based policy-making. The triple helix model has been revised to include additional stakeholders, such as the civil society and the environment. This has led to renaming - quadruple and quintuple helixes.

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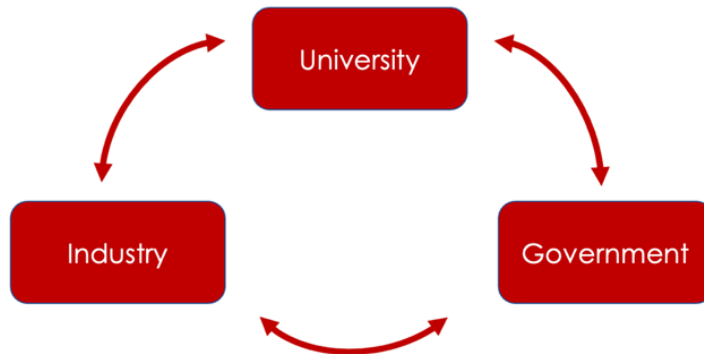
<sup>1</sup> <https://www.oecd.org/regional/regionalinnovation.htm>

<sup>2</sup> <https://link.springer.com/book/10.1007/978-3-319-29677-7>

<sup>3</sup> <https://www.leydesdorff.net/ntuple/>



Figure 1 Triple helix model



Pillars (2023).

The model is expected to stimulate valorisation of knowledge generated at universities/research institutions, knowledge transfer and spillovers among involved stakeholders, as well as, stimulate better quality of education at academic institutions and support strengthening of local and international networks. The triple helix collaboration, at times, leads to the establishment of hybrid organizations, such as technology transfer offices in universities, firms, government-funded research labs. In addition, such collaboration stimulates activation of business and financial support institutions.

The most famous example of the triple helix model is Silicon Valley. The US government supported stakeholder collaboration and ecosystem development (e.g., by offering flexible financing, tax holidays). The IT cluster allowed both small and big IT businesses to thrive, leading to new success stories of Dell, HP, Oracle, Intel, Microsoft etc. The researchers and ICT professionals have developed new facilities to do R&D, thereby supporting the development of new products.<sup>4</sup>

## 2 Spinoffs

A spinoff is a new and separate company that has been created when a parent company distributes shares in a subsidiary or business division to the parent company shareholders.<sup>5</sup> A spinoff may occur for various reasons, but the main motivations include higher productivity due to more streamlined operations and management structures, being a testbed for

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<sup>4</sup> <https://drvidyhattangadi.com/what-is-the-triple-helix-model-for-innovation/>

<sup>5</sup> <https://www.investopedia.com/terms/s/spinoff.asp>



innovation of a parent company, or plans to sell a business unit.<sup>6</sup> Spinoffs of successful companies are more likely to be successful than spinoffs of less successful companies.

A spinoff might stimulate labour mobility, knowledge transfer and network formation, especially if it has strong links with a parent company. Related variety is important to regional growth, as it induces knowledge transfer between complementary sectors at the regional level. Thus, spinoffs transfer knowledge across related sectors, which contributes to industrial renewal and economic branching in regions. Spatial agglomeration effects are also associated with spinoffs, as they are typically embedded into a local business and innovation ecosystem and attached to the value chain of a parent company.

When citing the example of Silicon Valley and its successes, it is not possible to neglect the spinoff dynamics. In fact, Fairchild Semiconductor which was the first producer of semiconductors in Silicon Valley (and has eventually led to the naming of the area) still has successful spinoffs today. A timeline of the spinoffs it has generated includes GMe and Intel in the 1960s, Apple and Oracle in the 1970s, Altera and SanDisk in the 1980s, eBay and Google in the 1990s, Facebook and Tesla in the 2000s, and Instagram and uber in the 2010s.<sup>7</sup>

### 3 Cluster policy

Clusters are geographic concentrations of interconnected companies and/or institutions that manufacture products or deliver services to a particular field or industry.<sup>8</sup> The cluster is based on an economic principle of Marshallian externalities – a theory that explains the co-location of firms and industries fosters exchanges of resources, labour, know-how, products or services. By building synergies and operating in a complementary manner, clusters serve as a driving force of local economies and innovation. In view of this, many policymakers in Europe support the development of clusters by stimulating collaboration within clusters, providing necessary resources and support services for innovation.

Clusters require dedicated management that is capable of reconciling interests of the private and public sector participants, while supporting the pursuit of a common goal. Many clusters,

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<sup>6</sup>

<https://www.investopedia.com/terms/s/spinoff.asp#:~:text=A%20company%20may%20conduct%20a,productive%20or%20unrelated%20subsidiary%20businesses.>

<sup>7</sup> <https://computerhistory.org/stories/spinoff-fairchild/>

<sup>8</sup> <https://www.inc.com/encyclopedia/clusters.html>



particularly high technology clusters, have been successful in leveraging private investment. This supports their sustainability and development.<sup>9</sup>

## 4 Entrepreneurship and innovation policy

Innovation is a necessary condition of entrepreneurship, while the latter leads to job creation and economic growth. Entrepreneurial opportunities can emerge from scientific discoveries, experiments, but also from more mundane applications of existing solutions in new contexts. Thus, entrepreneurship and innovation policies highlight interconnectedness of innovation, entrepreneurship and research activities.<sup>10</sup> The role of the policymakers is to strengthen entrepreneurial and innovation ecosystems, stimulating awareness of their benefits, supporting network-building, company R&D and skills development, facilitating access to capital and innovation infrastructure. The regulatory environment also should be reviewed to ensure ease of doing business (e.g., by offering favourable tax regimes, reducing administrative burdens), to support technology transfer, protection of intellectual property rights and commercial laws.<sup>11</sup>

## 5 Multinational enterprises and innovation

The multinational enterprises (MNEs) are crucial actors of the global knowledge-based economy. Given availability of resources and capabilities, they could drive innovation through engagement with local companies, R&D activities and foreign direct investment. Collaboration of local companies/organisations with the MNEs could expose them to global production, service and knowledge networks, thereby stimulating organisational innovation.<sup>12</sup>

The intensity of collaboration between the MNEs and local companies/organisations depends on a competitive position of MNEs in a local context, absorptive capacities of local companies/organisations, on existence/absence of institutional frameworks that stimulate innovation and collaboration, and on perceived advantages from innovation-related

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<sup>9</sup> [https://media.nesta.org.uk/documents/the\\_effects\\_of\\_cluster\\_policy\\_on\\_innovation.pdf](https://media.nesta.org.uk/documents/the_effects_of_cluster_policy_on_innovation.pdf)

<sup>10</sup> [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1115262](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1115262)

<sup>11</sup> [https://unctad.org/system/files/official-document/ciid13\\_en.pdf](https://unctad.org/system/files/official-document/ciid13_en.pdf)

<sup>12</sup> <https://www.routledge.com/Multinational-Enterprises-and-Innovation-Regional-Learning-in-Networks/Heidenreich-Barmeyer-Koschatzky-Mattes-Kruth-Baier/p/book/9781138959989>



activities. A large technology/productivity gap between the MNEs and local companies/organisations typically serves as a barrier for collaboration in innovation.<sup>13</sup>

In view of the above, the policymakers should foster the development of collaborative innovation and business frameworks, raise awareness about the potential of such collaboration and provide resources for it.

## 6 Smart specialisation strategy

Smart specialisation strategy revolves around the concepts of industrial relatedness and technological complexity, which suggest that a region is more likely to benefit from a new activity that aligns with the region's current set of capabilities and technologies. Some argue that an approach that focuses on comparative advantages may lead to a path-dependent process, locking regions in traditional activities. However, a contrasting view suggests that smart specialisation provides better economic opportunities than investing in unrelated activities.

Typically, a smart specialisation strategy combines industrial, educational and innovation policies that highlight priority areas for knowledge-based investments. The role of the policymakers is to encourage investment in activities that will complement other productive assets, provide infrastructure that will assist local companies/organisations in innovation and business activities, reinforce collaboration in key sectors, and stimulate knowledge generation and sharing that will accelerate innovation.

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<sup>13</sup> <https://www.sciencedirect.com/science/article/abs/pii/S0048733314002273>