

2024 EU-SPRI Early Career Researcher Conference: Call for papers

Enhancing innovation ecosystems for a sustainable world in times of dramatic change: A policy challenge

Relevance of theme

The innovation ecosystem debate is ongoing with more research directions in parallel. Among those directions, several scholars, and practitioners, from a policy standpoint, are delving much attention on how to nurture, develop and orchestrate innovation ecosystems to cope with grand societal challenges – as reflected in the Sustainable Development Goals (SDGs). Innovation ecosystems seldom emerge fully formed, rather they undergo complex genesis and development processes (Adner, 2006; Thomas et al., 2022; Cavallo et al., 2019), and roles that come to prominence from the important yet volatile phase of genesis to the mature phase require further investigation (Dedehayir et al., 2018), especially when SDGs need to be addressed. That is, few empirical investigations explored the process of innovation ecosystem emergence and development consistent with SDGs, its determinants and consequences at policy level (Dattée et al., 2018; Hannah and Eisenhardt, 2018; Pushpanathan and Elmquist, 2022). Such a process is, indeed, extremely relevant and at the very center of policy institutions' agenda (Acs et al., 2017). Innovation ecosystems should be supported, influenced, and oriented toward SDGs. However, we have little knowledge on how, for instance, public organizations and institutions may support directly or indirectly innovation ecosystem emergence and development for SDGs. Today's scenario is characterized by a high level of complexity. The grand societal challenges we need to face are inherently complex and systemic and could hardly be solved by individual actors or territories in isolation. For instance, technologies are commonly considered powerful enablers of network connectivity and the generativity of innovations (Nambisan, 2017). Yet, the rapid progress of digital technologies (such as Artificial Intelligence) and the platformization of the economy has brought additional issues to policy-makers' agenda. Power concentration in a platform-based innovation ecosystem may undermine competition and it creates giant private companies that hold mono-oligopolistic power. This comes with the risk of contributing to an increasing economic divide across nations, regions, and local communities. A more recent strand of the literature also highlights that it may be relevant to examine the transitional area between innovation ecosystems, as multiple ecosystems with different core competences for a more sustainable world may emerge (e.g., knowledge ecosystems, business ecosystems, digital ecosystems) (Gupta et al., 2019), and innovation may arise at their intersection. Such transitional area is named innovation ecotone (Ghazinoory et al., 2021; Massa et al., 2022).

Overall, as highlighted in the European Commission Communication on a New European Innovation Agenda, fostering innovation ecosystems across the European Union (EU) requires a systemic, collaborative, and inclusive approach involving diverse regions, actors, and institutions. EU aims to pave the way, a sustainable way, to create framework conditions for a unique innovation ecosystem model that guards against divides and gaps such as substantial labor market, wage and gender gaps, and associated threats to territorial and social cohesion. This overarching objective calls for integrated policies and strategies especially in the light of a new reconfiguration of markets following the dramatic and revolutionary changes brought in by the platformization of the economy, the new progress of digital technologies (such as generative AI), the Covid 19 and the recent Russo-Ukrainian war, which can spur inequalities across nations, regions, and local communities in EU.

Specific areas addressed

The challenges generated by Covid 19, the powerful fast progressing of generative AI, and the start of a de-globalization process (forced in by the Russo-Ukrainian war) are and will highly influence how innovation ecosystems may contribute to a more sustainable world.

Reflecting the breadth of innovation ecosystems as multi-stakeholder structures across geographical regions, the conference will deal with a transformed environment through dramatic and revolutionary events, by investigating the challenges (and opportunities) for policymakers and innovation ecosystem stakeholders involved. In particular, we outline three main thematic areas/streams that urge response by scholars and in particular by early career scholars. First, the progress of platforms and AI technologies are widening the set of innovations and entrepreneurial opportunities. However, there are several concerns about the “dark side” of these powerful tools (Nambisan and Baron, 2013). Scholars agree that the platformization of businesses till creating entire platform-based ecosystems (e.g., Apple store) is largely dependent on scale economies and network effects, which can enable rapid growth as well as rapid decline (Acs et al., 2021; Fraccascia and Yazan, 2018). This is leading to raise the question for policy institutions of whether there are ways of supporting and guiding businesses towards more sustainable long-term oriented growth. The “gold run” for exponential growth can create fragile systems of innovations, affecting the overall stability of the economic system.

Second, the pandemic has accelerated the emergence of a common awareness about the need to support much “deep tech” innovation to cope with and solve big and relevant societal challenges – as summarized through the SDGs framework. Deep tech innovation has distinctive and unique features, which it may require to advance our current understanding of the innovation ecosystem at multiple levels. Deep tech innovation aims to provide concrete solutions to our societal problems by finding its source in deep interaction with the most recent scientific and technological advances and by seeking to produce a profound impact in the targeted application areas. When operating at the very frontier of science and technology encouraging co-planning, co-complementation, and co-investments is a strategic priority for policy intervention. Indeed, in a deep tech context, it is quite unlikely that an individual actor possesses all the needed competencies and resources to produce innovation. Therefore, scholars and practitioners are called to reflect on new (circular) business models, new ways of collaborating, new financial instruments, and new policy measures that can support and nurture a “deep tech” innovation ecosystem for a more sustainable world.

Third, we assisted to the diffusion of an open culture of innovation in the last 20 years. The paradigm of open innovation introduced by Chesbrough (2003) has largely influenced companies’ culture, activities, and strategies. The advent of digital technologies has increased the chance for open innovation, making it easier to collaborate and produce innovation as a result of a collective process that may involve different and also geographically distant stakeholders (Nambisan, 2017; Del Vecchio et al., 2018). Moreover, the pervasiveness of software in every business has led to a shift from industry-bounded innovation towards cross-industry innovation trends like IoT, blockchain, and metaverse which presents applications and impact in several industries from logistics and transportation to insurance, finance, agriculture, and space among others. While innovation becomes more open and less bounded the world is witnessing the de-globalization, leading to polarized and more closed economic systems. The “cold war” system seems to re-emerge, but the world is different, and challenges for science and technology are evolving, thus, policy response will need to be rethought. Yet, we possess limited knowledge on how an innovation ecosystem may evolve and develop in such a new environment to still cope with grand societal challenges. Since climate change as well as other grand societal challenges will not stop due to de-globalization and related wars, we need to understand how these phenomena can affect innovation ecosystem emergence and development and what are the policy implications of this. In particular, research is needed to shed light on the link across levels of analysis from more micro factors at firm level (e.g. such as processes and structures) as the proximate causes of a macro

phenomenon and related outcomes at ecosystem level (e.g. number of innovative startups and scaleups), and what is the role of policy in explaining, favoring and supporting such link.

Given the above arguments, examples of possible topics that are worthy of exploration during the conference are (but are not limited to):

Policy measures and firms' strategies for platform-based and AI-enabled innovation ecosystems.

- Analysis of the societal impact of AI Technologies in innovation ecosystems.
- Public policies challenges to favor an ethical use of AI technologies.
- The role of policy for enabling the transition of traditional business towards the platform-based economy and related business model innovation processes.
- Unveiling key actors and their roles during ecosystem emergence and onward in light of the digitalization of innovation ecosystems.

Policy measures and strategies enhancing deep tech innovation for a sustainable world.

- Definition of public policies to stimulate deep tech innovation to cope with SDGs.
- Understanding the interaction between technology and science to address big societal challenges.
- The role of policymakers in promoting deep tech innovation ecosystems to achieve sustainability goals.
- Exploring the link between firm level business model innovation enabled by deep tech and innovation ecosystem outcomes
- Exploring innovation ecotones given the complex nature of deep tech

The role of de-globalization for innovation ecosystem emergence and development.

- Open innovation practices for SDGs in times of dramatic changes and the role of institutions.
- The role of cultural, technological, and institutional proximity in inter-organizational collaborations.
- Open innovation policy tools to sustain high-potential SMEs and local businesses.
- Public policies to stimulate firms' open innovation processes and the creation of open innovation ecosystems.
- Policies support to think globally (i.e., caring for the entire planet) and act locally.

Paper presentations by early career participants will be enriched by keynote speeches of leading scholars and representatives of EU institutions in the field.

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