
This is an electronic reprint of the original article.
This reprint may differ from the original in pagination and typographic detail.

Dzhengiz, Tulin; Patala, Samuli

The role of cross-sector partnerships in the dynamics between places and innovation ecosystems

Published in:
R and D Management

DOI:
[10.1111/radm.12589](https://doi.org/10.1111/radm.12589)

Published: 01/03/2024

Document Version
Publisher's PDF, also known as Version of record

Published under the following license:
CC BY

Please cite the original version:
Dzhengiz, T., & Patala, S. (2024). The role of cross-sector partnerships in the dynamics between places and innovation ecosystems. *R and D Management*, 54(2), 370-397. <https://doi.org/10.1111/radm.12589>

This material is protected by copyright and other intellectual property rights, and duplication or sale of all or part of any of the repository collections is not permitted, except that material may be duplicated by you for your research use or educational purposes in electronic or print form. You must obtain permission for any other use. Electronic or print copies may not be offered, whether for sale or otherwise to anyone who is not an authorised user.

The role of cross-sector partnerships in the dynamics between places and innovation ecosystems

Tulin Dzhengiz¹  and Samuli Patala^{2,*} 

¹Department of Strategy, Enterprise and Sustainability, Faculty of Business and Law, Manchester Metropolitan University, M15 6BH, Manchester, All Saints Building, UK. t.dzhengiz@mmu.ac.uk

²School of Business, Aalto University, Ekonominaukio 1, Espoo, 02150, Finland. samuli.patala@aalto.fi

The dynamics between places and innovation ecosystems and the role that cross-sector partnerships (CSPs) can play in regenerating places and in revitalizing innovation ecosystems remain poorly theorized. In this study we use two cases – Humber (UK) and Southwest Finland – to develop a conceptual model that demonstrates the vicious and virtuous dynamics between places and innovation ecosystems. We show that CSPs can act as herding spaces – arenas where actors from different organizations get together to address a common purpose and connect with the institutional context – and alter these vicious and virtuous dynamics. Specifically, our findings shed light on four mechanisms that enable CSPs to act as herding spaces and so to help break away from the vicious (vitalizing role) and reinforce the virtuous (nurturing role) dynamics between places and innovation ecosystems: recognition of place-based challenges, improvement or utilization of place attachment, development of purpose ecosystems, and direct engagement in place regeneration activities.

1. Introduction

Healey (1999, p. 112) defines places as ‘material and social space, a habitus, infused with meanings and transacted by relations through which particular cultural capitals are formed and transformed’. All organizational actors are embedded in places of different scales – neighborhoods, regions, cities – shaping their mindsets and providing meaning. It has been argued that the way in which places determine the *raison d’être* of various organizations and ecosystems is largely overlooked in research (Di Gregorio, 2017). This placelessness is particularly problematic in the context of sustainability research because the sustainability transition is ‘fundamentally

a geographical process that involves reconfiguring current spatial patterns of economic and social activity’ (Bridge et al., 2013, p. 331). Therefore, there has recently been increasing interest in explaining the role of places in determining organizations’ or ecosystems’ sustainability and health (Shrivastava and Kennelly, 2013; Lawrence and Dover, 2015).

One setting where places play an important role is in innovation ecosystems – ‘the evolving set of actors, activities, and artifacts, and the institutions and relations, including complementary and substitute relations, that are important for the innovative performance of an actor or a population of actors’ (Granstrand and Holgersson, 2020, p. 102098). Innovation ecosystems ‘focus on

innovation activities (goal/purpose), involve the logic of actor interdependence within a particular context (spatial dimension) and address the inherent co-evolution of actors (temporal dimension)' (Ritala and Almpantopoulou, 2017, p. 41). Research on innovation ecosystems has thus acknowledged the embeddedness of these ecosystems in countries (Su et al., 2018), regions (Madikizela, 2020), and cities (Chesbrough et al., 2014; Scaringella and Radziwon, 2018). Places are viewed as the boundaries of an innovation system and as such are part of the ecological, social, and geographical systems surrounding them (Vermunt et al., 2020). However, the dynamics between places and innovation ecosystems are still not well understood.

Another organizational setting that affects places and their quality is the cross-sector partnership (CSP). CSPs are defined as 'collaboration[s] amongst similar as well as diverse actors for the purpose of applying business principles to solving social problems' (Montgomery et al., 2012, p. 376). CSPs drive social and ecological innovation by allowing the integration of different organizations, institutions, social networks, and knowledge sources through communication (Ritvala et al., 2014; Ryan and O'Malley, 2016; Van Tulder et al., 2016). They allow various boundary spanners whose role is 'to manage innovation opportunities and outcomes, or [...] to locate opportunities for innovation' with a view to developing social capital (Ryan and O'Malley, 2016, p. 2). Social capital is also necessary to address a particular place's social and environmental issues due to the demands and expectations of diverse stakeholder groups. Therefore, CSPs may simultaneously benefit the innovation ecosystem and their embedded places.

However, the dynamics between innovation ecosystems and places and the role of CSPs in these dynamics remain undertheorized. This is where we position our research. We believe that research in this area is necessary for two reasons. First, scholars have long been interested in understanding what makes some places more advantageous and thriving in innovation activity than others (Audretsch and Lehmann, 2017; O'Connor et al., 2018). The quality of a place (henceforth placial quality) that makes a particular location attractive to live and work, its history, and the attachment of actors to their places all affect the development of an innovation ecosystem. While places can help us theorize innovation ecosystems through a different lens, these dynamics have thus far not been properly addressed and understood in research. Second, not all places are attractive locations that foster healthy innovation ecosystems. On the contrary, some are trapped in economic inactivity,

poverty, environmental degradation and inaction on grand societal challenges (Anderson et al., 2019). CSPs may have a crucial role here because they can enhance the quality of these places through regenerative activities (Ryan et al., 2020) and drive innovation ecosystems forward through interactions between different actors (Ryan and O'Malley, 2016). Therefore, it is necessary to explore the dynamics between places and innovation ecosystems and the role of CSPs in these dynamics.

In this paper we seek answers to two research questions: (1) what are the dynamics between places and innovation ecosystems and (2) how can CSPs positively influence these dynamics? We address these questions based on two cases that demonstrate successful CSP interventions: the case of Humber and the Humber Local Enterprise Partnership (LEP), and the case of Southwest Finland and the Telaketju Partnership. We synthesize insights from these cases and the extant literature and develop a conceptual model that presents three propositions for further research in this area.

Our article contributes in two ways to the current scholarly conversation about the place-based dynamics of organization (Shrivastava and Kennelly, 2013; Guthey et al., 2014), especially the organization of innovation ecosystems (Ritala et al., 2013) and CSPs (Ometto et al., 2019). First, we build a bridge between innovation ecosystems and the places in which they are embedded. Specifically, we demonstrate the complex negative and positive interdependencies between places and innovation ecosystems, contributing to the literature on innovation ecosystems by putting innovation ecosystems in their places. Second, we provide insights regarding the mechanisms that allow CSPs to enhance the dynamics between places and innovation ecosystems. Therefore, we explain the role of CSPs in positively reinforcing these dynamics.

2. Literature review

2.1. Innovation ecosystems

Innovation is 'the development and implementation of new ideas by people who, over time, engage in transactions with others within an institutional context' (Van de Ven, 1986, p. 590). *Innovation ecosystems*, then, are 'where people, culture and technology, [...] meet and interact to catalyze creativity, trigger invention and accelerate innovation across scientific and technological disciplines, public and private sectors [...] and in a top-down, policy-driven as well as bottom-up, entrepreneurship-empowered fashion' (Carayannis and Campbell, 2009, pp. 202–203).

Innovation ecosystems have an essential function: the co-creation and co-capture of value (Adner and Kapoor, 2010; Ritala et al., 2013; Autio and Thomas, 2014; Yin et al., 2020). Fulfilling this function requires a flow of materials, resources, capabilities, and knowledge between an ecosystem's interdependent actors (Ganco et al., 2019). The importance of collaborative creation and appropriation of value is emphasized because the survival of organizations does not depend solely on actors' individual performance (Yang et al., 2021). Instead, it depends on the properties of the ecosystem of which they are part (Kapoor, 2018), highlighting the 'shared fate of the community as a whole' (Jacobides et al., 2018, p. 2257).

While most research has considered the private economic value created and captured in innovation ecosystems, there are also innovation ecosystems that are specifically created or that emerge to generate environmental or social value (Oskam et al., 2020; Aarikka-Stenroos et al., 2021; Kadyrova, 2021). Recent studies have even posited that building innovation ecosystems and collaborations for open innovations is a way of responding to grand global challenges, such as the Covid-19 pandemic (Chesbrough, 2020; Radziwon et al., 2021). In this article we also consider innovation ecosystems that simultaneously co-create and capture economic, social and/or environmental value. Drawing on recent studies (Dahmann et al., 2020), we use the term *purpose ecosystem* to specifically refer to the type of innovation ecosystems that aim to create positive social/environmental value and regenerate the region by addressing place-based issues, such as water scarcity, biodiversity loss, inequality, or unemployment.

Innovation ecosystems need to be healthy in order to continue to create value. In its most basic sense, something healthy is 'thriving or flourishing ... all of its essential parts are in good working order, and its vital processes are running smoothly or capable of running smoothly when called upon' (McShane, 2004, p. 230). Accordingly, we define *healthy innovation ecosystems* as those where various actors can continue to develop and implement new ideas and can co-create and co-capture economic and social/environmental value smoothly. *Unhealthy innovation ecosystems*, then, are defined as those where actors cannot continue to develop and implement new ideas, for whatever reasons. Thus, they cannot smoothly fulfill their function of co-creating and co-capturing economic, social, and environmental value.

Healthy innovation ecosystems are productive, robust in times of disruption and capable of creating niches (Iansiti and Levien, 2004). To do so, they

require strong educational and research institutions to provide skills and capabilities; access to resources such as natural, social, and human capital; investments in research and development; a local business community that is willing to participate (Sharma and Meyer, 2019); frequent interactions between various actors; spaces for ecosystem actors to interact (Clarysse et al., 2014; Walrave et al., 2018); and openness to new entrants (Beltagui et al., 2020). In Table 1, we further describe the characteristics of ecosystem health based on the extant literature.

Healthy innovation ecosystems present a cycle that is 'self-generating, progressively building the innovation capability through reflective practice [whereby] the innovation capability is growing as the result of reinforcing feedback in the system' (Body and Habbal, 2016, p. 30). In contrast, unhealthy ecosystems are likely to lack these reinforcing dynamics (Fathallah et al., 2018). While this idea of an innovation cycle captures a vital dynamic that we emphasize in this article, it is missing one critical component: place.

2.2. Places

Originally a geographical concept and designation (Tuan, 1977, 1990; Cresswell, 2014), interest in places has over time expanded to entrepreneurship and innovation studies (Lang et al., 2014; Kibler et al., 2015; Audretsch and Lehmann, 2017; O'Connor et al., 2018; Muñoz et al., 2020), organization studies (Lawrence and Dover, 2015; Williams et al., 2021), sustainability transitions (Bridge et al., 2013), and regenerative businesses (Hahn and Tampe, 2020; Mazutis et al., 2021; Slawinski et al., 2021). This multidisciplinary background of the concept of place is very much in our mind as we develop our place-based arguments here.

Places contain actors through their embeddedness and situatedness within a geographical location and actively shape these actors by providing exclusive sentimental, cultural, and value-based meanings (Gieryn, 2000; Shrivastava and Kennelly, 2013; Lawrence and Dover, 2015). A critical factor to consider when studying places is their scale (Bridge et al., 2013; Bowen et al., 2018; Williams et al., 2021). What we mean by scale is a 'nested hierarchy of bundled spaces of different size' (Spicer, 2006, p. 1470), such as local, regional, national, and global scales (Cuba and Hummon, 1993; Spicer, 2006; Bowen et al., 2018). Most place-based studies consider regions and cities as places that provide inhabitants with a unique identity (Till, 2012; Vallance et al., 2019). In this article, we refer to places as natural, social, and physical environments within regions.

Table 1. Characteristics of innovation ecosystem health

Characteristics	Authors highlighting this characteristic	Supporting quote from extant literature
Productivity	Iansiti and Levien (2004), Iansiti and Richards (2006), Zhang and Liang (2011), Thomas (2013), de Vasconcelos Gomes et al. (2018)	'A healthy ecosystem is productive in that it can consistently transform technology and other raw material of innovation into lower costs and new markets, as well as continuously adapting and evolving to changes inside and outside of it' (Thomas, 2013, p. 26)
Robustness	Iansiti and Levien (2004), Iansiti and Richards (2006), Zhang and Liang (2011), Thomas (2013), de Vasconcelos Gomes et al. (2018)	'A company that is part of a robust ecosystem enjoys relative predictability, and the relationships among members of the ecosystem are buffered against external shocks' (Iansiti and Levien, 2004, pp. 72–73)
Ability to create niches	Iansiti and Levien (2004), Peltoniemi and Vuori (2004), Peltoniemi et al. (2005), de Vasconcelos Gomes et al. (2018), Vermunt et al. (2020)	'The best measure of this in a business context is the ecosystem's capacity to increase meaningful diversity through the creation of valuable new functions, or niches. One way to assess niche creation is to look at the extent to which emerging technologies are actually being applied in the form of a variety of new businesses and products' (Iansiti and Levien, 2004, pp. 72–73)
Strong bonds with research and educational institutions	Autio and Levie (2017), Sharma and Meyer (2019)	'A healthy innovation ecosystem is able to assist educational institutions. The innovation hub can inform the education practices and encourage the teaching of the pragmatic skills necessary to succeed in innovative ventures' (Sharma and Meyer, 2019, pp. 90, 99)
Frequent interactions between different actors and spaces for these interactions to take place	Rohrbeck et al. (2009), Davis (2016), Autio et al. (2018), Parida et al. (2019)	'These leaders need to be resourceful, being able to create a healthy ecosystem by providing a stable set of common assets, simplifying the connection between various stakeholders, and encouraging innovation and niche creation' (Parida et al., 2019, p. 717)
R&D investments	Zahra and Nambisan (2012), Autio and Levie (2017), Sharma and Meyer (2019)	'In considering knowledge development, a new venture may have to make decisions regarding R&D and investments without the benefit of hard evidence related to commercialization opportunities or market risks. It may be evident that any success in commercializing new technology/knowledge is dependent on extensive collaboration with varied other partners working in the same or similar areas since most innovation efforts in emergent fields call for pulling together diverse, complex knowledge bases' (Zahra and Nambisan, 2012, p. 226)
Keystone organization(s) to take care of ecosystems' health	Zhang and Liang (2011), Clarysse et al. (2014), Valkokari et al. (2017)	'An ecosystem needs diversity and a large number of innovative members to push the evolution of it. But if a keystone cannot manage the external network effectively and efficiently, it cannot maintain the health of the ecosystem' (Zhang and Liang, 2011, p. 166)
Fair distribution of value capture	Dedehayir et al. (2018)	'Value appropriation of other actors is especially pertinent for a healthy ecosystem that can maintain the subscription of actors, which are satisfied with the amount of value they can appropriate from the market they interact with' (Dedehayir et al., 2018, p. 23)

Table 1. (Continued)

Characteristics	Authors highlighting this characteristic	Supporting quote from extant literature
Self-sustaining economic conditions	Zhang and Liang (2011), Pilinkienė and Mačiulis (2014), Liua et al. (2021)	‘The levels of competitiveness, productivity and entrepreneurship are affected by healthy ecosystem analogies, and it shows that the system can be a significant determinant of sustainable economic growth. This is a good example for the public institutions which are focusing on measures to increase economic development. Self-sustaining analogies operate in a natural environment as well as the biological ecosystem’ (Pilinkienė and Mačiulis, 2014, p. 369)
A balance between competition and cooperation	Hannah and Eisenhardt (2018), Stonig and Müller-Stewens (2019), Shipilov and Gawer (2020)	‘Too much competition at an early stage of ecosystem development might be detrimental for the very health of the ecosystem’ (Shipilov and Gawer, 2020, p. 23)
Interdependence and complementarities between ecosystem actors	Adner and Kapoor (2010), Kapoor and Furr (2015), Ozcan and Santos (2015), Adner and Kapoor (2016), Jacobides et al. (2018)	‘Under unique complementarities, we expect participants to care about ecosystem health only inasmuch as its demise would eliminate the demand, whereas supermodularity would also increase the very attractiveness of the product or service offered by ecosystem participants. This should increase collaboration propensity’ (Jacobides et al., 2018, p. 2268)
Shared vision	Almpanopoulou et al. (2017)	‘Furthermore, we claim that innovation system-level policy tools and mechanisms can make such knowledge visible and provide opportunities for the actors who are potentially forming an ecosystem to create a shared vision and agenda. In particular, we focus on the scenario method as an intentional process that can focus the attention of ecosystem actors, enable the necessary social interaction, and facilitate a shared cognition over triggering events that guide actors towards a shared and plausible future’ (Almpanopoulou et al., 2017, p. 62)

We have chosen to focus on regions because regions are viewed as significant resources for individuals' identity construction, and they provide innovators with ideas, motivations, and resources (Anderson et al., 2019). In this article, we consider a region 'as a specific location which is in some way distinctive from other areas' (Hartshorne, 1969, p. 130).

Placial quality can be defined as the evaluations of members of a particular geographical location in terms of its health, social, cultural, economic, and environmental implications (Carmona, 2019; Hes et al., 2020). These evaluations concern not only the quality of the built environment but also the process of development, regeneration, and management that shape places (Carmona, 2019). It is essential to underline that the quality of a place depends not only on the well-being of physical environments, that is, human-made or natural environments (Hes et al., 2020), but also on the bond and healthy interactions between individuals/communities and these physical environments (Gieryn, 2000). This bond is best described with the concept of *place attachment* – a 'positive affective bond between an [actor] and a specific place, the main characteristic of which is the tendency of the [actor] to maintain closeness to such a place' (Hidalgo and Hernández, 2001, p. 274). A strong place attachment provides actors with a sense of comfort, safety, and belonging (Gieryn, 2000) and 'support[s] the emergence of new organisations tasked with facilitating environmental management and land-use decisions'. It gives rise to sustainable innovations due to inhabitants' connectedness to the natural environment (Basu et al., 2019) and ecological values (Norton and Hannon, 1997; van Hille et al., 2019).

Placial quality can be evaluated based on community well-being (Anderson et al., 2019), economic prosperity (McKeever et al., 2015), the well-being of the natural environment (Hes et al., 2020, pp. 290, 294), and the presence of valuable resources (Di Gregorio, 2017, p. 124). As Table 2 demonstrates, the dependence between actors and places leads to restorative topophilia – the love of place (Tuan, 1990) – which 'represents an opportunity for positive dependence that underpins the emergence of virtuous cycles' (Tidball and Stedman, 2013, p. 297). Here, drawing on ideas from systems thinking (Stroh, 2015; Williams et al., 2017), we consider a *virtuous cycle* to be 'a deviation amplifying loop that makes a good situation better' (Tsoukas et al., 2017, pp. 394–395). We consider places that demonstrate a virtuous cycle as *thriving places* where continuous efforts of placemaking materialize (Hahn and Tampe, 2020), which means a cycle of positive relationships between 'the individual

(self), the community, the natural environment and the human-made environment' (Hes et al., 2020, p. 277). Thriving places score high when various areas such as housing, safety, education, health and mental health, local economy, culture, income equality, and sustainability are assessed (Centre for Thriving Places, 2022).

However, a negative dependence between actors and places would lead to vicious cycles from which it is hard to break away. Here, drawing on ideas from systems thinking (Stroh, 2015; Williams et al., 2017), we consider a *vicious cycle* as 'a deviation amplifying loop that turns a bad situation worse' (Tsoukas et al., 2017, pp. 394–395). We consider places that demonstrate a vicious cycle as *declining places* where the natural, built, and social environment is deprived (Norton and Hannon, 1997), and people's relationship with their places is also broken (Gieryn, 2000). A place may experience such a decline due to geographic characteristics (isolated, disconnected areas) and the impact of external events such as wars (Fathallah et al., 2018) or natural disasters (McKinzie, 2019). One example of declining places is provided by peripheral postindustrial locations with depleted communities that cannot overcome their historical path dependencies that restrict innovative activities (Anderson et al., 2019).

Overall, we argue that places embed and situate innovation ecosystems and their actors, providing resources, identities, meanings, and motivations. Within these dynamics, we further aim to explore the role of cross-sector partnerships (CSPs).

2.3. Cross-sector partnerships (CSPs) as herding spaces

Like places, spaces can also be seen as essential elements of organizing (Sorenson and Baum, 2003). Generally, spaces can be areas, networks, clusters, or platforms where various actors interact (Sorenson and Baum, 2003). Spaces allow actors to develop innovation ecosystems and shape placemaking agendas because 'meanings entangled in the context influence innovation endeavours and steer the outputs of [collaborative innovation]' (Leminen et al., 2021, p. 3). In a simplified view, places can be considered external to a focal business system while spaces can be considered internal (Sorenson and Baum, 2003).

This study focuses on CSPs, which are 'collaborative efforts across two or more sectors that search for more effective organisational approaches to solve complex social problems' (Vurro et al., 2011, p. 39). The rationale behind CSPs is the assumption

Table 2. Characteristics of placial quality

Characteristics	Authors highlighting this characteristic	Supporting quotes from extant literature
Bond between places and their inhabitants	Healey (1999), Brown et al. (2002), Gaffaney (2017)	'These studies are making visible the different ways in which the qualities of places impact people's sense of well-being and the quality of their lived experience' (Healey, 1999, p. 112)
Presence of valuable resources	Lawrence and Dover (2015), Di Gregorio (2017), Frantzeskaki et al. (2018)	'However, challenges remain due to the public goods quality of place-based resources. Not only may it be difficult to translate terroir <i>via</i> extension into global markets [...], but a "place" is a common pool resource unlike a brand, over which firms have greater control and stronger property rights' (Di Gregorio, 2017, p. 124)
Well-being of communities and the natural environment	Slawinski et al. (2019), Hes and Hernandez-Santin (2020)	'We identified six elements to evaluate a place: Identity, a place that is distinctive and shares a narrative; Equity, defined to incorporate accessibility, a diversity of experiences and dynamism that keep the site interesting and connected to the community regardless of their situation; Connection to Country, which the group defined as an emotional connection to nature, culture and history; Care (attachment), where evidence of a sense of belonging and stewardship are visible; Economic Viability, where there is monetary and governance flows towards a place keeping strategy; and Alignment with Nature, ensuring that the site is adaptable and resilient to environmental changes' (Hes and Hernandez-Santin, 2020, pp. 290, 294)
Economic deprivation/prosperity	Frantzeskaki et al. (2018), Anderson et al. (2019)	'It relies on creating or strengthening new community relations with place: because of these relations, new place meanings, characteristics, and capacities, and attachment are regenerated. Thus, topophilia is constructed and essentially is important to be restored in "red zones" [...], such as urban areas that have suffered long-term erosion and decline through economic stagnation and the disintegration of meaningful social networks [...]. New or changed meanings, despite their power, can also create polarization and thus can facilitate or impede transitions to sustainability' (Frantzeskaki et al., 2018, p. 1047)

that a single organization would fall short of addressing systemic and wicked challenges; therefore, CSPs are viewed as spaces where actors can create systemic change through collective action (Senge et al., 2007). Multistakeholder partnerships, which bring together the critical social actors embedded in a place, can build a bridge between the innovation ecosystem and a geographical place and intervene to change vicious dynamics and reinforce virtuous dynamics.

There are various types of CSPs. Most research categorizes CSPs based on relationships between different sectors: business-NGO partnerships (Dzhengiz et al., 2021), public-private partnerships (Stadtler, 2016) or public-NGO partnerships (Selsky and Parker, 2005). For example, multinational businesses often partner with NGOs to address social issues in their supply chains (Dahan et al., 2010) or with the public sector through contracting projects (Selsky and Parker, 2005). NGOs and governments also collaborate through new models of delivering social value, for example by outsourcing some public sector functions to NGOs (Selsky and Parker, 2005). A broader partnership includes all three sectors: these are known as multistakeholder partnerships (Pinkse and Kolk, 2011; Gray and Purdy, 2018). Here, we focus mainly on multistakeholder partnerships because they span the boundaries of three critical sectors that make up a place's social dimension.

Multistakeholder partnerships represent a potential space for discussing place-related issues and collectively developing a placemaking agenda. Ometto et al. (2019) refer to such spaces as *herding spaces*, which is the concept on which we build in this article. Herding spaces are arenas where actors from different organizations get together to address a common purpose and connect with the institutional context (Ometto et al., 2019). Herding spaces allow for negotiating issues between different societal stakeholders (Ometto et al., 2019), which can also lead to the development of sustainable innovation ecosystems (Rajala et al., 2018; Parida et al., 2019) and contribute to place regeneration (McDonald et al., 2010; van Hille et al., 2019). We decided to choose the term herding spaces for several reasons. First, herding captures the bringing together of actors from different organizational backgrounds, as in the case of multistakeholder partnerships. Second, since a herd moves through local interactions, it also implies the embeddedness of a herd in a place, whereby the place enables interactions. Third, since a herd moves together, herding also implies the emergence of shared or aligned place-based frames, even if conflicting

place-based frames may occur because of differences in partners' place attachment (connected or disconnected) (Mazutis et al., 2020).

CSPs can serve as herding spaces because they bring together different societal stakeholders, enabling knowledge creation and innovation (Peschl and Fundneider, 2012; Davis, 2016) and helping ecosystem actors to use these relationships to create shared value and positive societal change (Kramer and Pfitzer, 2016). Rajala et al. (2018, p. 29) point out that partnerships can help structure a circular innovation ecosystem, especially by organizing the flow of waste that can be coordinated between actors from different sectors. CSPs are also promoted as mechanisms that can help support the governance of natural ecosystems (Manring, 2007; Heuer, 2011), be it climate change adaptation (Xu and Grumbine, 2014) or fisheries management (Berghöfer et al., 2008). According to Vallance et al. (2019, p. 3), CSPs that integrate community stakeholders and members of the innovation ecosystem, such as businesses, SMEs, and local governments, can build 'the institutional capacity for policy and planning processes that can enhance the economic, social and environmental qualities of a place'.

Based on the extant literature, CSPs can be posited as herding spaces that may enhance dynamics between places and innovation ecosystems. However, further empirical exploration is needed to determine how CSPs play this role and which mechanisms enable CSPs to enhance the place-based dynamics of innovation ecosystems.

3. Methods

3.1. Case study design and selection of cases

In this paper, we aim to answer two research questions: (1) what are the dynamics between places and innovation ecosystems, and (2) how can CSPs influence these dynamics? Place-based studies require attention to contextual specificities, and both the dynamics between places and innovation ecosystems and CSPs' roles remain underexplored. For this reason we have chosen to use a case study design, which allows us to take an exploratory approach to CSPs and ecosystems in their embedded context (Piekkari et al., 2009; Gibbert and Ruigrok, 2010).

The three principal criteria for case selection are fit, distinctiveness, and revelatory nature (Yin, 2003; Eisenhardt and Graebner, 2007; Stuermer et al., 2009).

We selected two cases based on their theoretical relevance and fit for exploring the positive and negative dynamics between places and innovation ecosystems: Humber and Southwest Finland. We were familiar with these regions' history and recent development, innovation ecosystems, and partnerships through our involvement in previous research interviews in these areas.

The case of Southwest Finland was chosen because this thriving region generally featured a healthy innovation ecosystem. Recently it has been at the forefront of developing circular innovations in Finland. We were studying circular innovation ecosystem development in this region in the context of the Telaketju partnership, which brought together textile firms, forest industry firms, public sector organizations, NGOs, and research organizations to collectively innovate for circularity in the textile sector. Since Telaketju includes members from universities, businesses, local authorities, regional authorities, and other stakeholders, it can be considered a multistakeholder cross-sector partnership (CSP). The partnership started out as a research and co-creation project but developed into a more enduring partnership spanning multiple consecutive projects (Heikkilä et al., 2019).

The Humber case was chosen because this region presented characteristics of negative path dependence and vicious cycles in terms of ecosystem health and placial quality. We knew of a partnership that aimed to tackle these dynamics: Humber LEP. Humber LEP served as a regional orchestrator of Humber's economic strategy, aiming to bring forward opportunities in the Humber region by collaborating with various local, regional, and national actors. LEP collaborated 'with local businesses small, medium and large, local authorities, education and training providers and central government through our staff and our board, sub-boards, working groups and consultation workshops' (Humber LEP, 2022). LEP bids for funding and lobbies for the region to provide legislative changes and supports the region to enhance development and growth, especially in energy and renewables (Humber LEP, 2022). Since Humber LEP involved various business partners, local authorities, regional authorities, and other stakeholders, it can be considered a multistakeholder cross-sector partnership (CSP).

These cases fit with our research goals for two critical reasons. Firstly, both cases presented actions where CSPs can be considered to have a positive impact on the dynamics between places and innovation ecosystems, allowing us to study the mechanisms through which successful interventions can

happen. Secondly, the CSPs in both cases were multistakeholder partnerships, the type of CSP on which we had chosen to focus.

3.2. Data collection and analysis

We decided to make use of secondary data based on its availability and its advantages, such as being 'more detailed, less obtrusive, and less contingent' (Welch et al., 2010, p. 199). Secondary data sources represent an 'unexploited and rich source of data that should be used when primary data is not available' (Ritala et al., 2014, p. 240). As summarized in Table 3, we collected data from various sources to triangulate the information, helping us to generate 'a richer understanding of the dynamics that unfold and leads to the identification of key themes based on rigorous analysis' (Ansari et al., 2016, p. 1832). We identified the secondary data sources as follows. For both cases, we examined the websites of specific partnerships (Humber LEP and Telaketju). We searched academic articles and reports on Google Scholar regarding the partnerships and the Humber and Southwest Finland regions and their history and identified place-related literature looking into these regions. Furthermore, a Google search was conducted to identify additional coverage of these cases in the news and other websites. All data sources were in the English language. For Humber LEP and Telaketju, we considered all publicly available secondary data until 2021, which marked the end of our research project.

We analyzed two separate databases for Southwest Finland and Humber using NVivo 12 Plus, which helped us to identify key themes and subthemes in our data, following a similar approach to others (Ansari et al., 2016). Our coding of the themes and subthemes was guided by the literature review presented earlier. The coding focused on three main areas. The first focus was on the health characteristics of the innovation ecosystem, which were coded based on the theoretical structure presented in Table 1. The second focus was on the characteristics of placial quality, which was coded based on the theoretical

Table 3. Sources of data

Type of secondary data	Humber case	Southwest Finland case
Academic articles, theses, book chapters	29	20
Reports	19	5
Press releases and news	7	15
Other (e.g., websites)	2	6
Total	57	46

structure presented in Table 2. Finally, the third focus was the impact of the CSPs (Telaketju and Humber LEP partnerships) on Southwest Finland and Humber, the regions' placial qualities, and the health of the innovation ecosystems. We aimed to generate a process model of how these three major elements were interconnected. Consequently, we followed an inductive approach and identified four specific mechanisms that CSPs use to improve the dynamics between places and innovation ecosystems. Table 4 provides some examples from our coding efforts.

4. Case analysis

4.1. Humber and Humber Local Enterprise Partnership

Humber is located on the east coast of Northern England and is characterized as a geographically isolated region (Kythreotis and Jonas, 2012). In the 1970s and 1980s, the region underwent further industrial decline and saw its population 'slowly hemorrhaging' (Green and White, 2007). By the 2000s, the Humber region was one of the most deprived areas

Table 4. Illustrative examples from our coding

Quotations	Subthemes	Themes
'... in the last decade, it has suffered from a somewhat tarnished reputation nationally when it was voted to the top of the list of so-called "crap towns" in the UK [...]. Yet, the social inequities experienced in some of the poorer areas of Hull are far from being mythological. If there was ever a "place on the margin", both geographically and socioeconomically, Hull fits the bill' (Kythreotis and Jonas, 2012, p. 389)	Declining well-being of communities Economic deprivation	Declining place
'Against key economic and innovation indicators the region lags behind both the EU27 and UK averages in key areas such as GDP <i>per capita</i> and expenditure on business R&D. This position has remained the same over recent decades and points towards structural problems with the regional economy linked to the decline of heavy industry. A particular area of concern is that the region's SMEs report low levels of investment in R&D' (Technopolis, 2014, p. 2)	Low R&D investments Inability to create self-sustaining economic conditions	Unhealthy innovation ecosystem
'The participants regarded Southwest Finland as the cradle of the nation and represented the "Western" province as a source of learnt pride. The imagined historical coherence and cultural distinctiveness of the region as one of the nine historical provinces (Paasi, 2013), and at times playful glorification of the past, are examples of shared regional discourses' (Vainikka, 2015, p. 527)	A healthy bond between places and their inhabitants Well-being of communities	Thriving place
'Turku region has been one of the notable growth areas [...]. Turku had been an important trading center for centuries. It had strong cultural and educational roots, dating back to its position as a former capital of Finland. Despite also being a strong industrial center, the service and cultural functions of the city are visible in the statistics. ... certain industry sectors, especially shipbuilding, machinery and the food industry, have been historically strong. These industries, however, have been quite slow or even stagnant in their growth compared with some other industries, most notably information and communication technologies (ICT), broadly defined' (Srinivas and Viljamaa, 2003, p. 11)	Self-sustaining economic conditions Productivity Robustness	Healthy innovation ecosystems
'...communicating clearly the benefits of circularity and sustainable textile production can have a major positive impact on the local industry and on the communities around production premises' (Pohls, 2020, p. 71)	Engaging in place regeneration	CSP's role in nurturing virtuous dynamics between places and innovation ecosystems
'Lord Haskins, chair of the Humber LEP, said: "We are already known as the Energy Estuary, and we are a leader in large-scale renewable energy, but our Energy Strategy shows that even down to a very localized – or even individual level – change is possible. This strategy will be an important part of the Humber's transition towards a net-zero carbon economy and will support the creation of new opportunities from clean growth in the region"' (Business Live, 2021)	Enabling the development of purpose ecosystems	CSP's role in vitalizing vicious dynamics between places and innovation ecosystems

of the UK in terms of income, employment, education, and skills. Hull and other cities in the Humber region were known for their 'dubious distinction of being named the worst place to live in Britain' (Woolliscroft, 2017, p. 116). Overall, the region showed characteristics of a place that lacked community well-being, suffered from economic deprivation and the deteriorating bond between places and their inhabitants.

Humber was characterized by 'low levels of investment in R&D' (Technopolis, 2014, p. 2), 'low levels of product innovation, and low to medium level skill qualifications' (Humber LEP, 2013a, p. 3). Companies lacked incentives to 'collaborate for product and process innovation' (Velenturf, 2016, p. 150). While the region had several industries that provided local employment, such as chemicals and energy, reports found that the region was 'locked in', missing clusters and interactions between regional industrial actors (Humber LEP, 2013a). In summary, Humber was characterized by a 'great deal of low-level innovation activity' (Humber LEP, 2018, p. 18). Table 5 provides illustrative examples of Humber's placial quality and innovation ecosystem health characteristics.

Humber represented a *declining place* and an *unhealthy innovation ecosystem*, with no prospects of regeneration until there was a conscious intervention through a CSP. It presented a *vicious cycle*. In 2011, the Humber region joined the Local Enterprise Partnership (LEP) programmed in the UK. Humber LEP was formed as a 'partnership that works closely with the government to promote and develop the natural economic area surrounding the Humber estuary and provide strategic leadership for economic growth' (European Commission, 2021).

In Table 6, we provide illustrative quotes about the impacts of Humber LEP on Humber's placial quality and the health of innovation ecosystems. Our findings show that Humber LEP positively impacted the dynamics between places and innovation ecosystems through specific mechanisms: recognizing the place-based dynamics and challenges, improving or utilizing place attachment, enabling the development of purpose ecosystems, and engaging directly in place regeneration activities.

As a first step, Humber LEP wanted to explore Humber's capabilities, strengths, weaknesses, threats, and opportunities (Humber LEP, 2013a). Humber LEP and the University of Hull joined forces to produce a report that identified the factors creating the vicious cycles. The report found that the region lacked collaboration between different partners, including academia, innovation ecosystem actors, and different constituents of the region (i.e., different

municipalities), and also lacked industrial clustering (Humber LEP, 2013a). Furthermore, the report acknowledged the negative bias towards Humber as a place and noted that Humber LEP should ensure that 'the Humber message is complete, cogent and succinct' (Humber LEP, 2013a, p. 4). Thus, Humber LEP allowed space to *recognize the place-based challenges*.

Several initiatives and investments also supported by the LEP helped *improve the place attachment* of regional actors. Humber LEP supported Hull's becoming the cultural city of 2017. Lord Haskins, Chair of the Humber LEP, said that Hull becoming the cultural city, together with 'the wider regional economic regeneration as part of the Humber's Energy Estuary, has the potential to act as a catalyst to change perceptions and, in turn, the region's fortunes' (Humber LEP, 2013b). For instance, the Hull Blitz Trail project regenerated the landscape. It helped 'trigger memories for insiders, who have a shared common past, and at the same time, [...] represent shared pasts to outsiders who might be interested in knowing about them in the present' (Tomlinson, 2020, p. 2).

Humber LEP wanted 'to identify a more accurate reflection of innovative activity in the region so that it can better tell the region's economic story' (Humber LEP, 2018, p. 2). While there were other sectors, one sector has become very important in the region's economic story: renewable energy. 'Characterised as a peripheral region of the UK, Humber appeared to have few of the historical industrial assets that encouraged regional institutions in North East England and Scotland to forge new growth paths in offshore wind' (Dawley et al., 2019). In the 2010s, the region attracted investments from international offshore wind players such as Siemens and Orsted. For instance, in 2011, Siemens chose Green Port Hull as their preferred location for a manufacturing facility (Humber LEP, 2011, p. 10). Humber LEP created the right conditions for the offshore wind industry to locate and invest in the region, developed infrastructure and logistics capabilities to enable offshore wind development, developed initiatives for a skilled and trained workforce, ensured the creation of local employment and supported the creation of local supply chains (Humber LEP, 2011, p. 13). For instance, in Project Aura, they brought various actors together to drive innovation in the offshore wind sector of Humber Energy Estuary. They supported businesses, start-ups, and suppliers by developing the region's talent pipeline, conducting research and development for offshore wind to reduce CO2 emissions of the region further, and

Table 5. Humber's placial quality and the health of its innovation ecosystem: unhealthy innovation ecosystem in a declining place

Characteristics	Supporting quotes from the Humber case
Lack of well-being of communities and/or natural environment	<p>'Historically, fisheries were the economic driver of the area. In 1976, rising fuel prices and the exclusion from fishing in Icelandic waters (i.e., the Cod Wars) led to the industries' collapse, causing mass unemployment and lack of compensation for work completed amongst the working class (Atkinson et al., 2002). This historic event is thought to contribute to a persistent distrust of institutions and sense of inequality still present today [...]. While this observation of collective identity may be subjective, the Index of Multiple Deprivation (IMD 2015) confirms that relative to other UK cities, Hull is 4th most deprived under the "Income" domain, 6th under "Employment", and most deprived in the UK under "Education, Skills and Training"...' (Rogers et al., 2021, p. 4)</p> <p>'In terms of community well-being and tenants' satisfaction with opportunities for participation, a survey carried out by each area's respective local authority (as part of the 2001 census survey) found that 64% of people were very satisfied in the East Riding region compared with 46% in Hull... Other interviewees from Hull also felt that the LSP did not pay enough attention to the environmental side of sustainable development. One, in particular, felt that the reason for low prioritisation of environmental issues was attributed to a historically embedded agenda of socio-economic priorities in the city' (Kythreotis, 2010, pp. 190–191)</p>
Deteriorating bond between places and their inhabitants	<p>'In 2003, Hull achieved the dubious distinction of being named the worst place to live in Britain' (Woolliscroft, 2017, p. 116)</p> <p>'... in the last decade, it has suffered from a somewhat tarnished reputation nationally when it was voted to the top of the list of so-called "crap towns" in the UK (BBC, 2003). In some respects, Hull fits into the kinds of stereotypes of the British "North" that are explored in Rob Shields's seminal book, <i>Places on the Margin</i> (1991). Shields points to a kind of "social mythology around the British North that is dialogically interwoven with other spatial mythologies and their attendant practices" (p. 207). Yet, the social inequities experienced in some of the poorer areas of Hull are far from being mythological. If there was ever a "place on the margin", both geographically and socioeconomically, Hull fits the bill' (Kythreotis and Jonas, 2012, p. 389)</p> <p>'It always surprises me that people put up signs to say "We are an NDC area" – i.e., we are deprived. It is important for a neighbourhood and a local economy to have exchanges with the outside world. Reinforcing localism may not be a good thing.' (Green and White, 2007, p. 49)</p>
Inability to create self-sustaining economic conditions	<p>'Hull has been "slowly haemorrhaging" population since the mid-20th century [...]. The Hull economy may be characterised as "sluggish", despite having the advantages of a port and a broadly based economy (Hull City Council, 2004). [...] The fishing industry (most important in West Hull) collapsed around 30 years ago' (Green and White, 2007, p. 23)</p> <p>'It is apparent that there is a great deal of low-level innovation activity that is not visible when seeking answers from publicly available data sources' (Humber LEP, 2018, p. 18)</p>
Lack of R&D investments	<p>'Against key economic and innovation indicators the region lags behind both the EU27 and UK averages in key areas such as GDP <i>per capita</i> and expenditure on business R&D. This position has remained the same over recent decades and points towards structural problems with the regional economy linked to the decline of heavy industry. A particular area of concern is that the region's SMEs report low levels of investment in R&D' (Technopolis, 2014, p. 2)</p> <p>'The Review recognised that the starting point for the area is one of relatively low R&D intensity, compared to larger and more advanced regions, but has benefited from recent investment in supply-side infrastructure and from strengths in the four universities' (Fisher et al., 2013, p. 23)</p>
Lack of productivity and robustness	<p>'The dock industries and food production/ processing industries contribute to a tradition of "casualisation" in the local labour market, where public sector services are also an important employer. The picture emerging is one of a low-wage, low-cost, low-skill economy' (Green and White, 2007, p. 23)</p> <p>'Productivity is below the national average and falling. Improving SME competitiveness will be central to a turnaround, and evidence makes it clear that skills and innovation are key drivers of productivity and central to long-term improvement' (Enterprise Partnership, 2016)</p>

Table 5. (Continued)

Characteristics	Supporting quotes from the Humber case
Lack of frequent interactions between different actors and spaces for these interactions to take place	<p>‘While economic development and structural change are urgently needed, the region faces several innovation challenges. The Humber region has performed below the UK average for innovation and was characterized as an innovation follower ... In particular, it scored low in the uptake of environmental technologies ... This is problematic given the central position the region aims to play in renewable energy supply ... Nevertheless, companies did collaborate for product and process innovation, for which knowledge was predominantly sourced within business groups or from suppliers and clients..., innovation may be negatively affected as evidence suggests that companies with both local and global connections have higher innovation performance’ (Velenturf, 2016, p. 150)</p> <p>‘Major weaknesses in the Humber region include higher-level (college or university) skills and professional services ... compounded by the media image of quality of life (not attracting people to the region) and low levels of attainment in education and attitude to work. Also noted were infrastructure and geographical isolation within the UK, a mature enterprise base, and lack of leadership and governance, particularly when the four local authorities need to work together. A number of specific points were also raised regarding the lack of collaboration and dynamism of the ports and the resulting lack of competitiveness’ (Humber LEP, 2013a, p. 14)</p>

positioning Humber as a globally influential center in offshore wind (Humber LEP, 2018). Therefore, LEP *enabled the development of purpose ecosystems*, in this case, specifically for offshore wind energy.

Humber LEP also *engaged directly in place regeneration*. For instance, Humber LEP invested in flood defenses, as the region was a high-risk area for floods (Jones et al., 2016). Other direct regeneration activities included investments in the transport links within the region (The Northern Way, 2010), housing programmed, and other infrastructure projects (e.g., electric vehicle transition) (Humber LEP, 2019b).

Overall, Humber LEP presented an example of a CSP that helped break away from the vicious dynamics, vitalized the innovation ecosystem, and contributed positively to the placemaking agenda. The 2013 report established the awareness that Humber was declining as a place. By 2019, Humber LEP had made significant progress through various interventions and argued that ‘Humber [was already] a more attractive place to live and invest’ (Humber LEP, 2019b, p. 11). Humber LEP’s success was in its ability to ‘drive a clear vision to transform their local area’ and ‘emphasis[e] how useful, and productive one collective voice [could be]’ (Jensen and Gibbs, 2018, p. 17).

4.2. Southwest Finland and the Telaketju partnership

Southwest Finland, the third biggest region in Finland, presented a positive path dependence as a place, being the historic core of Finland: the city

of Turku was previously the capital of the country. Southwest Finland is often called ‘Finland’s breadbasket, having a central position in Finnish food production from agriculture to the food processing industry’ (City of Turku, 2020). Additionally, the region has played an essential role in innovations within the electronics industry and biotechnology (Höyssä et al., 2004).

The region had a robust academic capacity and projected a collaborative spirit of regional actors who frequently cooperated (Höyssä et al., 2004). Furthermore, the regional authorities kept locals engaged in maintaining their place attachment (Hakala, 2021) and prioritized R&D activities (Höyssä et al., 2004). Even though the region endured a period of economic downturn in the early 1990s following the collapse of Finnish trade with Russia, the region remained resilient (Höyssä et al., 2004, p. 772). In Table 7, we provide illustrative examples of the characteristics of Southwest Finland’s placial quality and innovation ecosystem health.

Based on our findings, Southwest Finland presented a *thriving place* and a *healthy innovation ecosystem*, which helped to regenerate Southwest Finland. It thus presented a *virtuous cycle*. The region focused on developing niche innovations such as biosciences and circular economy that contribute to social and environmental value creation, which is a sign of healthy ecosystems. Southwest Finland repositioned itself as a regional hub for circular innovations whereby CSPs were utilized to operationalize the transition (Fontell and Heikkilä, 2017). The Telaketju partnership was motivated by the fact that Finland generates some

Table 6. Humber LEP's impact on placial quality and innovation ecosystem health in Humber

Mechanism	Impact area	Quotation
Recognizing place-based challenges	Placial quality and innovation ecosystem health through awareness	<p>'In 2011, the Humber Local Enterprise Partnership (LEP) was established and engaged the University of Hull's Business School to conduct an academic review of the region's potential. This culminated in November 2013 with the publication of a report entitled "The capability of the Humber region". The report described many of the same problems identified by Spooner nearly a decade earlier [...]</p> <p>The report galvanised the city into a renewed push for economic recovery. Innovation rose up the agenda, and once again, Hull's loyal business and educational communities invested in the city's economic growth' (Woolliscroft, 2017, p. 117)</p>
Improving or utilizing place attachment	Placial quality through enhancing the bond between places and their inhabitants	'The Humber is now a more attractive place to live and invest. Recent flagship business investments and Hull UK City of Culture have changed perceptions of our places, while city and town centre regeneration and new housing developments are supporting an improving Humber proposition' (Humber LEP, 2019a, p. 11)
	Placial quality through enhancing the bond between places and their inhabitants Innovation ecosystem's health through attracting investments	'The Humber LEP endorsed Hull's bid recognising the big effect on the city and wider Humber region that winning the title would bring, including putting the area on the map as a place people wish to invest, visit and do business. Visitor numbers and the associated spend alone will see economic benefits for Hull and the wider region – estimated at £184m. The title and culture activity backed up with £190m in infrastructure as part of Hull's city plan, teamed with the wider regional economic regeneration as part of the Humber's Energy Estuary, has the potential to act as a catalyst to change perceptions and in turn the region's fortunes' (Humber LEP, 2013b)
Enabling the development of a purpose ecosystem	Innovation ecosystem's health through attracting investments and building spaces for frequent interactions between different actors of the ecosystem	'... These political actors acted as crucial inter-scale mediators by building spaces of engagement with national authorities to obtain "supra-local regulatory and financial backing" for Hull's campaign to attract Siemens' (Dawley et al., 2019, p. 862)
	Placial quality and innovation ecosystem health through frequent interactions between different actors	'The introduction of the Humber LEP into the governance network did improve connections between the actors around the Humber estuary which promoted more joined-up thinking for economic development. This increasing connectivity within the governance network could contribute to channel knowledge and skills from places in the network where it is present to places where it was perceived to be missing' (Velenturf, 2016, p. 166)
	Innovation ecosystem's health through reinforcing the interdependence and complementarities between ecosystem actors, providing a shared vision and taking the role of a keystone organization to take care of ecosystems' health	'The LEP will continue to speak to government on behalf of the region with a united voice. This discussion should seek to influence Government strategy and policy on the key issues facing EII, seek increased recognition of the strengths and opportunities for the EEI cluster, pursue increased funding and policy support for renewable and energy-intensive industry development in the Humber, and seek high level and visible support and commitment for organisations considering inward investment' (Carbon Trust, 2018, p. 20)

Table 6. (Continued)

Mechanism	Impact area	Quotation
Engaging in place regeneration	Placial quality through direct investments in regenerative and environmentally friendly projects	‘The Humber is recognised as being rich in natural capital. Most of the Estuary is designated as a Ramsar site and as a Special Area of Conservation for its extensive intertidal habitats such as mudflats, sands, coastal lagoons and sand dunes, and its populations of grey seals and lampreys. It is also a Special Protection Area for its breeding, migratory and overwintering bird populations, the third-largest Site of Special Scientific Interest in England, and home to three National Nature Reserves. The Humber’s natural capital makes an important economic contribution through attracting tourists to areas such as Flamborough Head and Spurn Point; helping to retain the Humber’s deep water channels essential to shipping; saltmarsh acting as a natural buffer to tidal flooding; while the rivers and aquifers provide water for farming and other industries. The Humber’s natural capital will play a vital role in helping the area achieve net-zero carbon emissions and increase resilience to the impacts of climate change. The Estuary’s ecosystems, distinctive saltmarsh, reedbeds, mudflats and coastal marine sediments capture CO2 and provide effective flood management. A systemic, large-scale intervention in the land use management across the Humber could yield significant natural carbon sequestration while enhancing flood resilience and establishing a self-sustaining environment.’ (Humber LEP, 2019a, p. 10)

100,000 tons of textile waste annually. About 80% of this waste is incinerated and only 15% is reused (Mandalia, 2020). Against this background and the enabling policy conditions, Telaketju was formed in 2017 (Heikkilä et al., 2019).

Telaketju brought various organizations together with entrepreneurs who built circular business models but lacked access to the broader institutional context, including new textile firms like Infinited Fibre and Spinnova and the traditional Finnish forest industry, which sought novel ways to increase value-added to forest-based feedstock. The region’s bioeconomy background facilitated the birth of circular innovations (Heikkilä et al., 2019). Partners also included municipal waste management companies mandated to collect textile waste in their constituent regions, consultancies that fostered circular business, and research institutes that developed new materials through innovative recycling technologies (Ioncell) (Fontell and Heikkilä, 2017). Thanks to this space and the collaborative innovations developed, ‘Finland can be reborn as a textile country via renewable wood-based fibres and circular solutions’ (Heikkilä et al., 2019).

Our findings for the Telaketju partnership revealed the same four mechanisms that we saw at Humber LEP, reinforcing the positive dynamics between

the place and the innovation ecosystem. In Table 8, we provide illustrative quotes about the impacts of Telaketju on Southwest Finland’sacial quality and health of innovation ecosystems.

Telaketju partners had to address the challenges of reconciling between local, national, and global demands and needs. Specifically, the partnership developed a regional solution to a global problem. However, the partners were aware that ‘it is necessary to clarify the global aspects of textile recycling because the main part of textile products’ production is nowadays abroad’ (Heikkilä et al., 2019, p. 76). At the same time, the waste collection network in this partnership was mainly regional, and partners were aware that inter-regional, national, and international parties had to be involved in order to accelerate the circular transition (City of Turku, 2020). The reports we analyzed showed that the first step for the partners was to *recognize the place-based challenges* (Fontell and Heikkilä, 2017).

Telaketju was inspired by the availability of forest-based materials in the natural ecology. The CSP developed cellulosic fibers – one of the most promising technologies to replace materials such as cotton and synthetic fibers that are associated with negative environmental impacts due to extensive water use, high CO2 emissions, or the creation of micro-plastics (Heikkilä et al., 2019). The CSP

Table 7. Southwest Finland's placial quality and health of its innovation ecosystem: healthy innovation ecosystem in a thriving place

Characteristics	Supporting quotes from Southwest Finland
Well-being of communities and/or the natural environment	<p>'Southwest Finland is situated by the coast of the Archipelago Sea. Here maritime atmosphere meets urban city culture, a rich history is combined with high technology and global top know-how. The expertise in Southwest Finland creates products ranging from medicine to the world's biggest and most environmental cruise ships. The marine industry is a major employer in the region and represents global top competence. The research and development in biosciences is world-class. Southwest Finland is also our country's food granary. Creativity and culture have shaped life in this region throughout ages. Southwest Finland is a diverse educational region, and Turku has been selected the best student city in the nation. Southwest Finland's central location as a gateway to the West makes it an important international actor in the Baltic Sea area. By its population, Southwest Finland is the third biggest region in Finland. [...] Turku is the fifth biggest city in Finland. For centuries Southwest Finland was the centre of Finland, and Turku, the oldest city in Finland, was our nation's capital. [...] Southwest Finland is known for its unique archipelago comprising over 20,000 islands. The nature of Southwest Finland consists of oak groves, beaches and islands by the sea, river valleys and meadows. The nationally valuable cultural environments of Southwest Finland consist of medieval churches, castles and manors' (Southwest Finland, 2020, p. 1)</p> <p>'... Symbols of this kind are at the same time the beautiful and violent nature of the archipelago, the shores of the islands which form the boundaries, the freedom to work and define one's own way of life inside these limits, and the skills and knowledge learned on the islands, which take priority over the administrative and literal knowledge defined outside of them' (Siivonen, 2009, p. 54)</p>
Strong bonds with research and educational institutions	<p>'the region already had a strong research base in the two local universities and, on the other, that the major players in the Finnish pharmaceutical, diagnostic, and food industry were situated in Turku' (Höyssä et al., 2004, p. 772)</p> <p>'Also, new collaboration over regional barriers has been started between universities and organizations from Turku (Turku School of Economics and Business Administration, ICT Turku Ltd.) and Helsinki region (Helsinki University of Technology)' (Malinen and Simula, 2005, p. 429)</p>
Strong bond between places and their inhabitants	<p>'In the everyday culture of the archipelago, nature is the element that ties people most strongly to their own archipelago area. All of my informants in the archipelago area consider nature and environment as important matters in their relationship with their home area... All in all, identification with the archipelago consists of participating in practices related to nature and the community' (Siivonen, 2009, p. 54)</p> <p>'The participants regarded Southwest Finland as the cradle of the nation and represented the "Western" province as a source of learnt pride. The imagined historical coherence and cultural distinctiveness of the region as one of the nine historical provinces (Paasi, 2013), and at times playful glorification of the past, are examples of shared regional discourses' (Vainikka, 2015, p. 527)</p>
Robustness and ability to create niches	<p>'Turku is the oldest city in Finland and has, as a former capital, played a significant political, economic and cultural role in the history of Finland [...] From a cluster-perspective, the Turku region has five strong "groupings": the metal group, the real estate group, the logistics group, the graphic industry and the biotechnology and food group, which is structured around research-intensive pharmaceutical and diagnostics industry, as well as more conventional food processing [...] What is striking, is that the Turku region has a weak position in two of Finland's most important national clusters, the forest cluster and the telecommunications cluster. This is an important background for understanding the strength of the region in the life science sector' (Höyssä et al., 2004, p. 772)</p> <p>'Turku region has been one of the notable growth areas in Finland alongside Helsinki, Oulu, Tampere and Jyväskylä regions. ... Turku had been an important trading center for centuries. It had strong cultural and educational roots, dating back to its position as a former capital of Finland. Despite also being a strong industrial center, the service and cultural functions of the city are visible in the statistics. ... certain industry sectors, especially ship building, machinery and the food industry have been historically strong. These industries, however, have been quite slow to even stagnate in their growth compared with some other industries, most notably information and communication technologies (ICT), broadly defined' (Srinivas and Viljamaa, 2003, p. 11)</p>

Table 8. Telaketju's impact on placial quality and innovation ecosystem health in Southwest Finland

Mechanism	Impact area	Quotation
Recognizing the place-based challenges	Placial quality and innovation ecosystem health through awareness	'It may also help to reduce the amount of consumption of resources, prevent post-consumer textile waste ending up to landfill or incineration, and even be a good example for other business areas. Before this can come true, further development and knowledge is needed on efficient textile material recognition, fast sorting system and pre-treatment of postconsumer textile waste, including cleaning the raw material. In addition, new business opportunities of products in which virgin materials could be replaced with recycled ones, and benefits of the use of recycled fibre materials in products, were seen worth to be explored. A nation-wide plan for textile collection, cooperation between collectors and sorters, and a commercial network among different actors, a "from end to beginning" -chain, were seen to promote the shift to the circular economy of textiles. However, it is necessary to clarify the global aspects of textile recycling because the main part of textile products' production is nowadays abroad.' (Heikkilä et al., 2019, p. 76)
	Innovation ecosystem's health through awareness and frequent interactions between different actors	'Transitioning away from the linear economy is a massive challenge that a single city cannot achieve on its own. This is why Turku is committed to collaborating with local, regional, national and international partners through the Circular Turku project to accelerate change' (City of Turku, 2020, p. 13)
Improving or utilizing place attachment	Placial quality through enhancing the well-being of natural environments and improving economic prosperity	'Wood-based textiles are being developed in several Finnish projects – huge market potential is in sight. If the annual increment of Finnish forests was transformed into textiles with the technologies under development, the production would only correspond to ten per cent of the world's textile market. The same technologies can also be used in recycling textiles, which would decrease the need for virgin raw material and cotton' (Forest.fi, 2017, p. 1)
Enabling the development of purpose ecosystems	Innovation ecosystem's health through frequent interactions between different actors	'The Turku region holds a significant amount of expertise in circular economy, and we need to utilise that know-how together. A roadmap that is designed in broad collaboration from regional to international level has true scaling potential to other local governments around the world, says Pekka Sundman from City of Turku' (2020)
	Innovation ecosystem's health through reinforcing the interdependence and complementarities between ecosystem actors	'In the project, we established a value network that collaboratively enabled the implementation of a chained production demo. End-of-life textiles collected from consumers in the Turku region were sorted and delivered to France for fibre extraction. The Telaketju research partners and companies used these to make their demo products, such as nonwoven fabrics, composites and acoustic panels, recounts Senior Scientist Eetta Saarimäki from VTT' (2019, p. 2)
	Innovation ecosystem's health by taking the role of a keystone organization to take care of ecosystems' health	'Strong and enthusiastic leadership is a powerful driver for building the Finnish textile circulation ecosystem: charismatic, visionary speakers get people involved and gain the community's interest more efficiently. For example, the area of Turku has been remarkably active in the field of textile circulation, and this has been owed among other things to an enthusiastic and innovative leader in local waste management [...] Southwest Finland Waste Management agrees that their CEO and management have been one of the reasons why Southwest Finland Waste Management is currently the pioneer company in terms of piloting with the fibre opening plant and recycling of textiles: "The CEO of LSJH has been farsighted and ready to take risks, which has enabled research and development concerning textile circulation, investments in projects and hiring of personnel around the topic"' (Pohls, 2020, p. 67)

(Continues)

Table 8. (Continued)

Mechanism	Impact area	Quotation
Engaging in place regeneration	Innovation ecosystem's health through reinforcing the interdependence and complementarities between ecosystem actors and frequent interactions between different actors	'Mika Ingi, managing director for Paimion Kehitys Oy, says: "We want to step out of our traditional municipal role and create significant added value for everyone taking part. That is why we are involved in the development of a new modern service model based on ecosystem thinking. We are piloting the textile cluster, followed in the coming years by clusters focusing on plastic, construction, and energy. The aim of our service is to support and help develop new profitable business by bringing circular economy companies and their potential customers to innovate together"' (Association for Finnish Work, 2020, p. 3)
	Placial quality through enhancing the well-being of natural environments	'Recovery prevents textile waste from being disposed of at landfill or being combusted, and therefore, the greenhouse gas emissions from textile landfilling or combustion are avoided' (Korhonen and Dahlbo, 2007, p. 32)
	Placial quality through enhancing the well-being of natural environments	'Due to the utilisation of textile waste as raw material, the environmental impact of the manufacturing process is significantly lower than those of virgin cotton and virgin viscose. For example, up to 20,000L of water can be saved per one kilogram of Infinite Fibers compared to one kilogram of cotton, and 160,000 hectares of forest harvest can be avoided when compared to viscose manufacturing' (Pohls, 2020, p. 55)

utilized the identity of Southwest Finland, which is closely tied with nature (Sironen et al., 2020) and, therefore, aligned the sense of place with the requirements of a transition to the circular economy (Fontell and Heikkilä, 2017). The participation of local communities across Southwest Finland was critical to collecting post-consumer textile waste since it will continue to depend on voluntary action until EU legislation takes effect in 2025 (Fontell and Heikkilä, 2017). Therefore, partners developed awareness-raising activities with students, local citizens, and businesses, strengthening place attachment for regenerative purposes. Telaketju both *improved and utilized the place attachment of actors*.

Telaketju developed a network to collect, sort, and utilize post-consumer textile waste, introduced initiatives for reuse, and developed new technologies to create recycled fibers from this waste (Heikkilä et al., 2019). The space created by Telaketju facilitated the construction of new ties in the innovation ecosystem by bringing different actors together. Hence, the CSP was followed by other inter-firm alliances between private actors. For instance, two large firms that were also involved in the partnership, Fortum (energy and waste management) and Metsä (the forest industry), launched a strategic R&D partnership to develop new technologies and solutions for the conversion of organic feedstocks into high-value bioproducts such as textile fibers (Fortum, 2020). Telaketju reinforced the interdependence and complementarities between ecosystem actors and created space for frequent interactions between different

actors, thus *enabling the development of purpose ecosystems*.

Telaketju positively impacted the natural ecology by enabling participants to learn new ways of utilizing textile waste, reducing CO₂ emissions, and offering a solution to concerns around raw material security and availability as textile waste can replace virgin fibers (Fontell and Heikkilä, 2017). Moreover, Telaketju shaped the regional ecology by transmitting new sustainability-related knowledge to regional actors through new cross-industrial relations. Therefore, the partnership *engaged directly in place regeneration* by enhancing the well-being of the natural environment.

The Telaketju partnership was successful in achieving the target outcomes specified by the partners. Some partners announced they planned to open a new textile recycling plant that will regenerate fibers from textile waste by removing 12,000 tonnes of waste annually. Located in Paimio, Southwest Finland, the plant went into operation in 2021. The CSP helped magnify the virtuous dynamics between the place and the innovation ecosystem, nurtured the ecosystem and contributed positively to the place-making agenda.

5. Discussion

In this section, we develop a model of the relationship between places, innovation ecosystems, and CSPs (shown in Figure 1) and put forward

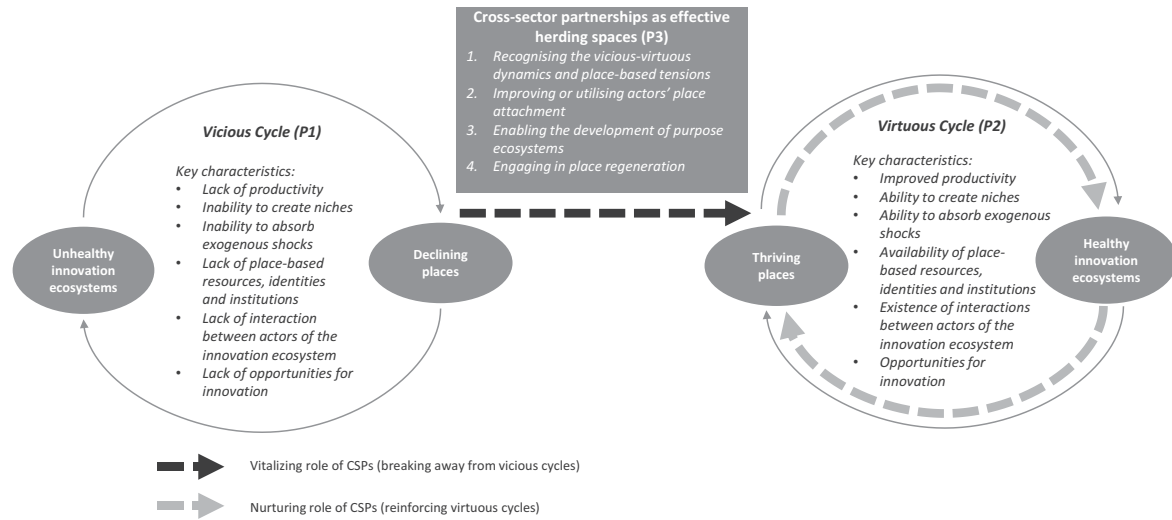


Figure 1. Conceptual model.

three propositions regarding the placial dynamics of innovation ecosystems and the role of CSPs in these dynamics.

5.1. Dynamics between places and innovation ecosystems: vicious and virtuous cycles (P1)

Our first objective was to explore the dynamics between places and innovation ecosystems. Our findings showed that in declining places, such as Humber, natural, human, and social capital were lacking, and therefore, the place restricted the emergence of a healthy innovation ecosystem. In such contexts, some actors may engage in exploitative activities and further destroy the very places they are part of (Shrivastava and Kennelly, 2013). If not, they would lack attachment to their places, likely reducing their motivation to enhance their places further. This, in turn, would lead to further decline of the place and create a vicious cycle. In thriving places, by contrast, natural, human, and social capital would be present as explained above, and the place's characteristics would enable the emergence of a healthy innovation ecosystem. This healthy ecosystem would in turn enhance the place and create a virtuous cycle.

Our findings also resonate with the literature in this area. Places 'can create the conditions for ecosystem emergence and health' because both actors and resources are embedded in places (Hakala et al., 2019, p. 18). A healthy innovation ecosystem requires an institutional context that can provide natural, human, and social capital and turn these capitals into an innovative output (Jackson, 2011), local resources, and knowledge (Korsgaard et al., 2015),

identities (Stedman, 2002), institutions (Lang et al., 2013), and opportunities for innovation (O'Connor et al., 2018). On the other hand, innovation ecosystems also actively shape their places through 'social-discursive practices that create, govern, and transform places' and hence 'try to shape, contest, and/or otherwise govern' places (Williams, 2014, p. 75). Healthy innovation ecosystems foster regional development and help regions meet sustainable development goals (O'Connor et al., 2018). Thus, innovation ecosystems are crucial in placemaking and can positively contribute to place regeneration activities (Lange et al., 2008; Audretsch and Lehmann, 2017).

Based on this, we argue the following:

Proposition 1 Declining places lead to unhealthy innovation ecosystems, which in turn exacerbates place decline, leading to a vicious cycle.

Proposition 2 Thriving places lead to healthy innovation ecosystems, which in turn facilitates further placemaking, leading to a virtuous cycle.

5.2. Vitalizing and nurturing the role of CSPs in the dynamics between places and innovation ecosystems (P3)

Our findings showed that CSPs have distinct roles to play both when there is a vicious and virtuous cycle between places and innovation ecosystems. Figure 1 demonstrates how CSPs can help break away from the vicious dynamics between places and ecosystems. We refer to this as their *vitalizing role*. CSPs can also help reinforce the already present virtuous dynamics, which we refer to as their *nurturing role*.

Based on our findings from the Humber LEP and Telaketju cases, CSPs owe these roles to four distinct mechanisms: recognizing the place-based challenges, improving or utilizing place attachment, enabling the development of purpose ecosystems, and engaging directly in place regeneration activities.

Through research reports, both Humber LEP and Telaketju partners initially explored the regions' issues and potential for innovation ecosystems. This helped them *recognize the place-based challenges*. Actors need to understand that vicious and virtuous cycles exist between places and ecosystems (Smith and Lewis, 2011) and identify the place-based challenges in order to be able to address them (Slawinski et al., 2019). We observed that while Humber LEP tried to *improve people's place attachment*, Telaketju mainly *utilized people's place attachment* which was already strong. This is expected since it is unlikely that a declining place would have actors with strong place attachments. One of the most critical mechanisms in Humber LEP and Telaketju that improved both placial quality and innovation ecosystem health was *enabling the development of purpose ecosystems*, that is, ecosystems with explicit societal impact goals (sustainable energy and circular textiles). We found that this result was in alignment with previous studies (Grobbelaar, 2018), which emphasized the need for CSPs to develop and nurture a local innovation system, which can facilitate mutual and shared value creation among different regional stakeholders. Finally, we found that Humber LEP and Telaketju *engaged directly in place regeneration*. The direct involvement of CSPs in place regeneration has long been discussed in the context of urban studies (Carley et al., 2000; Diamond, 2001). Regeneration partnerships aim to improve places by enhancing the social inclusion of marginalized communities through participatory approaches (Diamond, 2001) or environmental improvements (Carley et al., 2000).

Based on the above, we propose the following:

Proposition 3 Cross-sector partnerships help to break away from the vicious (vitalizing role) or reinforce the virtuous (nurturing role) placial dynamics of innovation ecosystems by providing herding spaces that allow actors to recognize place-based challenges, improve or utilize place attachment, enable the development of purpose ecosystems, and engage in place regeneration activities.

6. Conclusion

In this paper we have combined three literature streams: innovation ecosystems, places, and CSPs. By doing so, we believe we have contributed to theory development in three different ways.

First and foremost, we shed light on the role of CSPs in developing ecosystems, going beyond the link that others have discussed between inter-firm alliances and innovation ecosystems (Ansari et al., 2016). In essence, we shift the focus away from firm-led efforts to change or nurture ecosystems to the potential role of CSPs in achieving this. While past research has acknowledged the impact of partnerships and alliances between multiple stakeholders on innovation ecosystems (Bez and Chesbrough, 2020), we specifically highlight the vital role of places and expand on the notion of ecosystem health and how it is tied with placial quality. We suggest four critical mechanisms for CSPs, especially multistakeholder partnerships, that affect the dynamics between innovation ecosystems and places. We also propose that CSPs are specifically well suited to enable the development of purpose ecosystems (Dahlmann et al., 2020) where public and private interests intersect.

Second, we theorized the role of place as a factor that explains the health of innovation ecosystems, since places enable the human, social, and natural capital that is necessary for innovation ecosystems to function. By emphasizing how placial quality and the health of innovation ecosystems reciprocally reinforce each other?, we added to the existing conversation on innovation ecosystems (Adner and Kapoor, 2010; Dedehayir et al., 2015; Granstrand and Holgersson, 2020). We provided a potential solution to identifying the boundaries of innovation ecosystems through the lens of place (Ritala and Almpantopoulou, 2017).

Third, we demonstrated how CSPs become herding spaces that utilize various mechanisms, expanded on the literature on herding spaces (Ometto et al., 2019), and showed that CSPs could play two roles: a vitalizing role by breaking away from vicious dynamics and a nurturing role by magnifying virtuous dynamics. We also showed that CSPs not only have a role in breaking the vicious dynamics that affect ecosystems' health, but they also play a nurturing role in improving ecosystems and places that already have a positively reinforcing relationship.

Our work is not without its limitations, and we hope future research can address them. Our work was primarily based on secondary qualitative data. We did not use any measures to assess the quality of places (i.e., thriving or declining). Here, we believe it is necessary to engage in interdisciplinary research and draw on urban studies and environmental psychology. Similarly, we did not measure the health of innovation ecosystems. Future research should employ such measures and

aim to provide additional insights into these cases by using primary data.

Comparative longitudinal cases would provide a useful starting point for an empirical examination of the dynamics between places and innovation ecosystems. Recently, it has been feared that Covid-19 and related work-from-home policies will exacerbate particular vicious cycles, deteriorating commercial city centers. This could be one potential setting for comparative longitudinal analyses between places, ecosystems, and CSPs. Furthermore, as our study focused on regions as places, future studies could study these dynamics in other placial units of analysis, such as nations or cities. In addition, while we focused on Telaketju and Humber LEP as specific partnerships in two different regions, we are aware that other CSPs are also actively trying to shape placemaking agendas in these regions. Future research could also study how different co-existing CSPs in a place affect these dynamics overall and further elucidate which CSP characteristics generate a more significant impact on place regeneration.

Virtuous and vicious cycles can also be explored within other theoretical frameworks. One promising path is complex systems theory, which may offer new insights into the virtuous and vicious placial dynamics of innovation ecosystems and help further explore the tipping points from vicious to virtuous (Williams et al., 2017, 2021). Future longitudinal studies could also help to understand the transition from one CSP role to another: from a vitalizing role to a nurturing one.

We proposed that CSPs allow four specific mechanisms to take place and act as herding spaces that alter the dynamics between places and innovation ecosystems. Future research can test these mechanisms by using multiple case studies and qualitative comparative cases. Humber LEP and Telaketju can be categorized as multistakeholder platforms. This type of CSP has the greatest potential in that it brings together three critical sectors that aim to alter the placemaking agenda. However, we believe other types of CSPs (e.g., business-government or business-NGO) can also provide a herding space within which to vitalize and nurture the placial dynamics of innovation ecosystems. For instance, where dysfunctional public sector organizations exist, business-NGO CSPs could be more effective than multistakeholder ones.

We also examined cases where CSPs have had a positive impact and explored the mechanisms that led to this impact. Future research could study settings where CSPs were limited or negatively impacted the dynamics between places and innovation ecosystems. It would be essential to study, for instance,

which conditions lead to low impact in ineffective CSPs that failed to vitalize or nurture the placial dynamics of innovation ecosystems. For instance, in some contexts (e.g., those involving high corruption), CSPs could potentially provide additional platforms for collusion between businesses, governments, and NGOs, leading to negative impacts on the place and exacerbating vicious cycles. Also, we only theorized on the role of CSPs as herding spaces in the placial dynamics of innovation ecosystems. Other spaces might also play a similar role that future research should explore.

To conclude, we join others in arguing that 'each region has different ecological [or social] challenges and solutions, different networks of local actors and collaborations present, and specific local institutional settings'. Solutions, too, must, therefore, be altered and adapted according to the needs of the local settings (Vermunt et al., 2020, p. 246). Partnership managers and policymakers must consider these local settings in order to contribute to place regeneration. Managers in the private sector must consider the role of CSPs and place-based dynamics in location-related decisions regarding innovation ecosystems. For example, the presence of CSPs could alleviate risks related to investing in areas with place-related uncertainties that offer some other business value (e.g., locational benefits). Our findings could also encourage managers to seek out CSPs in places with fruitful dynamics between their innovation ecosystems and places, as those CSPs can nurture the ecosystems further. For policymakers and public sector managers, our findings should help to recognize potential vicious and virtuous dynamics between their regions and innovation ecosystems, as well as help to understand how collaborative partnerships with the private sector can alter those dynamics.

Acknowledgements

We want to thank Ewald Kibler, Minna Halme, Julia Roloff, Kai Hockerts, and Farah Al Taji for their friendly feedback on the earlier versions of this manuscript. We benefited from paper development workshops during the revise and resubmit process, which provided us with further insights and feedback to enhance our paper. Specifically, we would like to thank the organizers and participants of SE&I Virtual Brown Bag of Copenhagen Business School and the Sustainability in Business (SUB) meeting of Aalto University School of Business. We also would like to thank the participants of AOM 2021 ONE session on Ecological Sensemaking for the constructive feedback.

Funding information

This research was supported by the Academy of Finland's Strategic Research Council's grant no. 327299 Sustainable textile systems: Co-creating resource-wise business for Finland in global textile networks/FINIX consortium.

Conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this article.

Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

References

- Aarikka-Stenroos, L., Ritala, P., and Thomas, L.D. (2021) Circular economy ecosystems: a typology, definitions, and implications. *Research Handbook of Sustainability Agency*. Cheltenham: Edward Elgar Publishing.
- Adner, R. and Kapoor, R. (2010) Value creation in innovation ecosystems: how the structure of technological interdependence affects firm performance in new technology generations. *Strategic Management Journal*, **31**, 306–333.
- Adner, R. and Kapoor, R. (2016) Innovation ecosystems and the pace of substitution: re-examining technology S-curves. *Strategic Management Journal*, **37**, 625–648.
- Atkinson, D., Cooke, S., and Spooner, D. (2002) Tales from the Riverbank: place-marketing and maritime heritages. *International Journal of Heritage Studies*, **8**, 25–40. <https://doi.org/10.1080/13527250220119910>
- Almpanopoulou, A., Bergman, J.-P., Ahonen, T., Ritala, P., Honkapuro, S., Blomqvist, K., and Ahola, J. (2017) Emergence of energy services ecosystems: scenario method as a policy enabler. *Journal of Innovation Management*, **5**, 58–77.
- Anderson, A.R., Warren, L., and Bensemman, J. (2019) Identity, enactment, and entrepreneurship engagement in a declining place. *Journal of Small Business Management*, **57**, 1559–1577.
- Ansari, S.S., Garud, R., and Kumaraswamy, A. (2016) The disruptor's dilemma: TiVo and the U.S. television ecosystem. *Strategic Management Journal*, **37**, 1829–1853.
- Association for Finnish Work. (2020) *Nordic Countries' First Large-Scale End-of-Life Textile Refinement Plant to Open in Paimio in 2021* [Press release]. <https://suomalaintyö.fi/en/2020/08/19/nordic-count-ries-first-large-scale-end-of-life-textile-refinement-plant-to-open-in-paimio-in-2021/> [Accessed April 4, 2023].
- Audretsch, D.B. and Lehmann, E.E. (2017) The knowledge spillover theory of entrepreneurship and the strategic management of places. In: Ahmetoglu, G., Chamorro-Premuzic, T., Klinger, B., and Karcisky, T. (eds), *The Wiley Handbook of Entrepreneurship*. <https://doi.org/10.1002/9781118970812.ch16>
- Autio, E. and Levie, J. (2017) Management of entrepreneurial ecosystems. In: Ahmetoglu, G., Chamorro-Premuzic, T., Klinger, B., and Karcisky, T. (eds), *The Wiley Handbook of Entrepreneurship*. <https://doi.org/10.1002/9781118970812.ch19>
- Autio, E., Nambisan, S., Thomas, L.D., and Wright, M. (2018) Digital affordances, spatial affordances, and the genesis of entrepreneurial ecosystems. *Strategic Entrepreneurship Journal*, **12**, 72–95.
- Autio, E. and Thomas, L. (2014) Chapter 11, Innovation ecosystems. In: Dodgson, M., Gann, D.M., and Phillips, N. (eds), *The Oxford Handbook of Innovation Management*. Oxford: Oxford University Press.
- Basu, M., Hashimoto, S., and Dasgupta, R. (2019) The mediating role of place attachment between nature connectedness and human well-being: perspectives from Japan. *Sustainability Science*, **15**, 849–862.
- BBC. (2003) *Where is the Worst Place to Live in the World?* British Broadcasting Corporation. <http://news.bbc.co.uk/1/hi/talkingpoint/3158560.stm> [Accessed April 4, 2023].
- Beltagui, A., Rosli, A., and Candi, M. (2020) Exaptation in a digital innovation ecosystem: the disruptive impacts of 3D printing. *Research Policy*, **49**, 103833.
- Berghöfer, A., Wittmer, H., and Rauschmayer, F. (2008) Stakeholder participation in ecosystem-based approaches to fisheries management: a synthesis from European research projects. *Marine Policy*, **32**, 243–253.
- Bez, S.M. and Chesbrough, H. (2020) Competitor collaboration before a crisis. *Research Technology Management*, **63**, 42–48.
- Body, J. and Habbal, F. (2016) The innovation ecosystem. In: Banerjee, B. and Ceri, S. (eds), *Creating Innovation Leaders. Understanding Innovation*. Cham: Springer. https://doi.org/10.1007/978-3-319-20520-5_2
- Bowen, F.E., Bansal, P., and Slawinski, N. (2018) Scale matters: the scale of environmental issues in corporate collective actions. *Strategic Management Journal*, **39**, 1411–1436.
- Bridge, G., Bouzarovski, S., Bradshaw, M., and Eyre, N. (2013) Geographies of energy transition: space, place and the low-carbon economy. *Energy Policy*, **53**, 331–340.
- Brown, G.G., Reed, P., and Harris, C.C. (2002) Testing a place-based theory for environmental evaluation: an Alaska case study. *Applied Geography*, **22**, 49–76.
- Business Live. (2021) *Humber's New Energy Strategy Eyes Up £6b Investment with a 20,000-Strong Workforce*. <https://www.business-live.co.uk/economic-development/humbers-new-energy-strategy-eyes-17812807> [Accessed March 11, 2021].

- Carayannis, E.G. and Campbell, D.F. (2009) 'Mode 3' and 'Quadruple Helix': toward a 21st century fractal innovation ecosystem. *International Journal of Technology Management*, **46**, 201–234.
- Carbon Trust. (2018) *Study of the Humber Energy Intensive Industries Cluster*. <https://www.catchuk.org/wp-content/uploads/2018/04/Humber-EII-Cluster-Study-Summary.pdf> [Accessed April 4, 2023].
- Carley, M., Chapman, M., Hastings, A., Kirk, K., and Young, R. (2000) *Urban Regeneration Through Partnership – A Study in Nine Urban Regions in England, Scotland and Wales*. Bristol, UK: The Policy Press and the Joseph Rowntree Foundation.
- Carmona, M. (2019) Place value: place quality and its impact on health, social, economic and environmental outcomes. *Journal of Urban Design*, **24**, 1–48.
- Centre for Thriving Places. (2022) *Thriving Places Index*. <https://www.thrivingplacesindex.org/page/results/understanding-your-results> [Accessed July 1, 2022].
- Chesbrough, H. (2020) To recover faster from Covid-19, open up: managerial implications from an open innovation perspective. *Industrial Marketing Management*, **88**, 410–413.
- Chesbrough, H., Kim, S., and Agogino, A. (2014) Chez Panisse: building an open innovation ecosystem. *California Management Review*, **56**, 144–171.
- City of Turku. (2020) *Circular Turku: Regional Collaboration for Resource Wisdom*. Bonn: ICLEI – Local Governments for Sustainability e.V.
- Clarysse, B., Wright, M., Bruneel, J., and Mahajan, A. (2014) Creating value in ecosystems: crossing the chasm between knowledge and business ecosystems. *Research Policy*, **43**, 1164–1176.
- Cresswell, T. (2014) *Place: An Introduction*. Chichester: John Wiley & Sons.
- Cuba, L. and Hummon, D.M. (1993) A place to call home: identification with dwelling, community, and region. *The Sociological Quarterly*, **34**, 111–131.
- Dahan, N.M., Doh, J.P., Oetzel, J., and Yaziji, M. (2010) Corporate-NGO collaboration: co-creating new business models for developing markets. *Long Range Planning*, **43**, 326–342.
- Dahlmann, F., Stubbs, W., Raven, R., and De Albuquerque, J.P. (2020) The 'purpose ecosystem': emerging private sector actors in earth system governance. *Earth System Governance*, **4**, 100053.
- Davis, J.P. (2016) The group dynamics of interorganizational relationships: collaborating with multiple partners in innovation ecosystems. *Administrative Science Quarterly*, **61**, 621–661.
- Dawley, S., Mackinnon, D., and Pollock, R. (2019) Creating strategic couplings in global production networks: regional institutions and lead firm investment in the Humber region, UK. *Journal of Economic Geography*, **19**, 853–872.
- De Vasconcelos Gomes, L.A., Facin, A.L.F., Salerno, M.S., and Ikenami, R.K. (2018) Unpacking the innovation ecosystem construct. *Evolution, Gaps and Trends*, **136**, 30–48.
- Dedehayir, O., Mäkinen, S.J., and Roland Ortt, J. (2018) Roles during innovation ecosystem genesis: a literature review. *Technological Forecasting and Social Change*, **136**, 18–29.
- Dedehayir, O., Matthews, J., Mohannak, K., and Pennetta, S. (2015) The birth and development of innovation ecosystems: a literature review. In: *ISPIM Innovation Symposium*. The International Society for Professional Innovation Management (ISPIM), p. 1.
- Di Gregorio, D. (2017) Place-based business models for resilient local economies. *Journal of Enterprising Communities: People and Places in the Global Economy*, **11**, 113–128.
- Diamond, J. (2001) Managing change or coping with conflict? Mapping the experience of a local regeneration partnership. *Local Economy: The Journal of the Local Economy Policy Unit*, **16**, 272–285.
- Dzhengiz, T., Barkemeyer, R., and Napolitano, G. (2021) Emotional framing of NGO press releases: reformative versus radical NGOs. *Business Strategy and the Environment*, **30**, 2468–2488.
- Eisenhardt, K.M. and Graebner, M.E. (2007) Theory building from cases: opportunities and challenges. *Academy of Management Journal*, **59**, 25–32.
- Enterprise Partnership. (2016) *York, North Yorkshire and East Riding Revised Strategy*.
- European Commission. (2021) *Humber Local Enterprise Partnership*. <https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/organisation/humber-local-enterprise-partnership> [Accessed March 12, 2021].
- Fathallah, R., Branzei, O., and Schaan, J.-L. (2018) No place like home? How EMNCs from hyper turbulent contexts internationalize by sequentially arbitraging rents, values, and scales abroad. *Journal of World Business*, **53**, 620–631.
- Fisher, B., Goddard, J.G., Kempton, L., Marlow, D., Angel Robson, L., and Whitehurst, F.C. (2013) *North East Local Economic Partnership Smart Specialisation Report*.
- Fontell, P. and Heikkilä, P. (2017) *Model of Circular Business Ecosystem for Textiles*. VTT Technical Research Centre of Finland. VTT Technology No. 313. <https://publications.vtt.fi/pdf/technology/2017/T313.pdf> [Accessed April 4, 2023].
- Forest.fi. (2017) *Wood-Based Textiles are Being Developed in Several Finnish Projects – Huge Market Potential is in Sight*. <https://forest.fi/article/wood-based-textiles-are-being-developed-in-several-finnish-projects---huge-market-potential-is-in-sight/> [Accessed November 25, 2020].
- Fortum. (2020) *Fortum and Metsä Group to Launch a Joint EUR 50 Million R&D Programme Incircular Bioeconomy* [Press release]. <https://www.fortum.com/media/2020/06/fortum-and-metsa-group-launch-joint-eur-50-million-rd-programme-circular-bioeconomy> [Accessed April 4, 2023].
- Frantzeskaki, N., Van Steenberghe, F., and Stedman, R.C. (2018) Sense of place and experimentation in urban sustainability transitions: the resilience lab in Carnisse,

- Rotterdam, The Netherlands. *Sustainability Science*, **13**, 1045–1059.
- Gaffaney, J. (2017) *Thriving Cities: How to Define, Apply, and Measure Well-Being at Scale*. Master of Applied Positive Psychology (MAPP) Capstone Projects 120. http://repository.upenn.edu/mapp_capstone/120 [Accessed April 4, 2023].
- Ganco, M., Kapoor, R., and Lee, G. (2019) From rugged landscapes to rugged ecosystems: structure of interdependencies and firms' innovative search. *Academy of Management Review*, **45**, 646–674.
- Gibbert, M. and Ruigrok, W. (2010) The “what” and “how” of case study rigor: three strategies based on published work. *Organizational Research Methods*, **13**, 710–737.
- Gieryn, T.F. (2000) A space for place in sociology. *Annual Review of Sociology*, **26**, 463–496.
- Granstrand, O. and Holgersson, M. (2020) Innovation ecosystems: a conceptual review and a new definition. *Technovation*, **90**, 102098.
- Gray, B. and Purdy, J. (2018) *Collaborating for Our Future: Multistakeholder Partnerships for Solving Complex Problems*. Oxford: Oxford University Press.
- Green, A.E. and White, R.J. (2007) *Attachment to Place: Social Networks, Mobility and Prospects of Young People. The Homestead, 40 Water End*. York: Joseph Rowntree Foundation.
- Grobbelaar, S.S. (2018) Developing a local innovation ecosystem through a university coordinated innovation platform: the University of Fort Hare. *Development Southern Africa*, **35**, 657–672.
- Guthey, G.T., Whiteman, G., and Elmes, M. (2014) Place and sense of place. *Journal of Management Inquiry*, **23**, 254–265.
- Hahn, T. and Tampe, M. (2020) Strategies for regenerative business. *Strategic Organization*, **19**, 456–477.
- Hakala, U. (2021) The voice of dwellers – developing a place brand by listening to its residents. *Journal of Place Management and Development*, Ahead-of-print.
- Hakala, H., O'shea, G., Farny, S., and Luoto, S. (2019) Restoring the business, innovation and entrepreneurial ecosystem concepts: the model-narrative review method. *International Journal of Management Reviews*, **22**, 10–32.
- Hannah, D.P. and Eisenhardt, K.M. (2018) How firms navigate cooperation and competition in nascent ecosystems. *Strategic Management Journal*, **39**, 3163–3192.
- Hartshorne, R. (1969) *Perspective on the Nature of Geography*. Rand McNally. <https://agris.fao.org/agris-search/search.do?recordID=US201300486027> [Accessed April 4, 2023].
- Healey, P. (1999) Institutional analysis, communicative planning, and shaping places. *Journal of Planning Education and Research*, **19**, 111–121.
- Heikkilä, P., Cura, K., Heikkilä, J., Hinkka, V., Ikonen, T., Kamppuri, T., Knuutila, H., Kokko, M., Lankinen, S., Lehtinen, L., Mäkiö, I., Pitkänen, M., Saarimäki, E., Virta, M., Zitting, J., and Harlin, A. (2019) *Telaketju: Towards Circularity of Textiles*. VTT Research Report. VTT Technical Research Centre of Finland.
- Hes, D. and Hernandez-Santin, C. (2020) *Placemaking Fundamentals for the Built Environment*, 1st edition. Palgrave Macmillan Springer. <https://doi.org/10.1007/978-981-32-9624-4>
- Hes, D., Hernandez-Santin, C., Beer, T., and Huang, S.W. (2020) Place evaluation: measuring what matters by prioritising relationships. In: Hes, D. and Hernandez-Santin, C. (eds), *Placemaking Fundamentals for the Built Environment*. Singapore: Palgrave Macmillan. https://doi.org/10.1007/978-981-32-9624-4_13
- Heuer, M. (2011) Ecosystem cross-sector collaboration: conceptualizing an adaptive approach to sustainability governance. *Business Strategy and the Environment*, **20**, 211–221.
- Hidalgo, M.C. and Hernández, B. (2001) Place attachment: conceptual and empirical questions. *Journal of Environmental Psychology*, **21**, 273–281.
- Höyssä, M., Bruun, H., and Hukkinen, J. (2004) The co-evolution of social and physical infrastructure for biotechnology innovation in Turku, Finland. *Research Policy*, **33**, 769–785.
- Hull City Council. (2004) *Employment Strategy for Hull*. Hull: Hull City Council.
- Humber LEP. (2011) *Centres for Off shore Renewable Engineering Humber Prospectus*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/31731/11-1396-core-humber-prospectus.pdf [Accessed April 4, 2023].
- Humber LEP. (2013a) *The Capability of the Humber Region*. Hull: Hull University Business School, University of Hull.
- Humber LEP. (2013b) *Congratulations Hull – City of Culture 2017* [Press release]. <https://www.humberlep.org/news95/> [Accessed April 4, 2023].
- Humber LEP. (2018) *Innovation in the Humber – Baseline Data*. <https://www.humberlep.org/wp-content/uploads/2019/06/Humber-Innovation-Report-Part-1-April-2018.pdf> [Accessed April 4, 2023].
- Humber LEP. (2019a) *Humber Clean Growth Local White Paper November*. <https://cp.catapult.org.uk/wp-content/uploads/2021/01/Humber-Clean-Growth-Local-White-Paper.pdf> [Accessed March 12, 2021].
- Humber LEP. (2019b) *Humber Industrial Strategy Prospectus*. <https://www.humberlep.org/wp-content/uploads/2019/06/Humber-LIS-Prospectus-June-2019-1.pdf> [Accessed March 12, 2021].
- Humber LEP. (2022) *About the Humber LEP*. <https://www.humberlep.org/about-the-humberlep/#:~:text=We're%20driving%20the%20growth,Lincolnshire%20and%20North%20East%20Lincolnshire> [Accessed April 4, 2023].
- Iansiti, M. and Levien, R. (2004) Strategy as ecology. *Harvard Business Review*, **82**, 68–78.
- Iansiti, M. and Richards, G.L. (2006) The information technology ecosystem: structure, health, and performance. *The Antitrust Bulletin*, **51**, 77–110.
- Jackson, D.J. (2011) What is an innovation ecosystem. *National Science Foundation*, **1**, 1–13.

- Jacobides, M.G., Cennamo, C., and Gawer, A. (2018) Towards a theory of ecosystems. *Strategic Management Journal*, **39**, 2255–2276.
- Jensen, P. and Gibbs, D. (2018) *Development of a Robust and Locally Inclusive Renewables Industry: A Regional Comparator Study*. Kingston upon Hull, UK: Green Port Growth Programme.
- Jones, P., Comfort, D., and Hillier, D. (2016) LEPs and sustainable development. *Town and Country Planning*, **85**, 383–338.
- Kadyrova, A. (2021) Exploring structures of urban social innovation ecosystems: cases of Manchester, Utrecht, Stockholm, Sofia and Budapest. *Journal of Social Entrepreneurship*. <https://doi.org/10.1080/19420676.2021.1921013>
- Kapoor, R. (2018) Ecosystems: broadening the locus of value creation. *Journal of Organization Design*, **7**, 1–16.
- Kapoor, R. and Furr, N.R. (2015) Complementarities and competition: unpacking the drivers of entrants' technology choices in the solar photovoltaic industry. *Strategic Management Journal*, **36**, 416–436.
- Kibler, E., Fink, M., Lang, R., and Muñoz, P. (2015) Place attachment and social legitimacy: revisiting the sustainable entrepreneurship journey. *Journal of Business Venturing Insights*, **3**, 24–29.
- Korhonen, M.-R. and Dahlbo, H. (2007) *Reducing Greenhouse Gas Emissions by Recycling Plastics and Textiles into Products*. Helsinki: Finnish Environment Institute.
- Korsgaard, S., Ferguson, R., and Gaddefors, J. (2015) The best of both worlds: how rural entrepreneurs use placial embeddedness and strategic networks to create opportunities. *Entrepreneurship & Regional Development*, **27**, 574–598.
- Kramer, M.R. and Pfitzer, M.W. (2016) The ecosystem of shared value. *Harvard Business Review*, **94**, 80–89.
- Kythreotis, A. (2010) Local strategic partnerships: a panacea for voluntary interest groups to promote local environmental sustainability? The UK context. *Sustainable Development*, **18**, 187–193.
- Kythreotis, A.P. and Jonas, A.E.G. (2012) Scaling sustainable development? How voluntary groups negotiate spaces of sustainability governance in the United Kingdom. *Environment and Planning D: Society and Space*, **30**, 381–399.
- Lang, R., Fink, M., and Kibler, E. (2013) Understanding place-based entrepreneurship in rural Central Europe: a comparative institutional analysis. *International Small Business Journal: Researching Entrepreneurship*, **32**, 204–227.
- Lang, R., Fink, M., and Kibler, E. (2014) Understanding place-based entrepreneurship in rural Central Europe: a comparative institutional analysis. *International Small Business Journal: Researching Entrepreneurship*, **32**, 204–227.
- Lange, B., Kalandides, A., Stöber, B., and Mieg, H.A. (2008) Berlin's creative industries: governing creativity? *Industry & Innovation*, **15**, 531–548.
- Lawrence, T.B. and Dover, G. (2015) Place and institutional work. *Administrative Science Quarterly*, **60**, 371–410.
- Leminen, S., Rajahonka, M., Westerlund, M., and Hossain, M. (2021) Collaborative innovation for sustainability in Nordic cities. *Journal of Cleaner Production*, **328**, 129549.
- Liu, F., Zhang, J., and Yang, S. (2021) Research on health evaluation of sustainable regional innovation ecosystems based on improved niche suitability model. *Innovation and Development Policy*, **3**, 38–58.
- Madikizela, M. (2020) Building regional innovation ecosystems and the role of government. In: Mbg Cele, T.L. and Wilson Fadji, A. (eds), *Innovation Policy at the Intersection – Global Debates & Local Experiences*. Cape Town, South Africa: HSRC Press.
- Malinen, P. and Simula, H. (2005) *A Conceptual Platform for Developing Local and Regional Innovation Environment, The 6th CINet Conference*. Brighton, UK.
- Mandalia, B. (2020) *Circular Economy Finland Aims for a Recycling Plant that Would Handle a Large Part of Textile Waste in EU Countries – The Project Will Create Thousands of Jobs, Says the Industry Interest Group*. Pledgetimes.com.
- Manring, S.L. (2007) Creating and managing interorganizational learning networks to achieve sustainable ecosystem management. *Organization & Environment*, **20**, 325–346.
- Mazutis, D., Slawinski, N., and Palazzo, G. (2020) A time and place for sustainability: a spatiotemporal perspective on organizational sustainability frame development. *Business & Society*, **60**, 1849–1890.
- Mazutis, D., Slawinski, N., and Palazzo, G. (2021) A time and place for sustainability: a spatiotemporal perspective on organizational sustainability frame development. *Business & Society*, **60**, 1849–1890.
- McDonald, C., Frost, L., Kirk-Brown, A., Rainnie, A., and Van Dijk, P. (2010) An evaluation of the economic approaches used by policy actors towards investment in place-based partnerships in Victoria. *Australian Journal of Public Administration*, **69**, 9–21.
- McKeever, E., Jack, S., and Anderson, A. (2015) Embedded entrepreneurship in the creative re-construction of place. *Journal of Business Venturing*, **30**, 50–65.
- McKinzie, A.E. (2019) You don't miss it 'til it's gone: insecurity, place, and the social construction of the environment. *Environmental Sociology*, **5**, 232–242.
- McShane, K. (2004) Ecosystem health. *Environmental Ethics*, **26**, 227–245.
- Montgomery, A.W., Dacin, P.A., and Dacin, M.T. (2012) Collective social entrepreneurship: collaboratively shaping social good. *Journal of Business Ethics*, **111**, 375–388.
- Muñoz, P., Kibler, E., Mandakovic, V., and Amorós, J.E. (2020) Local entrepreneurial ecosystems as configural narratives: a new way of seeing and evaluating antecedents and outcomes. *Research Policy*, **51**, 104065.

- Norton, B.G. and Hannon, B. (1997) Environmental values: a place-based theory. *Environmental Ethics*, **19**, 227–245.
- O'Connor, A., Stam, E., Sussan, F., and Audretsch, D.B. (2018) Entrepreneurial ecosystems: the foundations of place-based renewal. In: O'Connor, A., Stam, E., Sussan, F., and Audretsch, D. (eds), *Entrepreneurial Ecosystems. International Studies in Entrepreneurship*, Volume **38**. Cham: Springer. https://doi.org/10.1007/978-3-319-63531-6_1
- Ometto, M.P., Gegenhuber, T., Winter, J., and Greenwood, R. (2019) From balancing missions to mission drift: the role of the institutional context, spaces, and compartmentalization in the scaling of social enterprises. *Business & Society*, **58**, 1003–1046.
- Oskam, I., Bossink, B., and De Man, A.-P. (2020) Valuing value in innovation ecosystems: how cross-sector actors overcome tensions in collaborative sustainable business model development. *Business & Society*, **60**, 1059–1091.
- Ozcan, P. and Santos, F.M. (2015) The market that never was: turf wars and failed alliances in mobile payments. *Strategic Management Journal*, **36**, 1486–1512.
- Parida, V., Burstrom, T., Visnjic, I., and Wincent, J. (2019) Orchestrating industrial ecosystem in circular economy: a two-stage transformation model for large manufacturing companies. *Journal of Business Research*, **101**, 715–725.
- Paasi, A. (2013) Regional planning and the mobilization of 'regional identity': from bounded spaces to relational complexity'. *Regional Studies*, **47**, 1206–1219.
- Peltoniemi, M. and Vuori, E. (2004) Business ecosystem as the new approach to complex adaptive business environments. *Proceedings of eBusiness Research Forum*, **2**, 267–281.
- Peltoniemi, M., Vuori, E., and Laihonen, H. (2005) Business ecosystem as a tool for the conceptualisation of the external diversity of an organisation. *Complexity, Science and Society Conference*, Liverpool, Great Britain, 11–14.
- Peschl, M.F. and Fundneider, T. (2012) Spaces enabling game-changing and sustaining innovations: why space matters for knowledge creation and innovation. *Journal of Organisational Transformation & Social Change*, **9**, 41–61.
- Piekkari, R., Welch, C., and Paavilainen, E. (2009) The case study as disciplinary convention: evidence from international business journals. *Organizational Research Methods*, **12**, 567–589.
- Pilinkienė, V. and Mačiulis, P. (2014) Comparison of different ecosystem analogies: the main economic determinants and levels of impact. *Procedia-Social and Behavioral Sciences*, **156**, 365–370.
- Pinkse, J. and Kolk, A. (2011) Addressing the climate change-sustainable development nexus: the role of multistakeholder partnerships. *Business & Society*, **51**, 176–210.
- Pohls, E.-L. (2020) *Towards a Circular Textile Ecosystem: Drivers and Barriers of National Textile Circulation*. Masters. Tampere University.
- Radziwon, A., Bogers, M.L., Chesbrough, H., and Minssen, T. (2021) Ecosystem effectuation: creating new value through open innovation during a pandemic. *R&D Management*, **52**, 376–390.
- Rajala, R., Hakanen, E., Mattila, J., Seppälä, T., and Westerlund, M. (2018) How do intelligent goods shape closed-loop systems? *California Management Review*, **60**, 20–44.
- Ritala, P., Agouridas, V., Assimakopoulos, D., and Gies, O. (2013) Value creation and capture mechanisms in innovation ecosystems: a comparative case study. *International Journal of Technology Management*, **63**, 244–267.
- Ritala, P. and Almpantopoulou, A. (2017) In defense of 'eco' in innovation ecosystem. *Technovation*, **60–61**, 39–42.
- Ritala, P., Golnam, A., and Wegmann, A. (2014) Coopetition-based business models: the case of Amazon.com. *Industrial Marketing Management*, **43**, 236–249.
- Ritvala, T., Salmi, A., and Andersson, P. (2014) MNCs and local cross-sector partnerships: the case of a smarter Baltic Sea. *International Business Review*, **23**, 942–951.
- Rogers, H.A., Deutz, P., and Ramos, T.B. (2021) Repairing the circular economy: public perception and participant profile of the repair economy in Hull, UK. *Resources, Conservation and Recycling*, **168**, 105447.
- Rohrbeck, R., Hölzle, K., and Gemünden, H.G. (2009) Opening up for competitive advantage – how Deutsche Telekom creates an open innovation ecosystem. *R&D Management*, **39**, 420–430.
- Ryan, A., Branzei, O., Geiger, S., and Haugh, H. (2020) Putting partnerships in their place: moral and material processes of place-based respect, repair, and renewal. *Journal of Business Ethics: Call for Papers*.
- Ryan, A. and O'malley, L. (2016) The role of the boundary spanner in bringing about innovation in cross-sector partnerships. *Scandinavian Journal of Management*, **32**, 1–9.
- Scaringella, L. and Radziwon, A. (2018) Innovation, entrepreneurial, knowledge, and business ecosystems: old wine in new bottles? *Technological Forecasting and Social Change*, **136**, 59–87.
- Selsky, J.W. and Parker, B. (2005) Cross-sector partnerships to address social issues: challenges to theory and practice. *Journal of Management*, **31**, 849–873.
- Senge, P.M., Lichtenstein, B.B., Kaeufer, K., Bradbury, H., and Carroll, J.S. (2007) Collaborating for systemic change. *MIT Sloan Management Review*, **48**, 44.
- Sharma, S.K. and Meyer, K.E. (2019) New startup ecosystems and the innovation hub. In: *Industrializing Innovation-the Next Revolution*. Cham: Springer. https://doi.org/10.1007/978-3-030-12430-4_8
- Shipilov, A. and Gawer, A. (2020) Integrating research on interorganizational networks and ecosystems. *Academy of Management Annals*, **14**, 92–121.
- Shrivastava, P. and Kennelly, J.J. (2013) Sustainability and place-based enterprise. *Organization & Environment*, **26**, 83–101.
- Siivonen, K. (2009) Local culture as a resource in regional development in the Southwest-Finland archipelago. *Journal of Ethnology and Folkloristics*, **3**, 47–64.

- Sironen, S., Primmer, E., Leskinen, P., Similä, J., and Punttila, P. (2020) Context sensitive policy instruments: a multi-criteria decision analysis for safeguarding forest habitats in southwestern Finland. *Land Use Policy*, **92**, 104460.
- Slawinski, N., Winsor, B., Mazutis, D., Schouten, J.W., and Smith, W.K. (2019) Managing the paradoxes of place to foster regeneration. *Organization & Environment*, **34**, 595–618.
- Slawinski, N., Winsor, B., Mazutis, D., Schouten, J.W., and Smith, W.K. (2021) Managing the paradoxes of place to foster regeneration. *Organization & Environment*, **34**, 595–618.
- Smith, W.K. and Lewis, M.W. (2011) Toward a theory of paradox: a dynamic equilibrium model of organizing. *The Academy of Management Review*, **36**, 381–403.
- Sorenson, O. and Baum, J.A.C. (2003) Editors' introduction: Geography and strategy: the strategic management of space and place. *Geography and Strategy*, **20**, 1–19.
- Southwest Finland. (2020) Southwest Finland. <https://www.varsinais-suomi.fi/en/southwest-finland> [Accessed November 23, 2020].
- Spicer, A. (2006) Beyond the convergence–divergence debate: the role of spatial scales in transforming organizational logic. *Organization Studies*, **27**, 1467–1483.
- Srinivas, S. and Viljamaa, K. (2003) *BioTurku: "Newly" Innovative? The Rise of Bio-pharmaceuticals and the Biotech Concentration in Southwest Finland*. IPC Working Paper Series. Cambridge, MA: Massachusetts Institute of Technology.
- Stadtler, L. (2016) Scrutinizing public–private partnerships for development: towards a broad evaluation conception. *Journal of Business Ethics*, **135**, 71–86.
- Stedman, R.C. (2002) Toward a social psychology of place: predicting behavior from place-based cognitions, attitude, and identity. *Environment and Behavior*, **34**, 561–581.
- Stonig, J. and Müller-Stewens, G. (2019) Navigating the challenges of ecosystem emergence: a multi-level review of leader and complementor strategies. *Die Unternehmung*, **73**, 288–307.
- Stroh, D.P. (2015) *Systems Thinking for Social Change: A Practical Guide to Solving Complex Problems, Avoiding Unintended Consequences, and Achieving Lasting Results*. White River Junction: Chelsea Green Publishing.
- Stuermer, M., Spaeth, S., and Von Krogh, G. (2009) Extending private-collective innovation: a case study. *R&D Management*, **39**, 170–191.
- Su, Y.-S., Zheng, Z.-X., and Chen, J. (2018) A multi-platform collaboration innovation ecosystem: the case of China. *Management Decision*, **56**, 125–142.
- Technopolis. (2014) *Regional Innovation Monitor Plus Regional Innovation Report Yorkshire and The Humber*. https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/sites/default/files/report/2014%20RIM%20Plus_Regional%20Innovation%20Report_Yorks%20Humber.pdf [Accessed March 12, 2021].
- The Northern Way. (2010) *City Relationships: Economic Linkages in Northern City Regions Hull and Humber Ports*. Stella House, Goldcrest Way, Newburn Riverside, Newcastle upon Tyne: The Northern Way. www.thenorthernway.co.uk
- Thomas, L. (2013) *Ecosystem Emergence: An Investigation of the Emergence Processes of Six Digital Service Ecosystems* (PhD Doctoral thesis). <https://spiral.imperial.ac.uk/handle/10044/1/18315> [Accessed April 4, 2023].
- Tidball, K. and Stedman, R. (2013) Positive dependency and virtuous cycles: from resource dependence to resilience in urban social-ecological systems. *Ecological Economics*, **86**, 292–299.
- Till, K.E. (2012) Wounded cities: memory-work and a place-based ethics of care. *Political Geography*, **31**, 3–14.
- Tomlinson, C. (2020) City of culture, city of transformation: bringing together the urban past and urban present in the Hull Blitz Trail. *Urban History*, **48**, 351–363.
- Tsoukas, H. and Cunha, M.P.E. (2017) On organizational circularity: vicious and virtuous cycles in organizing. In: Smith, W.K., Lewis, M.W., and Jarzabkowski, P. (eds), *The Oxford Handbook of Organizational Paradox, Oxford Handbooks*. Oxford Academic. <https://doi.org/10.1093/oxfordhb/9780198754428.013.20> [Accessed April 4, 2023].
- Tuan, Y.-F. (1977) *Space and Place: The Perspective of Experience*. Minneapolis, MN: University of Minnesota Press.
- Tuan, Y.-F. (1990) *Topophilia: A Study of Environmental Perceptions, Attitudes, and Values*. New York: Columbia University Press.
- Vainikka, J.T. (2015) Reflexive identity narratives and regional legacies. *Tijdschrift voor economische en sociale geografie*, **106**, 521–535.
- Valkokari, K., Seppänen, M., Mäntylä, M., and Jylhä-Ollila, S. (2017) Orchestrating innovation ecosystems: a qualitative analysis of ecosystem positioning strategies. *Technology Innovation Management Review*, **7**, 12–24.
- Vallance, P., Tewdwr-Jones, M., and Kempton, L. (2019) Facilitating spaces for place-based leadership in centralized governance systems: the case of Newcastle City futures. *Regional Studies*, **53**, 1723–1733.
- Van De Ven, A.H. (1986) Central problems in the management of innovation. *Management Science*, **32**, 590–607.
- Van Hille, I., De Bakker, F.G., Groenewegen, P., and Ferguson, J.E. (2019) Strategizing nature in cross-sector partnerships: can plantation revitalization enable living wages? *Organization & Environment*, **34**, 175–197.
- Van Tulder, R., Seitanidi, M.M., Crane, A., and Brammer, S. (2016) Enhancing the impact of cross-sector partnerships. *Journal of Business Ethics*, **135**, 1–17.
- Velenturf, A. (2016) Analysing the governance system for the promotion of industrial symbiosis in the Humber region, UK. *People, Place and Policy Online*, **10**, 146–173.
- Vermunt, D.A., Negro, S.O., Van Laerhoven, F.S.J., Verweij, P.A., and Hekkert, M.P. (2020) Sustainability transitions in the agri-food sector: how ecology affects transition dynamics. *Environmental Innovation and Societal Transitions*, **36**, 236–249.

- VTT. (2019) *Finland Advancing Towards an Efficient Circular Economy of Textiles*. <https://www.vttresearch.com/en/news-and-ideas/finland-advancing-towards-efficient-circular-economy-textiles> [Accessed March 12, 2021].
- Vurro, C., Dacin, M.T., and Perrini, F. (2011) Institutional antecedents of partnering for social change: how institutional logics shape cross-sector social partnerships. *Journal of Business Ethics*, **94**, 39–53.
- Walrave, B., Talmar, M., Podoyntsyna, K.S., Romme, A.G.L., and Verbong, G.P.J. (2018) A multi-level perspective on innovation ecosystems for path-breaking innovation. *Technological Forecasting and Social Change*, **136**, 103–113.
- Welch, C., Piekkari, R., Plakoyiannaki, E., and Paavilainen-Mäntymäki, E. (2010) Theorising from case studies: towards a pluralist future for international business research. *Journal of International Business Studies*, **42**, 740–762.
- Williams, D.R. (2014) Making sense of ‘place’: reflections on pluralism and positionality in place research. *Landscape and Urban Planning*, **131**, 74–82.
- Williams, A., Kennedy, S., Philipp, F., and Whiteman, G. (2017) Systems thinking: a review of sustainability management research. *Journal of Cleaner Production*, **148**, 866–881.
- Williams, A., Whiteman, G., and Kennedy, S. (2021) Cross-scale systemic resilience: implications for organization studies. *Business & Society*, **60**, 95–124.
- Woolliscroft, J. (2017) My place: hull. *Teaching Geography*, **42**, 116–117.
- Xu, J. and Grumbine, R.E. (2014) Building ecosystem resilience for climate change adaptation in the Asian highlands. *Wiley Interdisciplinary Reviews: Climate Change*, **5**, 709–718.
- Yang, J., Hurmelinna-Laukkanen, P., Sharma, A., and Westerlund, M. (2021) Value appropriation and innovation collaboration dynamics: a review and research agenda. *International Journal of Innovation Management*, **25**, 2140007.
- Yin, R.K. (2003) *Case Study Research: Design and Methods*. Thousand Oaks, CA: Sage Publications.
- Yin, D., Ming, X., and Zhang, X. (2020) Sustainable and smart product innovation ecosystem: an integrative status review and future perspectives. *Journal of Cleaner Production*, **274**, 123005.
- Zahra, S.A. and Nambisan, S. (2012) Entrepreneurship and strategic thinking in business ecosystems. *Business Horizons*, **55**, 219–229.
- Zhang, J. and Liang, X.-J. (2011) Business ecosystem strategies of mobile network operators in the 3G era: the case of China mobile. *Telecommunications Policy*, **35**, 156–171.

Tulin Dzhengiz is a Lecturer (Assistant Professor) in Sustainability at the Department of Strategy Enterprise Sustainability at Manchester Metropolitan University. She is interested in researching inter-organisational relationships, including collaborations, strategic alliances, partnerships, innovation and entrepreneurial ecosystems, and industrial clusters in the context of sustainability and circular economy. She has published in various journals such as the *International Journal of Management Reviews*, *Business Strategy and the Environment*, *Journal of Business Ethics*, and *Sustainability*.

Samuli Patala is an Assistant Professor at the Aalto University, School of Business. His research focuses on ecosystems and partnerships for sustainable development, circular economy governance as well as institutional change processes during sustainability transitions.