Drivers for SMEs participation in entrepreneurial ecosystems: evidence from health tech ecosystem in Northern Finland

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Abstract

Purpose – The entrepreneurial ecosystem (EE) literature is dominated by conceptual studies with insufficient theoretical foundations and empirical evidence on the micro-level. This study aims to explore the largely overlooked question of what the drivers that motivate small and medium-sized enterprises (SMEs) to participate in an ecosystem are.

Design/methodology/approach – The study adopts a qualitative exploratory approach. The empirical data consists of 19 semi-structured interviews with top management of SMEs in the health tech ecosystem in Finland. The data were analyzed using a thematic content analysis.

Findings – This study reveals a typology of drivers that motivate SMEs to participate in an ecosystem. These include social drivers (networking and cooperation and communication and knowledge sharing), resource drivers (access to resources, formal and informal support and market access) and cognitive drivers (shared goals and common values).

Research limitations/implications – The study contributes to the EE research by highlighting the drivers that motivate health tech SMEs to become members of the local ecosystem. It suggests that managers and entrepreneurs need to be aware of the factors related to social, resource and cognitive drivers to ensure the future success of their business.

Originality/value – The study draws evidence from a micro-level perspective which enriches the understanding of the EE phenomenon. It also explores an increasingly relevant but under-researched field, the health tech ecosystem.

Keywords Entrepreneurial ecosystems, Social drivers, Resource drivers, Cognitive drivers, Health technology

Paper type Research paper

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1. Introduction

The entrepreneurial ecosystem (EE) continues to gain popularity among scholars, policymakers and practitioners (Kansheba and Wald, 2020). In general, EE is described as the outcome-oriented sets of actors and factors that enable productive entrepreneurship in a particular territory (Stam, 2015). A thriving ecosystem enables entrepreneurs to identify untapped market niches and draw on local resources to grow new ventures into globally competitive firms (Spigel and Harrison, 2018). The potential reason for the exponential growth of research in this field is its focus on the interrelated aspects of entrepreneurship, thus providing a holistic approach to entrepreneurship. Moreover, in EE research, emphasis is given to the systemic conditions of entrepreneurship instead of personality-based explanations (Spigel and Harrison, 2018).

EEs are useful in analyzing the dynamics of new venture formation and other entrepreneurial activities within specific geographical locations (Subrahmanya and Hillemane, 2020). For policymakers, the EE approach offers insights into designing policies favoring a high level of entrepreneurship that further generate employment and economic growth (Stam and van de Ven, 2021). Overall, the EE literature aims to explain (ambitious) entrepreneurship and it often narrows this entrepreneurship down to "high-growth firms," claiming that this type of entrepreneurship is an essential source of innovation, productivity, growth and employment (Mason and Brown, 2014). EEs thus represent important and topical phenomena from economic and societal perspectives (Stam and van de Ven, 2021).

However, despite the increasing research interest in EEs, some important aspects still require further exploration. Firstly, EEs have been analyzed on different levels to determine the interactions within these systems (Simatupang *et al.*, 2015; Spigel, 2017). Nevertheless, existing studies have primarily been conducted on the macro or meso level, and from a structural perspective, to examine how the EEs are constructed on a national or regional scale (see, e.g. Cunningham *et al.*, 2019; Malecki, 2018; Spigel, 2017). Current EE research lacks proper theoretical micro-foundations that are needed to understand better the co-evolution of actors with EEs and their connection with the resulting forms of entrepreneurship in their community (Wurth *et al.*, 2021). Furthermore, more research is needed to enrich our understanding of EEs by employing micro (individual, firm, or meta-organizational) level data (Kansheba and Wald, 2021).

In relation to this, the previous literature has largely ignored what motivates and encourages different stakeholders to engage and participate in entrepreneurial activities within a particular ecosystem. More knowledge of the actual drivers that induce companies to engage, participate and operate in the EE is thus needed. Entrepreneurs are, indeed, the key actors in the EE (Spigel and Harrison, 2018) and understanding their behavior and the reasons for them to engage in the local ecosystem provides an important and novel understanding of the EE dynamics.

Furthermore, several scholars, such as Spigel (2017) and De Brito and Leitão (2021) pinpoint that as our understanding of EEs is still incomplete and conceptual studies mostly dominate the field, there is a need for more empirical research on the phenomenon. Specifically, there is a need for empirical studies in diverse and strategically important sectors (Kansheba and Wald, 2020). Health technology represents this emerging, highly relevant and fast-growing business field that can offer various novel business opportunities for diverse actors. Health tech SMEs in particular can be seen as innovative and growth-seeking companies that could benefit from operating in the EE. Therefore, this study focuses on health tech SMEs as they provide a fruitful context to study the different, less-known aspects of EEs.

To fill the above-mentioned research gaps, this study adopts a micro-level perspective and empirically explores the drivers that motivate health tech SMEs as focal EE actors to engage in the ecosystem. The study aims to answer the following research question: *What kinds of drivers motivate SMEs to engage in the Finnish health tech ecosystem?* To answer this

question, our study employs existing EE literature to form a loose theoretical frame to explore the drivers for engagement in an EE. The empirical part of the study includes qualitative exploratory research that examines the phenomenon both extensively and in-depth. The empirical context of this study is the ecosystem built around health technology in the fast-developing district in Northern Finland. The data consists of 19 semi-structured interviews with the managers of health tech SMEs and other archival material. The present study contributes to EE research by highlighting the drivers that motivate health tech SMEs to become members of the local ecosystem. Furthermore, we bring a micro-level perspective to EE research and explore the phenomenon empirically in a rarely studied, yet essential and timely context.

2. Literature review

2.1 The EE metaphor

Entrepreneurial behaviors are the outcome of attitudes, desires and opportunities embedded in a certain context in which people work and live (Szerb *et al.*, 2013). Consequently, the entrepreneurial environment impacts the types of SMEs that are created (necessity or opportunistic) and how quickly they grow (Isenberg, 2010). Although biological symbiotic relationship perspectives provide useful insights, Kuckertz (2019) argues that EEs (being complex adaptive systems) exhibit far more distinctive features beyond those natural ecosystems such as forests and other living habitats. However, the vital role played by the natural ecosystems management literature toward theorizing the EE phenomenon cannot be neglected (Hwang and Horowitt, 2012). Building from the natural science perspective, Kuckertz (2019) describes EE as a complex agglomeration of regional entrepreneurial activities and various forms of informal and formal supports to benefit its large economic and societal environment. Thus, EEs are composed of interconnected entrepreneurial actors, entrepreneurial organizations (e.g. firms, venture capitalists, business angels, incubators and banks), institutions (universities, public sector agencies and financial bodies) and entrepreneurial processes that connect, mediate and govern the performance within the local entrepreneurial environment (Mason and Brown, 2014). In this study, we focus on SMEs to be able to concentrate on certain EE participants that are one of the key actors in the EE (Spigel and Harrison, 2018) and this way acquire an in-depth understanding of the micro-level issues still less understood in the EE.

Vibrant EEs, such as Silicon Valley in the USA and Tel Aviv in Israel, have been well-known for their notable contributions to entrepreneurship and economic growth. In addition, Cunningham *et al.* (2019) pointed out that by fostering competitive advantages and value among firms and sectors, EEs ultimately shape regional innovation outcomes and speed up innovations and innovativeness among the members. Entrepreneurial stakeholders, particularly entrepreneurs, normally have several motives other than economic resources for being members of EEs. Members of EEs also benefit from potential non-economic (e.g. social) motives that emanate from agglomerations and networks of coexistence of both entrepreneurial firms and other supporting actors such as government agents, universities and financial and research institutions. Thus, EEs act as habitats for both nascent, high-growth and innovative SMEs by in-housing critical tangible and intangible resources necessary for entrepreneurial processes (Tabas *et al.*, 2020).

Unlike the old concepts of clusters, industrial districts and regional innovation systems, which place little concern on entrepreneurs and SMEs, the concept of EE lays emphasis on the entrepreneurs' centric view (Kansheba, 2020). This view places entrepreneurs and their related SMEs as the focal actors responsible for initializing and undertaking entrepreneurial processes and activities while other actors provide supportive services to ensure the success of such entrepreneurial activities (Kuckertz, 2019; Nicotra *et al.*, 2018). Cowell *et al.* (2018) pointed out

that entrepreneurial processes and activities emerge in complex systems with multiple integrated actors. The EE phenomenon has been used to expound on the embedded interconnections between entrepreneurs and other stakeholders and how such interactions shape entrepreneurship routines and performance (Bischoff *et al.*, 2018; Theodoraki *et al.*, 2018).

2.2 The drivers for participating in an EE

A systemic entrepreneurship that is self-sustained requires a supportive environment (a vibrant and healthy ecosystem) which necessitates frequent and effective participation and engagement from members of such an ecosystem who think alike (Kuckertz, 2019). However, the extant literature has mainly focused on identifying relevant components, stakeholders and embedded interactions that define a particular EE (Colombo *et al.*, 2019). In this study, we seek to explore an overlooked question of the drivers of SMEs as focal EE actors to engage and actively commit to a certain ecosystem.

Entering or exiting an ecosystem is attributed to the perceived benefits and (or) costs to members of such ecosystems. As EEs are characterized by formal and informal networks, they have the potential to create several opportunities that influence the behavior of their members (Isenberg, 2010). These opportunities include easy access to resources and strengthening member relations and trust, increasing firms' survival due to economies of scale (Theodoraki *et al.*, 2018). SMEs' participation in the ecosystem results in discovering and creating new business opportunities (Nambisan *et al.*, 2018) as they implement open innovations to benefit from the inflow of external and internal knowledge (Gassmann *et al.*, 2010). Moreover, firms gain access to information on markets, customers, distributors and regulations (Banc and Messeghem, 2020). As contended by Kansheba and Wald (2020), firms within EEs enjoy additional benefits beyond their resources and capabilities due to shared risks and resources. In relation to this, Roundy and Bayer (2019) argue that to manage resource dependencies properly in the EE different strategies should be adopted to mitigate risk and obtain resources.

In their study of how EEs take form, Thompson *et al.* (2018) argue that SMEs' actions and decisions within EEs are induced by endogenous influences such as cultural cognition, resources, interactions and exogenous influences such as governmental support. Advocates of EE governance (Kuckertz, 2019; Spigel, 2017) posit that EEs emerge from the actors' intrinsic motivations and self-regulation with few targeted or political triggers (Feld, 2012). Thus, individual views and personal judgments on potential drivers such as access to critical resources and support define and shape actors' decisions within such ecosystems.

Firms in an EE amalgamate their complementary skills, capabilities and resources, which finally encourage innovation and new value creation between themselves. However, participation in an ecosystem differ from one firm to another depending on the heterogeneous interests, motives and expectations of such ecosystems (Nicotra *et al.*, 2018). For instance, while some firms engage in an ecosystem to maximize their economic profits, others look for prestige and social recognition (Cowell *et al.*, 2018). Thus, understanding the diverse drivers that induce firms (and other players) to engage in an ecosystem is crucial and enlightens our theorizing regarding EE functionality. SMEs' participation in an EE is also largely influenced by their experiences with it. Isenberg (2010) argues that as SMEs legitimize themselves and establish social networks by interacting with other members, it becomes easier for them to harness critical entrepreneurial resources offered by such an EE than those not involved (Spigel and Harrison, 2018). Furthermore, EE actors (e.g. SMEs) may become reluctant to exert maximum participation in the ecosystem if the costs associated with it (such as resources and time spent) exceed the perceived benefits derived from it (Bischoff *et al.*, 2018). Thus, in this study, we focus on exploring various drivers for health tech SMEs to engage and commit to an ecosystem. The health tech context was chosen as it represents a novel, societally important and fast-growing business field that has scarcely been researched in the EE literature.

3. Methodology

To address our research question, we adopted a qualitative exploratory approach (Gephart, 2004). The advantage of qualitative methods in exploratory research is that they enable the handling of the research topic in a flexible and inductive manner, which is critical in revealing an emerging phenomenon (Mack *et al.*, 2005). Besides, qualitative methods allow researchers to emphasize the qualities of the entities and explore the phenomenon at hand in a holistic way (Denzin and Lincoln, 2008).

3.1 Data collection

Finland is known as a small giant in medical technology and is home to over 300 companies operating in the health tech sector (Health-tech Finland, 2019). Health tech is the second largest sector in Finland which accounts for more than half of Finland's technology exports, making it a highly important business field with an aggregate turnover of about 2.6 billion euros (Health-tech Finland, 2019). The empirical data for this study was collected from the OuluHealth ecosystem that offers products or services to nearly 3 billion people worldwide.

We used purposive sampling to identify suitable SMEs in the health tech ecosystem to be explored in this study. Purposive sampling helps the researcher identify and select information-rich informants for in-depth examination, which was the primary rationale behind choosing purposeful sampling over random or theoretical sampling techniques. The selection process was based on the following criteria to ensure versatile and comprehensive data. First, SMEs were selected following the definition of the European Commission: "Micro, small and medium-sized enterprises (SMEs) refer to enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding 50 million euros, and/or an annual balance sheet total not exceeding 43 million euro" (EU, 2003/361/EC, 2003). Second, the selected SMEs were from the health tech sector, which includes companies from MedTech and health services. Third, SMEs at different stages of growth were selected following Scott and Bruce's (1987) defined stages of growth in small businesses. The study benefits from selecting SMEs to varying stages of growth because it gives more detailed information about SMEs' motivations to engage in the ecosystem. The first category of SMEs is at the initial stage, in which companies have recently started their business and are searching for internal and external funding to enhance their business. The second category of companies is at the growth stage, where companies from the domestic market are searching for other markets to sell their products and services. Finally, the companies in the expansion stage are developing their business in international markets through various sales channels. The common denominator for all SMEs was their ambitions to grow and develop their business.

Initially, the researchers identified the SMEs from the OuluHealth ecosystem website where the potential interviewees' contact information was found. The top management of the selected companies were chosen to be interviewed because they make the major strategic decisions for companies to engage in the ecosystem and can best reflect on their business development. The researchers contacted 50 SMEs and finally conducted 19 interviews in the same EE. The selection of 19 interviews was based on category saturation (Corbin and Strauss, 2008), meaning that the interviews with representatives of companies continued until they yielded relatively few new insights. Table 1 provides an overview of the respondents.

A semi-structured interview protocol was used to collect data. A total of 17 interviews were conducted face-to-face and two online. The interviews started by asking general questions about the informants and the company background, followed by more detailed questions such as what motivates their company to engage in the ecosystem, why they find it relevant, and how they collaborate/compete with other ecosystem members. The interviews were audio-recorded with permission and later transcribed word-for-word, resulting in over 200 pages of transcriptions. All the interviews were in English and ranged from 47 to

Company	Role	Size	Duration	Method	Stage of business growth
SME3	CEO	Small	47 min	Face-to-face	Initial stage
SME13	Executive vice president and international sales	Small	63 min	Face-to-face	
SME11	CEO	Small	76 min	Face-to-face	
SME9	CEO	Small	58 min	Face-to-face	
SME4	Managing director	Small	76 min	Face-to-face	
SME17	CEO	Small	76 min	Face-to-face	Growth stage
SME12	CEO	Small	59 min	Face-to-face	
SME16	Quality and regulatory specialist	Small	76 min	Online	
SME6	CEO	Small	57 min	Face-to-face	
SME8	CEO	Small	77 min	Face-to-face	
SME10	CEO	Small	63 min	Face-to-face	
SME1	CEO	Small	69 min	Face-to-face	
SME7	CEO	Small	64 min	Face-to-face	
SME15	Vice president, sales and marketing	Small	47 min	Face-to-face	
SME18	CEO	Medium	73 min	Online	
SME2	CEO		90 min	Face-to-face	Expansion stage
SME14	CEO	Medium	62 min	Face-to-face	
SME5	CEO	Medium	90 min	Face-to-face	
SME19	CEO	Medium	53 min	Face-to-face	

Table 1.
Overview respondents

90 minutes. Apart from the primary data, the interview data was triangulated with secondary data (e.g. information from the websites, press releases and literature on these topics) providing a general understanding of the health tech business and the companies' operations.

3.2 Data analysis

In analyzing the data, we followed the three-step process method proposed by Gioia *et al.* (2013) to ensure "qualitative rigor" in conducting and presenting our research. The approach relies on the notion of knowledgeable actors who actively construct their reality and can explain their thoughts, intentions and actions (Gioia *et al.*, 2013). Initially, the research team read through all the raw data (e.g. interview transcripts) several times to get familiar with the data and selected interesting phrases and passages. In the second round, common words and phrases were coded from the data, which led to the generation of first-order codes. Second-order themes emerged as the researchers further grouped the first-order codes around a collection of categories that allowed data to be viewed at a higher level of abstraction. Several themes were generated, and similar themes were combined, which generated seven second-order themes. Finally, the similarities and differences between the second-order themes were investigated to determine the aggregate dimensions. The resulting data structure is illustrated in Figure 1.

4. Findings and discussion

Based on our empirical data, this chapter presents the results of various drivers that motivated the SMEs to engage in the EE. We identified several specific aspects (first-order codes in Figure 1) that constitute the drivers of SMEs engaging in the health tech ecosystem. These are further classified into seven main categories (second-order themes): networking and cooperation, communication and knowledge sharing, access to resources, formal and informal support, access to markets, shared goals and common values. The seven themes

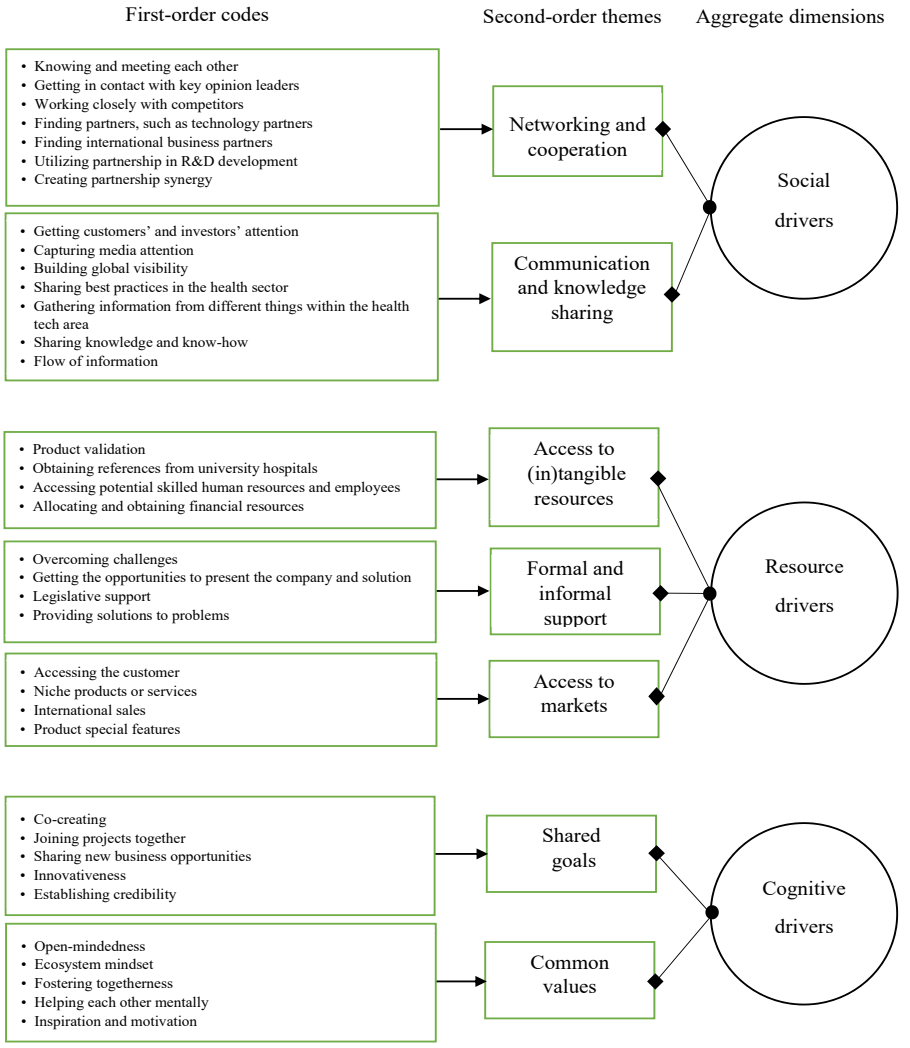

Figure 1.
Data structure

comprehensively describe the drivers for the health tech SMEs to engage and participate in the ecosystem and can be further categorized into three main drivers (at an aggregate-level): social, resource and cognitive. Many aspects are highly intertwined and partly overlapping but present the various vital facets of the phenomenon under scrutiny.

4.1 Social drivers

We start by discussing the social drivers that refer to different socially oriented factors that induced and motivated the studied SMEs to engage and participate in the EE (see Figure 1). Social aspects are associated with networks with a range of actors who participate in EEs and the social drivers here represent the social links between various actors such as SMEs, departments, groups, or individuals. Based on our data, the ecosystem provides SMEs with

networking and collaboration opportunities and *communication and knowledge sharing* with other SMEs that are identified as key social drivers and will be next discussed in detail.

4.1.1 Networking and cooperation. Networking and cooperation are closely intertwined concepts and were identified among the interviewed SMEs as one of the major drivers related to EE. This is in line with De Brito and Leitão (2021) suggesting that active networking is crucial especially for SMEs. It was highlighted that having companies from various areas of the health sector in one place is valuable, as it leads the companies to learn from each other. Having contacts and/or collaboration with companies in well-established positions and having high credibility in the healthcare field may be vital for the survival of SMEs, as it helps them to gain credibility in the eyes of the other companies (such as potential customers) in the EE (Cunningham *et al.*, 2019; Isenberg, 2010). Networking may also guide the companies in what to produce, how to produce, and for whom to produce. Thus, in line with the study of Kansheba and Wald (2020), the companies in our study saw networking and cooperation as key benefits that motivated them to engage in the health tech ecosystem and be active members. This was explained by one of the respondents as follows:

> We would not be here without our ecosystem, and no company would go anywhere without an ecosystem. You start to produce something nobody wants or understands if you are not networking with others. (SME4)

Closely related to networking and cooperation, the partners in an ecosystem can act as essential sources of technology, market and customer knowledge. By enabling a diversity of tacit knowledge to be mobilized, an ecosystem can also help speed up innovation and improve customer service. The interviewees emphasized the importance of finding and establishing different types of partnerships, e.g. with technological partners, and utilizing partnerships in R&D development due to their scarce resources. This was explained by another of the respondents as follows:

> The ecosystem is beneficial for us in a way that it provides an opportunity for us to find partners, such as technology partners. We have a lot of collaboration that is essential to us. (SME14)

Although companies benefit from developing partnerships, not all partnerships may end with good results and in some cases, they may result in the failure of the business. Exploiting business opportunities in the ecosystem requires entrepreneurial insight coupled with strategic thinking. Therefore, choosing the right partners for cooperation at the right time can be challenging. One of the respondents explained,

> One of the critical challenges is trying to understand whom you should partner with. Who is the one that is big now and who is the one that might be big tomorrow? Are you betting on suitable horses? Because there are tons of horses out there. Because of resource constraints, specialist companies cannot take on more horses. So, you need to bet on the right one. (SME2)

To sum up, cooperation in partnerships that companies can acquire through networking in the ecosystem provides various multifaceted advantages and is thus an important factor for the company's business and success.

4.1.2 Communication and knowledge sharing. According to our data, communication and knowledge sharing are key drivers for SMEs to engage and participate in the EE. SMEs benefit from being members of the ecosystem as they can regularly access needed information and share knowledge. This is in line with previous research (e.g. Bischoff *et al.*, 2018) suggesting that knowledge sharing in different forms can be highly beneficial for companies in an EE. Furthermore, active participation in the ecosystem reduces information and communication asymmetry because all partners can constantly communicate. Based on our data, accessing an accurate flow of information at the right time was seen as very important. One of the respondents expressed this as follows:

> In the ecosystem, we talk a lot about how to carry out distribution, how to get regulation acceptance, and how to use cheap resources. Those discussions have massive value for us. (SME12).

EEs, particularly the health tech ecosystem, is a knowledge-rich environment due to the existence of various diverse stakeholders. Firms can learn from each other's expertise and receive references that, in the case of the health tech ecosystem, can help them to get medical-sector approval and sell their products. Additionally, the more established firms can share their experience and best practices with the younger SMEs, as the quotation below describes:

> I regularly share information about my company and my activities with the network. If I see someone in my network who needs help, I try to give support. I have many years of experience in the health business, and I know many people, various stakeholders in the medical ecosystem. I positively use my links, ethically and morally, because I want to help. (SME10)

In relation to communication, the EE can help the companies involved gain visibility in many ways. For instance, by spreading information, the EE may help companies attend entrepreneurship-focused workshops and events, such as hackathons and boot camps, and in this way help to gain visibility in the eyes of potential customers and investors. In addition, our data support the findings of Subrahmanya and Hillemane (2020) in that sometimes just being a member of a particular ecosystem may help get attention from those outside the ecosystem, such as the media. This was explained by one of the respondents as follows:

> We get much interest from outside; investors, media companies and partners contacting us [. . .] It would be challenging to do all that without being a part of the ecosystem. (SME13)

Hence, different forms of active communication and knowledge sharing are substantial drivers for SMEs. Utilizing the other health tech-related actors' knowledge base and open communication can be invaluable for smaller and larger companies involved in an EE.

4.2 Resource drivers

Secondly, resource drivers refer to those resource benefits the SMEs can gain from participating in the EE (see Figure 1). These include actual *access to resources*, both tangible (such as product validation, skilled employees and financial resources) and intangible (such as information or tacit knowledge). Furthermore, resource drivers include *formal and informal support* received from the EE and *access to markets*, both national and international. These three types of drivers are described in the following.

4.2.1 Access to resources. Based on our data, health tech ecosystems offer SMEs access to various resources. SMEs can benefit from factors emanating from networks of coexistence, entrepreneurial firms, and other supporting actors such as government agents, universities, financial and research institutions. Most of the health tech companies in Finland come from regions with university hospitals and these can help SMEs in their various stages of growth. In the initial product validation stage, SMEs may utilize test labs to validate their ideas and test product usability. Furthermore, SMEs may gain references from university hospitals for their product validation. In the later stages, the university hospitals are often the first customers to which the SMEs can sell their products and improve them before going to the international markets. One of the interviewees explained the benefits of a university hospital for the health tech SME in Finland as follows:

> In Finland, 96% of the revenue for selling health tech products comes from a region with a university hospital. A university hospital is an essential part of the ecosystem [. . .] A university hospital provides a lot of clinical know-how and a clinical network for companies developing medical equipment and medical devices. It is a good opportunity for companies to study their idea for possible clinical evidence. (SME10)

Skilled employees are important for new and fast-developing SMEs. Developing high-class competence takes time and effort that may be obtained through the help of the ecosystem. Many of the respondents in our data highlighted that the EE provides companies with access to skilled human resources. For instance one respondent noted:

> My dream company is . . . I would like to have talented and highly motivated young people who would like to conquer the world with our product so that they are not afraid of going to the USA, Europe or Russia. (SME10)

The partnership and collaboration among the companies are not limited only to the companies producing complementary products or services. Instead, SMEs also utilize their competitors and their resources because, due to scarce or sometimes lacking resources, they need this kind of "coopetition" (see, e.g. Lundgren-Henriksson and Kock, 2016) to be able to deliver the final products or services to the end-users. This coopetition can be highly useful from both the individual SMEs' and the whole ecosystem's perspectives. For example, one of the respondents explained:

> We have collaborated with competitors and the collaboration started from our side, which has been running for many years. Our partnership is because we could not provide the whole product by ourselves and still needed a part of the solution from a third party. (SME2)

Hence, the EE can be a very important source of different resources for health tech SMEs.

4.2.2 Formal and informal support. Companies may be motivated to engage in the ecosystem based on self-interests or external reasons such as obtaining various types of formal and informal support from the ecosystem (Kuckertz, 2019). In our case, young companies typically engaged the EE to overcome the liability of newness (Kuratko *et al.*, 2017). One big challenge for a company in the health tech ecosystem is to acquire regulatory certificates. Our data suggest that the SMEs obtained various types of legislative support from the ecosystem, as the following quotation implies:

> The ecosystem gives us training and guidance regarding legislation. We can still be a small company and get those targets and documentation. For example, if a new regulation on medical devices comes into force specially tailored for health sector devices, we can get help with it. (SME15)

Some respondents pointed out that the ecosystem has a kind of "helping each other" mentality that was highly important. With the help of the ecosystem, SMEs can also get answers to their questions and even concrete solutions to their business problems. This can be one critical driver that motivates SMEs to participate and operate in the ecosystem. As one respondent noted:

> There have been cases when we have had some issues and challenges. We have been finding the answer to our question through direct help or these contact networks in the ecosystem. (SME11)

4.2.3 Access to the market. Based on our data, one major challenge for SMEs in the Finnish health tech sector is access to domestic and international markets. The local market is too small, and accessing the international market is not easy for health tech SMEs due to various types of regulations in different countries (see also Tabas and Komulainen, 2020). Finnish SMEs are very good at developing new and innovative products and services but have difficulties selling them. Often, they need help from the ecosystem to access new customers, as illustrated by the following quotation:

> As a small Finnish company, we need to have help from other companies to get access to customers. It is a bit easier through the more established partners. (SME6)

Moreover, due to specific features of health tech products and services, it is vital for companies to target international markets. Therefore, health tech SMEs in most cases need to

develop internationalization strategies to access global markets to survive and grow their business. This was noted by one of the respondents who pointed out the following:

> We have a niche solution. When you have something niche you will see the limit much quicker. For example, we have limited markets in Finland, and if we want to grow, we must grow outside Finland. One of the main benefits is that the market is much bigger. One of the super benefits is that it also brings security to our business. (SME18)

4.3 Cognitive drivers

In the context of entrepreneurship, the cognitive aspects refer to how firms attempt to make sense of the complex world around them, i.e. how they think, reason, decide and use information (Baron, 1998). In the health tech ecosystem, they can be seen to refer for example to shared beliefs, values, attitudes, missions and perceptions. Based on our data, the development of *shared goals* and *common values* can aid SMEs in developing their business with the help of the ecosystem around them (see Figure 1). Besides their individual goals, the ecosystem members thus need to work together to achieve their goals. This means that SMEs need to change their attitude from individually centric to ecosystem centric views to be able to realize the full potential of the ecosystem.

4.3.1 Shared goals. Shared goals are one critical aspect that keeps the ecosystem together and working (Theodoraki *et al.*, 2018; Thompson *et al.*, 2018). Based on our data, this includes various aspects such as co-creating, engaging in projects together, sharing new business ideas, and innovativeness between the ecosystem members. In the studied ecosystem, there are several different companies and research institutions specialized in different areas of the health sector. The ecosystem leads them to share some of their best practices and know-how as well as learn from each other, as discussed earlier. By enabling a diversity of tacit knowledge to be mobilized, an ecosystem can help speed up innovations and innovativeness among the members (Malecki, 2018). By collaborating and co-creating value, companies can achieve innovations they could not do alone, as the following quotation illustrates:

> The ecosystem is a combination of researchers, universities, companies, medical science departments, national research institutions, etc. [. . .] The ultimate way is that some players come together and create something, many being new things that you would not be able to do alone as a company or as a researcher. (SME16)

We further found that members of the ecosystem know that they need to align their individual goals with that of the ecosystem. As argued by Isenberg (2010), companies need to know where in the ecosystem they exist and how to develop their position and relationships within the EE. Our findings indicate the attempts of companies to set a common goal and follow a particular business model where their products complement each other's offerings. Thus, the EE can become a significant source of innovation if the diverse types of expertise and knowledge involved can be harnessed toward shared goals. The following quotation illustrates this view:

> I think it is most challenging to align the goals. To have business goals that support each other. But this is also the most rewarding. If we can do that then we can do all the technological stuff. We can provide all the services, if we get a business goal and business model that complement each other and amplify each other that is where it all starts. (SME5)

4.3.2 Common values. Our data support the previous research that SMEs are adopting an open ecosystem approach to benefit from the inflow of external and internal knowledge (Gassmann *et al.*, 2010). Due to the rapidly changing business environment, customers are increasingly demanding complex, integrated solutions rather than standardized products and services delivered in high volume. As an answer to this, the ecosystem opens

opportunities for SMEs to discover, create and pursue new business opportunities (Nambisan *et al.*, 2018). Having a more open-minded mindset is demonstrated in the following quotation:

> We believe in open-innovation thinking. We do not believe in a walled garden approach [. . .] I think history has proven that the walled-garden strategy did not work because you will never be able to build a complete solution that satisfies the customers' needs by yourself. (SME2)

Working and creating value together was a massive benefit among the interviewed SMEs. There are an increasing number of joint projects between SMEs, research organizations and hospitals where information is shared openly between different parties. Companies saw this as beneficial for everybody, as the next quotation reveals:

> I have been trying to use this kind of attitude that 'okay, if I give something, I may get something in return when I have the need. (SME11)

Some interviewees emphasized the importance of following the ecosystem norms and especially not doing anything that could harm the ecosystem. This is closely related to an "ecosystem mindset" that stresses the aim for the common good, mutual respect, trust and working together. It became evident that the ecosystem aids in fostering togetherness and trust. This sentiment was explained as follows:

> I think together we can be stronger. I need to have a network behind me. I cannot do it on my own. One plus one is more than two. (SME15)

In the ecosystem, the participants are bonded by shared interests and purposes and care about developing and nurturing the ecosystem. The SMEs expect each other to follow ecosystem goals and values by considering fair business. However, any wrongdoing will also be responded to by other ecosystem members and may have significant consequences in some cases. This was explained by one of the respondents, who stated:

> If you start misbehaving towards the other member, of course it is possible that you will be excluded. (SME13)

To summarize, companies are increasingly collaborating and aiming at win-win situations instead of keeping information and business ideas to themselves. Based on the data in this study, health tech SMEs felt that they gained a lot of inspiration and motivation by participating in an EE. If somebody sees a business opportunity share it with other ecosystem members. This kind of openness is gaining ground in health tech ecosystems, which is valuable for all the companies involved (see also Spigel and Harrison, 2018).

5. Conclusions

The purpose of this research was to explore the drivers of SMEs to participate in a health tech ecosystem. In answer to the research question, our study identified different social, resource and cognitive drivers that motivated SMEs to engage in an ecosystem (see Figure 1). First, social drivers included benefits related to networking and cooperation as well as communication and knowledge sharing involving different aspects related to social interaction between the ecosystem actors that help to grow and develop their business. Second, resource drivers referred to access to resources, formal and informal support and market access. These are the benefits the SMEs could gain from participating in the EE as they were exchanging both tangible and intangible resources with other ecosystem actors. Furthermore, simultaneous cooperation and competition (i.e. coopetition) between the SMEs enabled them to leverage the complementary resources more effectively which in turn helped the overall success of the industry (Lundgren-Henriksson and Kock, 2016). Finally, cognitive drivers were related to shared goals and common values of the actors in the ecosystem.

The common denominator for these is that they cognitively improved the company's business opportunities by helping them to acquire and exchange relevant information and know-how in the ecosystem.

Altogether, these findings aggregate different drivers that influenced and motivated the companies we studied to participate in the EE, which provides valuable implications for both scholars and practitioners. These implications are discussed next.

5.1 Theoretical contributions

Firstly, we enhance the theorization and a better understanding of EE functionality by exploring the largely under-researched phenomenon, namely drivers for SME participation in EEs. Some studies have touched on the topic and recognized some advantageous features of EEs in general (see, e.g. Cowell *et al.*, 2018; Kuratko *et al.*, 2017) but our study extends and deepens the existing knowledge by systematically examining and identifying comprehensive and explicit typology of drivers related to EEs that can be widely applied in future studies and practice.

Secondly, research on EEs has been dominated mainly by conceptual studies (see, e.g. Isenberg, 2010; Stam, 2015) and therefore, recent studies (e.g. De Brito and Leitão, 2021; Kansheba and Wald, 2020; Spigel, 2017) have called for more empirical research on the phenomenon. Specifically, research in the context of the health tech sector is scarce or even non-existent in the previous research, although it represents a growingly important business field both in Finland and globally. This study fills these gaps and provides empirically grounded results of what drives SMEs in the health tech sector to participate in EEs. In relation to this, our findings support the previous EE literature suggesting that political triggers do not seem to play a significant role in influencing the companies' decisions to engage in an EE (e.g. Feld, 2012; Spigel, 2017). Instead, social drivers (related to aspects such as networking and knowledge sharing), the possibility to exchange diverse resources and cognitive factors such as shared goals and common values seem to play a more significant role in motivating companies to engage and participate in the EE. Although the resource-related factors have been recognized at some level in previous research (e.g. Kansheba and Wald, 2020; Roundy and Bayer, 2019), our study found that the social and cognitive drivers also play an important role in motivating SMEs to engage in the EE, specifically in the health tech context. This brings forward that the non-concrete and non-economic factors often ignored or underestimated in the extant research still might have a massive role in the SMEs' decision making in relation to EEs.

Thirdly, previous EE research has mainly focused on the macro- or meso-levels (see, e.g. Cunningham *et al.*, 2019; Malecki, 2018; Wurth *et al.*, 2021) and there is a lack of research focusing on how focal actors (entrepreneurs and SMEs) behave and shape EEs on a micro-level. In relation to this, De Brito and Leitão (2021) argue that micro-perspectives can provide a richer understanding of EE dynamics. More specifically, focusing on the micro-level helps to understand better the evolution of actors within EEs and their relationship in forming entrepreneurship in a community (Wurth *et al.*, 2021). In line with this, our study suggests that looking at the ecosystem from a micro-level perspective is very useful as it provides a more detailed and accurate picture of the EE and its dynamics, for instance in relation to its formation, development and success factors.

Fourthly, our findings support the study by Nicotra *et al.* (2018) in that the interests and motives of actors are heterogeneous, which in turn influences their participation in an ecosystem. Our study emphasizes the individual and heterogeneous nature of motivational drivers of SMEs and suggests that different stakeholders emphasize different reasons for their engagement in the EE and these reasons may change in time as both the SMEs and the EE evolve. This implies that there is a link between the drivers and the context. For instance,

based on our empirical study, the firm size and stage of the business growth affect the ambition the companies have and what they expect from the EE. For example, for the small and young SMEs, the expertise, reputation and formal and informal support of the more established SMEs are critically important drivers to engage and participate in the EE. On the other hand, more established SMEs can utilize their social networks to find new partners, gain access to skilled human resources or collaborate in R&D. However, what needs to be noted is that these are highly context-related issues depending on various changing factors in the EE and therefore, presenting any specific propositions related to the relationship between the certain drivers and the context is not possible based on our data. Instead, our study provides an in-depth understanding of why the individual actors engage in the ecosystem and further how they seek growth with the aid of the ecosystem. This is an important addition to the previous research as it aids in comprehending the functioning and dynamics of the EE also at a more general level.

Finally, related to the identified drivers, our findings support the study by Roundy and Bayer (2019) that calls upon the need to integrate the resource dependency perspectives in the existing EE framework. We found that SMEs are often driven to engage and actively participate in their ecosystems because of resource constraints. EEs are banks of resources that SMEs can leverage for their growth. Access to resources is also related to the speed of innovation as it can help to shorten the journey to the markets and improve the product to market fit. Hence EEs in the health sector can benefit the whole economy as they improve innovation potential. However, some fail to tap this potential due to a lack of required skills on how to harness available resources. Our study thus sheds light on the resource dependency and management of SMEs within and beyond existing EEs.

5.2 Managerial implications

The present study provides insights for entrepreneurs and managers of SMEs in terms of utilizing the knowledge of different types of drivers for participating in the health tech ecosystem. First, considering social drivers, it is evident that active networking and partnering with various actors (such as potential customers, key opinion leaders and competitors) within an ecosystem can prolong SMEs' survival rates by shaping their routines and operational decisions on what, how and for whom to produce. Actively participating in an EE can also open opportunities and help to find new international business partners, which can be highly valuable especially for SMEs at the initial stage of their business growth. In addition, visibility and access to information provide opportunities from the perspective of economies of scale where particularly SMEs can enjoy synergies of belonging to the EE.

Gaining increased attention in the eyes of different stakeholders both in national and global markets can be very important to SMEs as well as utilizing the other actors' know-how, information flows and open communication. Thus, entrepreneurs and managers need to be aware of and pay careful attention to these socially oriented factors, as they can be critical drivers for them to engage and participate in an EE. If they are ignored, the firm may remain outside the ecosystem where its chances of survival alone can be poor. Furthermore, when managers recognize these social factors and their importance, it becomes easier to grasp the opportunities related to them when those arise in the EE. One important aspect here is to choose the right partners at the right time to be able to reach the set business goals.

Secondly, resource drivers are another important reason for health tech SMEs to participate in an EE. Access to different types of tangible and intangible resources, support in diverse forms, and access to new local and international markets are examples of notable drivers. SMEs in vibrant ecosystems can easily navigate the valley of liability of newness from the support obtained from established actors and their resources. Established firms can help new SMEs to extend their market niches by integrating them into their networks.

Therefore, health tech SMEs managers need to recognize their most critical resources and plan how to utilize those EE resources as effectively and efficiently as possible.

Thirdly, ecosystems are fertile soils for SMEs where cognitive drivers are highlighted. Companies can work, co-create value, collaborate and join projects together and help each other to accomplish common goals. Co-creation in an EE often leads to sharing new business ideas and increasing innovativeness, which further creates inspiration and business opportunities for companies participating in the EE. To utilize these cognitive factors, managers need to be open to collaboration and ready to reciprocally share their expertise and resources with other actors in the EE.

5.3 Limitations and future research

This study has some limitations that may also inspire future research. First, our empirical data are collected from health technology SMEs in a local health tech ecosystem in Northern Finland. Although this context (health technology) is relevant and interesting due to the many business opportunities and growth possibilities it offers for SMEs in domestic and international markets (see Tabas and Komulainen, 2020), it also has some limitations. This kind of specific business sector has unique characteristics, such as the sensitive nature of the business and strict regulative control, and therefore, our results cannot be generalized as such to other types of business contexts. However, we believe this study provides a good starting point for understanding the drivers for SME's participation in EEs. For generalization purposes, future research could study other industries and different contexts to enrich our insights. In addition, future research could further explore the drivers of different actors and use quantitative methods to study the causal connections between different concepts.

Moreover, this study is cross-sectional and presented a snapshot of the studied ecosystem. We call for longitudinal studies to understand the dynamics of the studied phenomenon, as EEs form, evolve and develop over time. Therefore, a longitudinal study exploring the same companies in the EE for several years and perhaps having more representatives from each of them, could deepen the understanding of the dynamics of drivers.

References

Banc, C. and Messeghem, K. (2020), "Discovering the entrepreneurial micro-ecosystem: the case of a corporate accelerator", *Thunderbird International Business Review*, Vol. 62 No. 5, pp. 593-605.

Baron, R.A. (1998), "Cognitive mechanisms in entrepreneurship: why and when entrepreneurs think differently than other people", *Journal of Business Venturing*, Vol. 13 No. 4, pp. 275-294.

Bischoff, K., Volkmann, C.K. and Audretsch, D.B. (2018), "Stakeholder collaboration in entrepreneurship education: an analysis of the entrepreneurial ecosystems of European higher educational institutions", *The Journal of Technology Transfer*, Vol. 43 No. 1, pp. 20-46.

Colombo, M.G., Dagnino, G.B., Lehmann, E.E. and Salmador, M. (2019), "The governance of entrepreneurial ecosystems", *Small Business Economics*, Vol. 52 No. 2, pp. 419-428.

Corbin, J. and Strauss, A. (2008), *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*, Sage Publications, Thousand Oaks, CA.

Cowell, M., Lyon-Hill, S. and Tate, S. (2018), "It takes all kinds: understanding diverse entrepreneurial ecosystems", *Journal of Enterprising Communities: People and Places in the Global Economy*, Vol. 12 No. 2, pp. 178-198.

Cunningham, J.A., Menter, M. and Wirsching, K. (2019), "Entrepreneurial ecosystem governance: a principal investigator-centered governance framework", *Small Business Economics*, Vol. 52 No. 2, pp. 545-562.

De Brito, S. and Leitão, J. (2021), "Mapping and defining entrepreneurial ecosystems: a systematic literature review", *Knowledge Management Research and Practice*, Vol. 19 No. 1, pp. 21-42.

Denzin, N.K. and Lincoln, Y.S. (2008), *The Landscape of Qualitative Research*, 3rd ed., Sage Publication, Thousanks Oaks, CA.

EU 2003/361/EC (2003), "Commission recommendation 2003/361/EC of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises", *Official Journal of the European Union*, Vol. 124 No. 36, pp. 36-41.

Feld, B. (2012), *Startup Communities. Building an Entrepreneurial Ecosystem in Your City*, John Wiley & Sons, Hoboken, NJ.

Gassmann, O., Enkel, E. and Chesbrough, H. (2010), "The future of open innovation", *R&D Management*, Vol. 40 No. 3, pp. 213-221.

Gephart, R.P.J. (2004), "Qualitative research and the academy of management journal", *Academy of Management Journal*, Vol. 47 No. 4, pp. 454-462.

Gioia, D.A., Corley, K.G. and Hamilton, A.L. (2013), "Seeking qualitative rigor in inductive research: notes on the Gioia methodology", *Organizational Research Methods*, Vol. 16 No. 1, pp. 15-31.

Health Tech Finland (2019), "Health tech Finland", available at: http://healthtech.citrus.dev/en/healthtech-industry-finland (accessed 2021).

Hwang, V.W. and Horowitt, G. (2012), *The Rainforest: the Secret to Building the Next Silicon Valley*, Regenwald Publishers, London.

Isenberg, D. (2010), "The big idea: how to start an entrepreneurial revolution", *Harvard Business Review*, Vol. 88 No. 6, pp. 40-50.

Kansheba, J.M.P. (2020), "Small business and entrepreneurship in Africa: the nexus of entrepreneurial ecosystems and productive entrepreneurship", *Small Enterprise Research*, Vol. 27 No. 2, pp. 110-124.

Kansheba, J.M.P. and Wald, A. (2020), "Entrepreneurial ecosystems: a systematic literature review and research agenda", *Journal of Small Business and Enterprise Development*, Vol. 27 No. 6, pp. 943-964.

Kansheba, J. and Wald, A.E. (2021), "Entrepreneurial ecosystems quality and productive entrepreneurship: entrepreneurial attitude as a mediator in early stage and high-growth activities", *Journal of Small Business and Enterprise Development*, Vol. 29 No. 2, pp. 311-329.

Kuckertz, A. (2019), "Let's take the entrepreneurial ecosystem metaphor seriously", *Journal of Business Venturing Insights*, Vol. 11, e00124.

Kuratko, D.F., Fisher, G., Bloodgood, J.M. and Hornsby, J.S. (2017), "The paradox of new venture legitimation within an entrepreneurial ecosystem", *Small Business Economics*, Vol. 6 No. 1, pp. 119-140.

Lundgren-Henriksson, E.L. and Kock, S. (2016), "A sensemaking perspective on coopetition", *Industrial Marketing Management*, Vol. 57, pp. 97-108.

Mack, N., Woodsong, C., Macqueen, K.M., Guest, G. and Namey, E. (2005), *Qualitative Research Methods: A Data Collector's Field Guide*, Family Health International, Research Triangle Park, NC.

Malecki, E.J. (2018), "Entrepreneurship and entrepreneurial ecosystems", *Geography Compass*, Vol. 12 No. 3, pp. 1-21.

Mason, C. and Brown, R. (2014), "Entrepreneurial ecosystems and growth oriented entrepreneurship", *Final Report to OECD*, Vol. 30 No. 1, pp. 77-102, Paris.

Nambisan, S., Siegel, D. and Kenney, M. (2018), "On open innovation, platforms, and entrepreneurship", *Strategic Entrepreneurship Journal*, Vol. 12 No. 3, pp. 354-368.

Nicotra, M., Romano, M., Del Giudice, M. and Schillaci, C.E. (2018), "The causal relation between entrepreneurial ecosystem and productive entrepreneurship: a measurement framework", *The Journal of Technology Transfer*, Vol. 43 No. 3, pp. 640-673.

Roundy, P.T. and Bayer, M.A. (2019), "To bridge or buffer? A resource dependence theory of nascent entrepreneurial ecosystems", *Journal of Entrepreneurship in Emerging Economies*, Vol. 11 No. 4, pp. 550-575.

Scott, M. and Bruce, R. (1987), "Five stages of growth in small business", *Long Range Planning*, Vol. 20 No. 3, pp. 45-52.

Simatupang, T.M., Schwab, A. and Lantu, D.C. (2015), "Introduction: building sustainable entrepreneurship ecosystems", *International Journal of Entrepreneurship and Small Business*, Vol. 26 No. 4, pp. 389-398.

Spigel, B. (2017), "The relational organization of entrepreneurship ecosystems", *Entrepreneurship Theory and Practice*, Vol. 41 No. 1, pp. 49-72.

Spigel, B. and Harrison, R. (2018), "Toward a process theory of entrepreneurial ecosystems", *Strategic Entrepreneurship Journal*, Vol. 12 No. 1, pp. 151-168.

Stam, E. (2015), "Entrepreneurial ecosystems and regional policy: a sympathetic critique", *European Planning Studies*, Vol. 23 No. 9, pp. 1759-1769.

Stam, E. and van de Ven, A. (2021), "Entrepreneurial ecosystem elements", *Small Business Economics*, Vol. 56, pp. 809-832, doi: 10.1007/s11187-019-00270-6.

Subrahmanya, B. and Hillemane, M. (2020), "Entrepreneurial ecosystem for tech start-ups in Bangalore: an exploration of structure and gap", *Journal of Small Business and Enterprise Development*, Vol. 27 No. 7, pp. 1167-1185.

Szerb, L.A., Acs, Z. and Autio, E. (2013), "Entrepreneurship and policy: the national system of entrepreneurship in the European Union and in its member countries", *Entrepreneurship Research Journal*, Vol. 3 No. 1, pp. 9-34.

Tabas, A.M. and Komulainen, H. (2020), "The role of entrepreneurial ecosystem in the internationalisation of high growth SMEs in health technology business", *Journal of Emerging Trends in Marketing and Management*, Vol. I Nos 1/2020, pp. 32-42.

Tabas, A.M., Komulainen, H. and Arslan, A. (2020), "Internationalisation in entrepreneurial ecosystem and innovation system literature: a systematic review", *International Journal of Export Marketing*, Vol. 3 No. 4, pp. 314-334.

Theodoraki, C., Messeghem, K. and Rice, M.P. (2018), "A social capital approach to the development of sustainable entrepreneurial ecosystems: an explorative study", *Small Business Economics*, Vol. 51 No. 1, pp. 153-170.

Thompson, T.A., Purdy, J.M. and Ventresca, M.J. (2018), "How entrepreneurial ecosystems take form: evidence from social impact initiatives in Seattle", *Strategic Entrepreneurship Journal*, Vol. 12 No. 1, pp. 96-116.

Wurth, B., Stam, E. and Spigel, B. (2021), "Toward an entrepreneurial ecosystem research program", *Entrepreneurship Theory and Practice*, Vol. 25 No. 1, pp. 107-125, doi: 10.1177/1042258721998948.

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