

Full conference paper

THE INNOMEDIARY ROLE OF UNIVERSITY IN START-UP ECOSYSTEMS

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INTRODUCTION

Start-up companies are increasingly growing by exploiting disruptive ideas and recent digital technologies. As of November 2018, there are about 9,000 innovative start-ups in Italy, leading the employment rate to grow up above 5% per semester, with about 40,000 shareholders and over 12,000 employees (Sole 24 Ore, 2018).

The work starts by some considerations on the relationship between entrepreneurship and academia: once upon a time at University little was said about how to become an entrepreneur. Indeed, management professors conveyed students' attention towards becoming a good consultant or working in big companies and introduced them to the major instruments and dynamics of financial institutions.; on the other hand, students wanted to become sector managers, analysts, bank directors. Nobody or few students attended university to learn how to start a new business venture.

Recently something has changed: professors teach not only the theory and the principles of entrepreneurship but also its ecosystem. They invite entrepreneurs and businessmen during academic course and lots of entrepreneurs share their own experience with students. Focus on lean start-ups, entrepreneurship weekends, and business modelling competitions are just some of the examples of this approach (Paço et al., 2016; Kuratko and Morris, 2018).

However, data on students and entrepreneurs are quite contrasting: on one hand there is an estimate of a research (Unioncamere, 2013) where it is stated that only one out of seven new companies registered with the Camera di Commercio (the Italian Chamber of Commerce) in 2013, only one has a graduate as founder. On the other hand, in favour of the probable relationship between academic skills and companies, there is the new Italian normative for setting up a start-up: currently, the Italian law it is required that at least 2/3 of the team has a master degree or at least 1/3 holds – or is about to hold – a PhD to register an innovative start-up (Registro delle Imprese, 2019).

Many scholars investigated the growing phenomenon of start-ups in last decade (Petretto, 2009; Davila, 2010; Blank, 2013; Cohen, 2014) highlighting the most relevant features as the drivers of success (Scagnelli et al., 2018), the control systems (Samagaio et al., 2018), and the role of actors in shaping the start-up ecosystem (Sipola et al., 2016).

Therefore, this research aims at grasping some more meaning on start-up ecosystem, by infusing the concept of innomediaries (Mele & Russo-Spena, 2015); more in detail, due to the focus on universities, the aim is to verify if and how universities can be meant as innomediaries in the start-up ecosystem.

The remainder of this paper is structured as follows: a literature review on start-up ecosystem and the role of universities is offered and partnered by literature on innomediaries. Then, a multiple case study is performed on the start-up ecosystem listed by Genome Report, leading to offer insights from the empirical context. Considerations on the role of universities in this kind of ecosystem are proposed, favouring theoretical and

practical implications of this research. The paper ends up with limitations and suggestions for further research.

LITERATURE REVIEW

Start-up ecosystem

The notion of start-up ecosystem originates from the pioneering definition of business ecosystem provided by Moore (1996) and describes the context offering the opportunities to start new business ventures due to an impressive encouraging of entrepreneurship (Bala Subrahmanya, 2017). Indeed, empirical investigations had already showed the positive impact on both new ventures and maturing of running firms (Aleisa, 2013; Hernández & González, 2016). Additionally, the notion of start-up ecosystem emerged as a zooming-in of the entrepreneurial ecosystem and Bala Subrahmanya (2017) represented it as the development of a business context, leading to an increase in both production and employment. More in detail, the same author described a start-up ecosystem as a dynamic context formed by people and start-ups in a system offering chances to create new business ventures; this definition complemented the theoretical proposal by Lauzikas et al. (2015) considering a start-up ecosystem as shaped by internal and external dimensions supporting the development of new ventures. The internal dimension consists of start-ups, employees, and the community network, while the external dimension groups events, programs, funding for investments, educational institutions, the society, and governmental institutions). This perspective was somewhat expanded by Sipola et al. (2016) when considering start-up ecosystems' outcomes also as either the creation of international ventures or the failure of transitions to business. Anyhow, they framed this ecosystem as a process featured by contextual factors, a temporal dimension, and renewal mechanisms. Local actors and business competence are the most relevant contextual factors, the prior economic history and policies as well as the newness of start-ups outline the temporal dimension, while institutions and their dynamism, and the role of failure lead to the renewal mechanisms. Competence, policies, and the institutional dynamism can be observed in incubators and accelerators as initiatives favouring either the emerging or the maturity of start-ups (Josh & Satyanarayana, 2014); moreover, incubators and accelerators are considered as key agents of a start-up ecosystem and the wider entrepreneurship community (Hernández & González, 2016), whose growth is based also on out-of-the-ordinary events, as TechMeet-up, Open Coffee Club, Start-Up Weekend, and so on (Hernández & González, 2016; Paço et al., 2016; Fraiberg, 2017). These new approaches represent stimuli for entrepreneurs, interesting research issues, but most of all they give fluidity to start-up ecosystems, favouring the permeability of new competence, additional actors, and new ways of doing. These elements are all needed in an innovation-oriented context (Fraiberg, 2017), but further research has been called for to depict how the activities of start-up communities can be improved (Manaba et al., 2019), how accelerators' members can impact on the start-up ecosystems (Cohen et al., 2019), and how universities can further stimulate entrepreneurship (Knop and Odlanicka-Poczobutt, 2018).

Innomediaries

Start-up companies constantly deal with innovation (Josh & Satyanarayana, 2014; Bala Subrahmanya, 2017; Fraiberg, 2017) and since they act in a multi-actor context, they are exposed to several innovation carrier, apart from being themselves innovators. Innovation

studies focused on agents and parties carrying and sharing knowledge to favour innovation, therefore scholars started proposing the concept of mediated innovation. Firstly, Sawhney et al. (2002) defined the third-party actors acting as mediators who facilitate innovation as “innomediaries”. Additionally, they categorized them based on the firms they support and identified three actions, namely connection, recombination, and dissemination of ideas to favour innovation. On the other hand, Vanhaverbeke and Cloudt (2014) framed innomediaries in the paradigm of open innovation; more in detail, they considered the advantages of mediation for innovation as favouring new trajectories of innovation, as well as a way to make innovation-oriented transactions more efficient. Similarly, Vanhaverbeke et al. (2014) questioned how a firm should be organized to get the most from innomediaries in terms of effectiveness. Further, innomediaries are a new market actor favouring the co-creation of innovation and the research by Mele and Russo-Spena (2015) described their role through a practice-based approach, highlighting engaging, exploring, exploiting, and orchestrating as the ways enabling resource exchange and integration. Engaging is a way to build connections in social networks, while exploring lever on knowledge and creativity in networks. This knowledge is fully exploited in the third practice through modifying and extending solutions, and finally orchestrating is the definition of alignment and linkage of actors to achieve innovation and overcome the contextual divides. Differently, other authors focused on the main goals of innomediaries, namely problematizing what firms need and open ways to look for a suitable solution in a network of actors (Chen et al., 2016). More recently, Lee (2018) described the increasing relevance of innomediaries due to the wider adoption of open innovation approaches helping firms in finding solutions in an open source environment.

RESEARCH PROCESS

This research aims at applying the notion of innomediaries to start-up ecosystem in order to understand actors’ impact as in the call for research by Cohen et al. (2019). With such an aim, the authors analysed the Startup Ecosystem Report (2018) issued by Genome and set an exploratory research project based on multiple case studies, in line with the choice of Hernández and González (2016) when dealing with the same topic. 15/54

The case studies we selected are the start-up ecosystems all over the world, as listed by Genome. Therefore, 54 start-up ecosystems have been considered, regardless of the phase of the lifecycle they mostly care about. The information provided in the report have been partnered by other sources available online, in order to better describe the role of actors and to be aligned with the notion of ecosystem. The additional sources considered are websites and reports of National Governments, website, documents, and reports of firms shaping the ecosystem, start-ups tracking back their evolutions and so on. Some examples are: the Dutch Ministry of Economic Affairs, technology-based companies in the US, business angels in Singapore, start-ups in Australia, and so on.

All in all, particular attention has been devoted to universities in such ecosystems, due to specific calls for research (e.g., Knop and Odlanicka-Poczobutt, 2018) to depict their activities through the four practices on innomediaries (Mele and Russo-Spena, 2015).

FINDINGS

The findings of our analysis will be presented in the following table (Table 1) and lines by adopting the practice-based view as in the paper dealing with innomediaries by Mele and Russo-Spena (2015). Therefore, engaging, exploring, exploiting, and orchestrating are the four practices used in depicting the start-up ecosystems listed by Genome.

Table 1 – The four practices in the Genome Start-up Ecosystems: some evidences

Practices	Example 1	Example 2
Engaging	<p>Silicon Valley:</p> <p><i>Startups have access to talent (Stanford University, UC Berkeley and USCF), capital, plus numerous investors and mentors</i></p>	<p>Stockholm:</p> <p><i>Companies have access to top talent from some of Europe's top ranking universities, such as the Stockholm School of Economics, Karolinska Institutet and Royal Institute of Technology (KTH).</i></p>
Exploring	<p>Seattle:</p> <p><i>Microsoft and Amazon, both headquartered in the Seattle region, have been the source of numerous spinoff companies directly (such as Expedia). This record has given the region a rich genealogy of startups that become scaleups, be getting more startups.</i></p>	<p>Singapore:</p> <p><i>Singapore is rated as the second best country to conduct business globally. Singapore now recognises engineers are valued and should learn from Silicon Valley's practices</i></p>
Exploiting	<p>Amsterdam:</p> <p><i>Startups can gain access to corporates across every sector. Nearly 200 multinationals have their European headquarters in Amsterdam, including Netflix, Uber, Tesla, and Salesforce.</i></p>	<p>Berlin:</p> <p><i>Berlin is home to more AI companies than any other German ecosystem and involve about 5,000 people. But Berlin ecosystem attracts entrepreneurs and talent from all over the world and from different contexts, basing on factors like essentials, openness, and recreation.</i></p>
Orchestrating	<p>Sidney:</p> <p><i>The region's many universities draw tens of thousands of international students, providing a good testing ground for Edtech startups. Sydney-based Smart Sparrow, an online learning design platform</i></p>	<p>Singapore:</p> <p><i>Singapore is rated as the second best country to conduct business globally.</i></p>

Source: own elaboration from multiple sources

Engaging:

Exploring:

Through the practice of exploring, the innovative actors of start-up ecosystems in certain contexts are invited to operate also in different contexts

“Singapore and Silicon Valley share a unique quality, they are magnets for talent across the globe. Magic is sparked when people from different backgrounds come together to solve a problem.”

Vinnie Lauria Managing Partner at Golden Gate Ventures

Exploiting:

The start-up ecosystems as an innomediary carry out the concept of exploiting because they make knowledge matured in a specific context that can also be used in other contexts.

“Amsterdam is a very open city with the most nationalities in one place in Europe. The combination of highly educated people and liveable wages results in an amazing work and life culture.”

(Nils Beers Director at StartupDelta)

Orchestrating:

The innomediary performs the function of orchestrating as they create rules, dynamics to allow alignment, harmony between different contexts in order to help collaborations and therefore other engaging, exploratory, exploiting practices.

Sydney Startup Hub has incubators, accelerators, and coworking spaces. It is complemented by the Building Partnerships grants, which assist revenue-generating startups scale through acquisitions.

DISCUSSION

The practice-based approach highlighted universities as one of the key actors in the start-up ecosystem; additionally, the four practices have been useful in describing the roles universities can have in a start-up ecosystem. We are aware that ecosystems are different one another and they are constantly changing due to their nature, anyway, we can highlight some patterns emerging from the analysis.

Universities are particularly relevant in relation with two of the four practices, namely engaging and orchestrating: as it regards the practice of engaging, universities are in direct touch with talents and their efforts are addressed at making them interested in supporting new ventures. Specific programs, courses, special events, and creative meetings are the most common ways to make people interested in the market opportunities favouring the rise up of new start-ups. Existing start-ups themselves are a way to inspire new ideas and to set a fertile ground favouring the interests of future start-uppers. As it concerns orchestrating, universities are conveying start-ups towards the right partners and contexts; indeed, universities are designing and launching incubating and accelerating initiatives to support the recently born start-ups. The role of universities in incubators and accelerators stands on creating relationships and coordinating the efforts of the various actors needed to achieve the right set of actors to properly support start-ups.

IMPLICATIONS

The encouraging effect for start-uppers and start-ups as theorized by Bala Subrahmanya (2017) is confirmed, but emerges as a result of the involvement of universities; indeed, universities have the advantage to be in touch with potential entrepreneurs as students are, as well as with start-uppers already running a business, thus an overall perspective can be acquired and fertilization among actors can be supported.

Moreover, the practice-based approach helped in understanding what universities are actually doing to favour entrepreneurship: universities are not acting on their own to support start-ups, thus the external dimension – as proposed by Lauzikas et al. (2015) – showed its relevance and its intricacy, being dependent on a wide range of actors. These actors are shaping the start-up ecosystem and creating the out-of-the-ordinary events stressed by Hernández & González (2016) and they represent an answer to the call for solutions on what start-ups need to further advance (Chen et al., 2016). Due to this, the actors encouraging the emerging of innovative ideas in a business context can be clearly defined as innomediaries, since they bridge the gap between firms-to-be and the remainder of the ecosystem. Universities can figure out this bridge and facilitate innovation and this outcome can be achieved even by allowing a higher level of effectiveness (Vanhaverbeke et al., 2014), since they can identify solutions (Lee, 2018) and co-create them in the ecosystem. In this vein, universities are innomediaries, therefore this analysis represents a first step towards the understanding of actors' roles in start-up ecosystems, in line with the call for research by Cohen et al. (2019).

On a practical perspective, this research is suggesting additional efforts to be performed by universities in acting as innomediaries; indeed, their support to exploring and exploiting is not as strong as it is for exploring and orchestrating. Thus, universities can increase the benefits of their acting as innomediaries by adopting specific initiatives aiming at identifying market spaces where start-ups can flourish and where useful relationships can be found to decrease the risk of premature failure of new ventures projects. Similarly, a closer support to firms is required, since this is problem the most complicated stage of a start-up and of a start-up ecosystem, due to the concrete issues to be faced. Thus, universities should be ready in setting guidelines and actions to be used in supporting start-ups when the innovation has to be exploited and turn an idea into a firm.

LIMITATIONS AND FURTHER RESEARCH

This research is based on a qualitative analysis of reports, documents, and information issued by ecosystems' actors and shared online. Therefore, further research can add some more information by addressing questions to some of the actors of these start-up ecosystems to acquire detailed clarifications on some evidences. Moreover, the documents and sources we used are issued by very different actors, thus on one hand this is an advantage since the ecosystem-based perspective is based on the wide range of actors shaping them, while, on the other hand, some comparisons can't be properly done due to the variety of approaches. Finally, a longitudinal analysis can enforce the results we attained by observing the effectiveness of some interventions and offer additional insights on how universities are supporting start-ups.

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