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Gateways to Digital Entrepreneurship: Investigating the Organizing Logics for Digital Startups

ABSTRACT

Business incubators are institutions that link capital, competence and entrepreneurial talent with a goal to accelerate business development. While experiencing a set of institutional pressures, incubators navigate their environment and find different means to assist startups in exploitation of entrepreneurial opportunities. We conducted a multiple case study of incubators in Sweden in which we: (1) distinguish four different incubation modes, with the reference to institutional logics and entrepreneurial opportunities; (2) identify key barriers and gateways for entrepreneurship that leads to digital products and services; (3) and show how the plural logics identified in the incubator context are not necessarily logics in conflict, but rather complementing each other at an aggregate level.

Keywords: Incubation, Entrepreneurship, Institutional Logics, Digital Entrepreneurship, Digital Innovation

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INTRODUCTION

Incubators have emerged as a means by which firms can be developed from initial conception through to becoming established and ready to move beyond the incubator confines. Recently, with increasing digitalization and growing importance of the internet economy (Manyika, Hazan, Bughin, Chui, & Said, 2011), a new type of digital incubators appeared, that is not only conducive to the "hatching" and development of new firms (Chan & Lau, 2005) but also develops products and services that are exclusively digital.

While there is a significant literature on incubator dynamics (Dettwiler, Lindelöf, & Löfsten, 2006; Lee & Osteryoung, 2004; Rothaermel & Thursby, 2005) there is a paucity of studies addressing incubators specifically dealing with digital startups. We argue that digital entrepreneurship is different from other forms of entrepreneurship in that it is focused on "move-to-market" more than anything else. Similar to the notion of lean startups (Ries, 2011), we argue that the emergence of digital entrepreneurship generates profound changes in a firm's organizing logic and innovation trajectory where speed in the process is critical. This raises some fundamental questions – how are incubation processes for digital startups carried out, and what are the organizing logics for such digital startups?

To address these questions, we develop a conceptual framework to characterize the organizing logics of digital entrepreneurship. A key feature for the formation of new knowledge in any field is the inevitable presence of diverse institutional logics – a variety of material routines, cultures, and values that influence the behavior (e.g. Thornton, Ocasio, & Lounsbury, 2012). The

institutional logics perspective provides a possibility for exploration of the factors that characterize the organizing logics of digital entrepreneurship, and how it shapes organizational action (Thornton & Ocasio, 2008) in the context of incubators. The larger institutional context shapes individuals' behavior (Thornton & Ocasio, 2008). As such, in line with other studies building on an institutional lens (e.g. Berente & Yoo, 2011) we argue that the incubators are influenced by multiple dissimilar logics. When multiple dissimilar logics simultaneously inform an actor, this is referred to as institutional complexity (Greenwood et al., 2011). While such complexity does not necessarily entail that logics are contradictory, "complexity is amplified by the divergence between prescribed goals and means" of the logics involved (Greenwood et al., 2011, p. 334). Specifically, we use the institutional logics perspective to explore the *speed* with which a start-up moves through the incubation process, and the *specialization* of the incubator. The concepts of speed and specialization are fundamental in explaining success of digital startups. While specialization is important in explaining the business model/market fit (Javidan, 1998), and speed is central in markets where time-to-market is a key (Clausen & Korneliussen, 2012). Given their central roles in startup success, it is not surprising that research have investigated the application of speed and specialization across several studies (Heirman & Clarysse, 2007; Schwartz & Hornych, 2008). Some researchers suggest that the research efforts should be directed to exploring how incubator support is currently provided and what models are employed for that purpose (Bergek & Norrman, 2008).

Despite the increasing recognition of the importance of the incubation process for new venture creation, the focal point for scholars has been on issues such as the outputs of incubation. Little attention has been given to unpacking how the incubation process functions and the variables

associated with the incubation process. Drawing on an in-depth multiple case study research of digital incubators in Sweden, we explore the challenges associated with providing incubation support for such digital startups. The aim of this study is to understand the dynamics of digital entrepreneurship through addressing the concerns of speed and specialization in the incubation processes. In doing so, we analyze how start-ups are constrained by institutional logics. In order to address the above research questions, this study uses a qualitative research strategy and a multiple case study research design. Primary data were collected utilizing semi-structured interviews from incubator managers.

PLURAL LOGICS IN THE CONTEXT OF DIGITAL ENTREPRENEURSHIP

Digital Entrepreneurship

Digital startups have attracted a large public interest and also significant funding during the past few years. We define digital entrepreneurship as a domain that explores, analyzes and develops the ways in which digital startups seize entrepreneurial opportunities.

Existing conceptualizations of startups are diverse (Robehmed, 2013; Shontell, 2014), even though some general properties surface in most extant research: the startup is a firm that engages in entrepreneurial activities of high uncertainty (Ries, 2011), with undefined business model (Blank, 2013) and has higher innovation rate than incumbent firms (Criscuolo, Nicolaou, & Salter, 2012). Most importantly, startups are used as proxies that allow exploitation of entrepreneurial opportunities (Shane & Venkataraman, 2000) and therefore become critical nodes for entrepreneurial activities.

A key aspect of digital startups is that they are operating in the digital realm, providing products and services that are exclusively digital. Recent research has been explicit about fundamental

differences of digital technology as key resources compared to "traditional" resources in relation to issues such as copyright, taxation, economics, and strategy (Ku, 2002; Levén, Holmström, & Mathiassen, 2014; Manyika et al., 2011; Nylén & Holmström, 2015).

Another key aspect of digital startups is the focus on entrepreneurial opportunities (e.g. Eckhardt & Shane, 2003; Shane & Venkataraman, 2000) in that the digital startup scene is very much characterized by the ways in which individual entrepreneurs such as Jobs or Bezos have successfully pursued opportunities, or how entrepreneurial opportunities have been successfully pursued by digital startups such as Uber, Spotify and Airbnb. However, extant research on entrepreneurial opportunities is split on the core understanding of what constitutes an opportunity. The first stream of research, following the original definition proposed by Shane and Venkatamaran (2000), defines opportunities as objectively existing conditions favorable for entrepreneurial action and available for discovery. The second stream sees opportunities as the creation (Alvarez & Barney, 2007), enactment (Gartner, Carter, & Hills, 2003), or emergence (Dimov, 2007) of constructs, that come into being through the entrepreneur's sense-making and interaction with the environment. The third stream holds a middle ground describing opportunities as both "made as well as found" (Venkataraman, Sarasvathy, Dew, & Forster, 2012), or neither of two (Klein, 2008).

The nature of entrepreneurial opportunities in extant research is fiercely debated as different authors put different meanings into terms like "discovery" and "creation". For example, Gartner et al. (2003) when describing the discovery perspective emphasize the element of surprise in the entrepreneurial context. Meanwhile, Shane explicitly defines the discovery perspective as something that is purposefully "identified, evaluated and exploited" (Shane, 2012). Also, the debate between Ramoglou (2013) and Alvarez et al. (2014) brings forward the issue of ontology

in general and the appropriateness of using critical realism to analyze the ontology of opportunities in particular. Such a dispersion of definitions signals the need for additional scholarly efforts directed towards studies of entrepreneurship opportunities.

In contrast to the fierce disputes on the nature of entrepreneurial opportunities in extant entrepreneurship research, research on digital entrepreneurship has not been explicitly focused on entrepreneurial opportunities. Attempts made by researchers to tackle peculiarities of entrepreneurship in digital realm are either limited to the characteristics of the entrepreneurial activities (Davidson & Vaast, 2010; Hull, Hung, Hair, & Perotti, 2007), or touching the subject from related perspectives of innovation and options (e.g. Sambamurthy, Bharadwaj, & Grover, 2003; Yoo, Henfridsson, & Lyytinen, 2010). A detailed exploration of digital entrepreneurship through the application of the opportunities perspective should give new insights to the field and possibly provide better understanding of the phenomena of entrepreneurial opportunities. Moreover, incubation institutions - being at the grass roots of the entrepreneurial activity (Aernoudt, 2004) and the hosts for digital startups - should serve as a suitable contextual site for digital entrepreneurship research. While it has been recognized that the incubation process is critical for achieving incubation outcomes such as new venture creation (Patton et al., 2009) there is little consensus in the literature on the nature of the incubation process and some authors use different terminology across multiple studies (Hackett and Dilts, 2008). Moreover, the terms “incubation” and “incubation processes” are used interchangeably with other terms such as “incubation strategies” (Grimaldi and Grandi, 2005), “business development process” (Campbell et al., 1985) and “business assistance” (Hackett and Dilts, 2008, Rice, 2002) which has also fragmented the literature. The questions of how incubator support is currently provided, i.e. which incubator models that are used, and how different incubators differ in this respect is largely

neglected in extant research (Bergek & Norrman, 2008). Specifically, existing studies fail to account sufficiently for the incubation process within its regional context despite the recognition in the literature that the process is 'geographically anchored', drawing on external organizations to function (Bollingtoft and Ulhoi, 2005). The environment that is comprised of established norms, culture and expectations has been explored in detail by the institutional theory (Scott, 2014). Particularly, the stream of institutional logics has been revelatory in pointing to the environmental structures that guide organizational behavior. As such, in order to investigate the dynamics of speed and specialization in digital incubation processes we focus on the relationship between business incubators and its environment through turn to institutional logics as a theoretical framework.

Plural logics

Institutional logics are ''the socially constructed, historical patterns of material practices, assumptions, values, beliefs and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality'' (Thornton & Ocasio, 1999). Institutional logics, which are both material and cultural, comprise a highly contingent set of social norms that drives behavior by logic of appropriateness. Thus, institutional logics shape decision making and guide organizational actors to focus on a limited set of issues and solutions that are consistent with the prevailing logic and that determine salient issues and problems (Thornton, 2002).

An "institutional logic" has been described as follows:

> *[The logic associated with an institution is] a set of material practices and symbolic constructions – which constitutes its organizing principles and which is available to organizations and individuals to elaborate... These institutional logics are*

> *symbolically grounded, organizationally structured, politically defended, and technically and materially constrained. (Friedland & Alford, 1991)*

Much of the initial empirical research on logics tended to feature industry and field-level analyses, documenting the effects of logics as they shifted over time (e.g. Haveman & Rao, 1997; Lounsbury, 2002; Thornton, 2002; Thornton & Ocasio, 1999). For instance, Borum and Westenholz (1995) showed how an organization continuously integrated elements of new institutional logics into its organizational practice without fully discarding old ones. Alvarez et al. (2005) explored how movie producers tended to couple artistic pressures for distinctiveness with business pressures for profits in order to achieve optimal distinctiveness in the movie industry. Greenwood et al., (2010) showed how potentially incompatible demands stemming from plural institutional logics get worked out inside organizations. These studies have in common the core assumption of the institutional logics approach - that the interests, values and identities of individuals and organizations are embedded within prevailing institutional logics that enable and constrain the means and ends of their agency (Thornton & Ocasio, 2008).

While Friedland & Alford (1991) focus on institutional logics of broad, societal level institutions (i.e., capitalism, the state, democracy, family, religion, etc), the same construct can be applied to the taken for granted logics that guide action on a micro-level (Thornton & Ocasio, 2008). An institutional logic is something that can be induced from an institution and the manner in which individuals relate to that institution. As a fundamental component of institutional orders, logics are constructions that can be used to interpret, compare, and contrast institutional forces (Thornton & Ocasio, 2008). Empirically, this is typically illustrated by scholarly investigations of the impacts of a “dominant” logic in an institutional field, or by investigations of the transition from one dominant logic to another across a set of organizations (Lounsbury, 2007).

Friedland & Alford's (1991) view of institutional logics involves a multiplicity of institutional logics that are coexisting with each other, yet often in conflict. We find studies on plural logics in contexts such as the mutual fund industry (Lounsbury, 2007); the legal profession (Suddaby & Greenwood, 2005); regional banking (Marquis & Lounsbury, 2007), and a Canadian government agency (Townley, 2002). These studies show how conflicting logics are physically (geographically) separate in their practice (Lounsbury, 2007), comprised of distinct rhetorical practices (Suddaby & Greenwood, 2005) and rationalities (Townley, 2002), and result in novel forms of organizational resistance (Marquis & Lounsbury, 2007). As such, we find, that the conflicting logics can elucidate the organizational behaviors that are geographically bounded yet different in its rationality and practice. We use this theoretical framework in order to understand the processes of business incubation through addressing particular concerns of speed and specialization in the incubation processes.

RESEARCH METHODOLOGY

Research Context

The study is conducted in a mid-sized city in Sweden, where factors that contribute to entrepreneurship levels (e.g. new enterprises creation, barriers to entrepreneurship) are above or consistent with the OECD average (OECD, 2014). The city represents a strong regional industrial and knowledge hub, with diverse business sectors represented in the area. Three sectors largest by the employment levels are (in descending order) healthcare and social work, education, and mining and manufacturing (SCB, 2012). The information and communication technology industry has a smaller share, but has been growing 4 times faster than national average, thus becoming an important target for special policies and investments. The highly diverse environment in the city has been fertile for businesses of all sorts and has triggered establishment of eight incubation

organizations. These incubators are represented by both publicly and privately funded organizations, signaling strong governmental support of business incubation and economic growth in the region.

Data Collection

Qualitative case studies have a long tradition in IS research: they are particularly illuminative, if the case represents a critical, extreme, unique or revelatory event, context or situation (Klein & Myers, 1999). In this study, four different incubator modes were identified and studied, because of the extreme dissimilarities in their institutional logics. The incubator context presented an opportunity to analyze and theorize about how divergent practices struggle to coordinate their activities amidst conflicting logics. Specifically, the present study explored the complex issue for which individual interpretations were crucial and therefore called for qualitative generated data (Ritchie, Lewis, Nicholls, & Ormston, 2013). Generating data about processes requires methods that produce information rich in detail and conducive for deep analysis. In order to understand the organizational behaviors, we studied their communication with the public, which has been previously noted as a representation of organizational sense-making (Cooren, Kuhn, Cornelissen, & Clark, 2011). Such information included documents, mission statements, marketing materials, website descriptions of the incubators, and interviews with the employees in the media. Where it was possible, we conducted 8 in-depth semi-structured interviews. See description of the collected data in the table 1.

Insert Table 1 about here

Selection criteria for the sample were inspired by the incubation concept definition – as an institution that links capital, competence and entrepreneurial talent with a goal to accelerate business development (Grimaldi & Grandi, 2005). In that sense we followed stratified purposive sampling (Ritchie et al., 2013; Teddlie & Yu, 2007) and identified eight incubation organizations that fit the profile. In cases when organizations were not explicitly calling themselves "an incubator" but possessed all the qualities of such, we included them in the sample and here and after called them "incubators".

Data Analysis

With a purpose to understand the dynamics of digital entrepreneurship, our work had an objective to analyze business incubation practices in relation to speed and specialization. In order to achieve that we followed grounded theory approach (Strauss, 1987), inductively deriving meaning from the data and relating conceptualizations to the entrepreneurship and incubation literature. The coding was done in Atlas.ti qualitative data analysis software, where both generated and secondary data was processed within multiple iterations, until saturation was reached and no new evidence was coming from the data. During the analysis, Bergek and Norrman (2008) categories of business incubation were used in order to focus the research effort on the particular classes of action. Further, in order understand the institutional forces present in the cases, we have used the dimensions of institutional logics proposed by Thornton and colleagues (Thornton et al., 2012) and adopted for organizational studies by Berente and Yoo (2012). We have used the organizational **principles** to understand the central guiding ideals of the incubators. We identified

on what **assumptions** the organizational behavior is based and what are the **identities** exposed by the incubators, from which they rationalize their choices and actions.

RESULTS

This section displays the eight incubators. The main interest of this study is to understand the dynamics of digital entrepreneurship through the business incubation processes in relation to speed and specialization and these two elements are described here in detail. Other elements of the incubation process and characteristics of the incubators (e.g. sources of revenue, networks, settings) are important (Grimaldi & Grandi, 2005; Hackett & Dilts, 2004), but lay outside of the scope of this study.

The incubators differed significantly in the focal areas of their operations. During the data collection and analysis the results were structured following the Bergek and Norman's (2008) components the business incubation: selection, infrastructure, business support, mediation, and graduation. *Selection* is a process of attracting and accepting future tenants. *Business support* is a part of incubator model that is associated with training of entrepreneurs in the area of the business development. *Infrastructure* describes services provided by incubator that are not related to business development. *Mediation* is a process under which incubator is providing mediating support to start ups, connecting them with existing networks of partners, suppliers, other tenants, investors etc. Finally, *graduation* describes the processes that are related to the tenants' leave from the incubator.

Speed and Specialization in the Incubation Processes

The focal concerns of the incubators vary greatly. Some of the incubators represented a generic "free for all" environment with no preference for specific industries or technologies. Others,

however, are very specific about the startups that are expected to apply and the types of businesses that are developed in the incubators. To the same extent incubators vary in how their business support is focused on specific areas of expertise. As such, incubators expressed different level of specialization based on their inclination towards *general businesses, specific business sectors, and specific expertise*.

The incubators also differ greatly in terms of the speed of their operations. The most obvious difference is in the incubation time – the actual time that it takes to incubate startups and release them from the incubator. Among the selected companies there is a 12x difference between the shortest and longest periods of incubation. Besides that, incubators differ in the overall speed of the incubation: the admission process speed is related to the ways in which incubators handle the incubation admission process, how much time it takes to process applications, how complicated is the procedure. Business support process speed is the effort and time that is required for the incubator tenants to receive support services that are provided by the incubator. Mediation process speed is related to the time that is involved in connecting the tenants to the external partnership networks. Graduation processes include graduation assessment, criteria and exception rules (factors that would prolong graduation beyond the prescribed time). The speed of the incubation processes is assessed according to the three-point scale that represents their timeliness and flexibility: *reactive*, *mixed*, and *proactive.* The assessment of the speed and specialization of the incubation processes was used for creation of composite indices.

A Typology of Incubators

Using two composite indices of speed and specialization allowed us to map the eight incubators in that were investigated in this study (see figure 1). The matrix reflects different approaches towards

incubation processes and is assembled by assessing processes speed and inclination towards general business practice, specific business sectors, or specific expertise. What follows is a brief summary of the incubators and their characteristics.

Innovation Incubator is an established non-profit incubator that is located in the city science park. It has no clear specialization in any business sector, technology or expertise. The processes speed is low and reactive, no clear procedure involved in the incubation process. *Biotech Incubator* is another incubator situated in the science park. It is specialized on a specific business area and has a clear and rigid incubation process structure. The speed of incubation is the slowest among the studied population *Culture Incubator* is a recently founded incubator that resides at the university campus. With the vision to develop creative industries, it targets entrepreneurs in the cultural sector. Being founded by *Innovation Incubator* it provides similar services and incubation process to its tenants. *Design Incubator* is another incubator that focuses exclusively on the creative industries. *City Incubator* represents a traditional business incubator that accepts companies for early growth and acceleration. It has no particular vision in terms of specialization or focal industries. *Entrepreneurship Organization* provides mentorship program for nascent entrepreneurs with no particular focus but short incubation time. *Tech Accelerator* is an incubation division in the private company that is specializing on digital production. Their vision is to attract entrepreneurs at the very early stage of their concept development with potential buyout or investment. *Tech Incubator* is an incubator that is focused on the digital sector. In its vision it clearly expresses “digital innovation” as the field it is working in and the types of startups it expects to apply.

Incubator Dynamics: Four Different Modes

The incubators that were explored in the study were very different in terms of their incubation processes, degree, and area of focus, their speed of operations. By placing them on a matrix that reflects their speed and specialization (see figure 1), we were able to identify four distinct incubation modes present among the explored organizations.

Insert Figure 1 about here

The first identified incubation mode is *Regional innovation.* This mode manifested in inclusive selection practices, with incubators accepting entrepreneurs from different business sectors. Admitted entrepreneurs were provided with general business support, covering standard issues of business planning and development (e.g. accounting, marketing, intellectual property rights). During incubation and after, newly formed start-ups were mediated with the broad business network, e.g. potential investors and policy makers. *City Incubator* and *Innovation Incubator* followed this mode and abided by organizational **principles** that could be characterized as networking and scale. Both incubators relied on their scale for knowledge boundary spanning between startups, creating environments that (according to incubators) provide better outcomes for the entrepreneurs. Incubators also directed major efforts in finding advisors that can provide domain knowledge and access to the regional networks:

> *"Our business advisors allow [startups] to take quick steps forward and help [them] get in touch with the right people. […] Our network, which we have built up over more than 30 years, gives [startups] priority access to the right people, companies and organizations."*
>
> -Innovation incubator

Main **assumption** of the incubators was characterized by the integration with the regional supply networks. The incubators believed that the success of the incubators lies in their ability to find local customers, suppliers, and investors.

> *"We offer business coaching. We help them to build up the advisory boards, upon their need that are following them during these two years. And that is very good support that we found out, because through that advisory board they get both network and they get clients. Maybe, even a new owner!"*
>
> - City incubator

The assumption of the success through integration was a manifestation of the **identity** of the incubators, formed by their investors and perceived as a developer of regional innovation and entrepreneurship. This identity was partly a reaction to pressures from large governmental institutions, which are characterized by inclusive policies, large financing capabilities, bureaucratization of the processes with long response times and multiple (including non-financial) performance targets:

> *"But I think the main thing is for me is that when [entrepreneurs] are leaving [the incubator] that they are pleased with the time they have spent here, with what they learned, and with their personal goals that they have reached."*
>
> - City incubator

> *"The municipality has for many years invested considerable resources in attracting young people to start businesses. The municipality took the initiative […] and makes investments in [local incubators]."*
>
> - Press release

The *Cluster Innovation* mode is identified as dominant for a few incubators that could have been described as "specialized" in that the selection was focused on entrepreneurs within particular industries (e.g. fashion, design). The incubators provided services to the tenants relevant to their particular area, be it equipment or expertise. The mediation processes were also focused on the specific networks, linking tenants with the potential clients, partners and investors. That said, the

agility of the incubators was particularly low: the periods that startups remained in the incubators were extended and the procedure for them to graduate was loose and ill defined. *Culture Incubator, Design Incubator,* and *Biotech Incubator* were acting responding to institutional pressures for specialization and cluster formations in the region. These pressures can be tracked all the way up to "Framework Programs for Research and Technological Development" funded and created by the European Commission. These programs created institutional practices and beliefs that formed widespread support programs for clustering and specialization across European Union, including Sweden. Hence, the **principles** among the incubators formed in support of development of regional clusters:

> *"Through strengthening existing and developing new firms within the creative industries in parallel with developing and widening the market for creative competences, a sustainable industry without the use of costly intermediaries is supported."*
>
> - *EU EC Report, Culture incubator*

Further, the central **assumption** was a belief in success through deep specialization. That is, the business incubation can provide better support to the entrepreneurs by targeting specific knowledge areas. For example, here is how Culture incubator presents its value proposition:

> *"Here there will be workshops including 3D printers, water and laser cutters and a 5-axis gantry milling, audio and video studio, textile workshop, FabLab and modular workstations. [Culture incubator] has access to all this infrastructure."*
>
> *- Culture incubator*

The **identity** of incubators in Cluster innovation mode was inseparable from their domain areas. In the press releases, media appearances, conversations and reports, the perception of the domain leaders have driven decision-making and values, for example:

> *"[Biotech incubator] functions as a greenhouse for Life Science ideas where researchers can gather to verify and explore the commercial potential of their research. […] Our goal is to continue to provide fertile ground for Life Science businesses and generate more job opportunities in the region."*

- Biotech incubator

The third mode – *Career Innovation* – is defined by a low incubation process focus with a high operational agility. The selection in the identified incubator was directed at individual entrepreneurs and the business support services were rather general. The mediation support was absent or very superficial. On the other hand, incubation processes were highly agile, with streamlined procedures and short incubation periods. *Entrepreneurship Organization* responded to two different sets of pressures. First, the community recognizing serious challenges for employment (especially among minorities and youth) required institutional support for nascent entrepreneurs in fulfilling their aspirations and develop their careers, leading to guiding **principles** of talent development and support. These principles provided challenges for the organization:

> *"It has launched 600 businesses […] consisting of the so-called forced entrepreneurs and more growth-oriented innovative companies. [Entrepreneurship organization's] mission is to support companies in early stages regardless of the growth ambitions of the aspiring entrepreneur. […] the conditions are not the easiest given the distance to markets, availability of skilled labor or dynamic business."*
>
> *- Final report, Entrepreneurship organization*

Secondly, the desire of large funding organizations to have a larger pool of startups seeking funding provided the financial and institutional support for *Entrepreneurship Organization* to act with the **assumption** that initial support (pre-seed level) for the entrepreneurs leads to higher number of entrepreneurs in the region. *Entrepreneurship Organization* attempted to act proactively in reaching its goals to create new jobs, but due to the highly diverse applicant base it could not provide any in-depth or specialized support for the entrepreneurs. The **identity** of the *Entrepreneurship organization* as an actor that assists the community in creating employment and self-realization has proven to be difficult to reconcile with the increasing economic constrains and growing diversity of the citizen base. These and other factors, according to the final project report, lead to the failure of the project and termination of its operations.

The fourth mode among investigated incubators – *Digital Innovation* – is characterized by both high operational speed and high focus of incubator processes. The selection processes were fast and precise, focused on the startups that are explicitly digital in terms of their products & services. The business support is focused on building digital startups, providing expertise and coaching in the domain. The mediation incubation processes are focused and agile, quickly building a network for a newly graduated startup. This approach adopted by the *Tech Accelerator* and *Tech Incubator* manifested in the organizing **principles** of agility and commitment that transcended into the goals of the organizations:

> *"If you work with us, you should now that we take a lot of early risk, we want fast processes but we also have an ambition of being extremely clear when it comes to the decisions. Either we are all in, or we are not!"*
>
> *- Tech accelerator*

The beliefs shared by the professionals suggest the need to move extremely quickly through the incubation process, experimenting with the future product and searching for the niched core offering that will form the future company. The main **assumption** associated with the successful business incubation were pointing towards deep specialization and, once again, operational agility:

> *"The idea of [Tech incubator] is to stimulate the innovation with a very particular focus on the digital technology… and that is a huge area in and of itself or course […] But basically the idea is for us to be very focused innovation system focused on one thing: digital innovation. We would like to avoid extremely long time periods of, you know, "here you learn about writing a business plan and it will take 10 months". No, we have a completely different mindset!"*
>
> *-Tech Incubator*

The nature of the digital products and services makes them susceptible to global competition and requires a fast pace of the development and a high degree of innovation. These pressures translated into the **identity** of the incubators, establishing a vision of becoming innovators of the particular industrial domain and building products that are capable to compete internationally.

In this section we provided a detailed review of the eight incubation companies in relation to the main components of business incubation: selection, infrastructure, business support, mediation, and graduation. Further, we described a typology of the incubators making use of the key dimensions of the institutional logics: organizing principles, assumptions, and identities. In what next follows we present a critical discussion of the extant literature in light of the empirical findings.

DISCUSSION

This paper had the aim to understand the dynamics of digital entrepreneurship through addressing the concerns of speed and specialization in the incubation processes. In addressing this aim, we have identified four distinct incubation modes, which follow different trajectories, one of which is focused on digital entrepreneurship. In this vein, our findings illustrate different gateways to entrepreneurship and how multiple institutional logics can co-exist in a field, generating heterogeneity amongst actors and communities by imbuing them with different worldviews and organizing principles (e.g. Dunn & Jones, 2010; Purdy & Gray, 2009). In such institutionally complex environments, organizations typically respond heterogeneously depending on their exposure to particular logics (Greenwood et al., 2010).

This paper explored the dynamics of digital entrepreneurship through addressing the concerns of speed and specialization in the incubation processes. In so doing we make two main contributions to extant research: First, based upon the results four different incubation modes were distinguished. In addition, using the plural logics approach as a theoretical framework, we analyzed which resources these incubators used to successfully organize their activities. The professionals managing the incubators "*experience a multiplexity of different pressures from a plurality of*

institutional logics" (Greenwood et al., 2011, p. 357) that presents them with an ambiguity as to which logics to adhere to. As such, they choose to "*stick with old logic, embrace the new one, or figure out some way to hybridize*" (Thornton et al., 2012, p. 142). In contrast to prior works which have emphasized how plural logics within a specific institution (e.g. Marquis & Lounsbury, 2007; Suddaby & Greenwood, 2005) our study addresses a broader context – the incubator scene in a region. In line with Friedland & Alford's (1991) definition, conflicting institutional logics manifested in the four modes of material practices: The *Regional Innovation* mode, driven by the intent to improve regional economy had no particular stances towards entrepreneurial opportunities that resulted in reactive incubation processes. *Cluster Innovation* mode, formed and defended by the political decisions to develop certain business sectors in the region. The *Career Innovation* mode, instituted and driven by the intent to develop local community supporting local entrepreneurs, providing them with opportunities for self-realization. That meant that the main objective was "placement" of human capital in the appropriate area, thus promoting "discovery" attitude towards entrepreneurial opportunities. Finally, the *Digital Innovation* mode was formed under the vision to produce startups that would offer digital products or services with potential to create high impact disruption in the industry and society at large. The study thus fills a gap for research that will "focus on the process of incubation rather than on the incubator facility and its configuration", which in return will lead to development of incubation theories (Hackett & Dilts, 2004).

Second, we have identified key barriers and gateways to digital entrepreneurship. Digital startups are faced with two major challenges: pressure to reduce time-to-market and the extreme exposure to the global markets that requires precision of value proposition and focus on the core competencies. These challenges (rooted in the unique properties of the digital technologies)

manifested itself in a view on opportunities expressed in the *Digital Innovation* mode of incubation. At first digital incubators were looking for specific startups, digital startups that will fit the profile and have a clearly defined offering. In that sense digital incubators are "idea driven" and tend to "pick the winners" (for selection strategies see Bergek and Norrman (2008)). However, as soon as tenants were admitted, the startups were directed into constant experimentation, creation of prototypes and testing of preexisting assumptions regarding business models and unique offerings. This dissonance between selection and incubation is related to the dual nature of digital entrepreneurial opportunities. At first they are "created" (very much in spirit of Shane and Venkataraman (2000)) by introducing new technology, new product etc.; and after admission they are "discovered" (Alvarez et al. (2014)) (or re-discovered) by intense experimentation, market research, negotiation with potential partners. This attitude is different from the one-sided views of the opportunities, but also different from "made as well as found" definition (Venkataraman et al., 2012), as there was a clear switch from a "creation" attitude towards a "discovery" attitude during the incubation process. As such, the study provides evidence of the dual nature of digital entrepreneurship, encompassing both views on entrepreneurial opportunities: discovered and created.

Finally, we extend prior research on institutional logics by exploring what determines engagement with alternative logics. Extant contributions have shown that organizational actions are systematically influenced by their exposure to multiple logics (Greenwood et al., 2010). As such, extant research has addressed the question how organizational actors recombine multiple logics to engage in logics hybridization (Battilana & Dorado, 2010; Kraatz & Block, 2008). However, extant research has paid less emphasis on how organizations process institutional complexity and engage in different logics and thus positioning themselves in a field. Our study shows how the

plural logics are not necessarily logics in conflict. Rather, the logics driving the incubators are in fact complementing each other at an aggregate level. We bring this line of thinking to the study of multiple institutional logics, helping to mitigate the lack of studies on how organizational actors behave in situations of institutional complexity and why alternative logics are chosen.

CONCLUSIONS

In conclusion, our understanding of digital entrepreneurship advances extant research in three important ways: First, four different incubation modes were distinguished. These modes are fundamentally different in character and follow different trajectories. Second, we identified key barriers and gateways to digital entrepreneurship. We show how the gateways to digital entrepreneurship are different from other types of entrepreneurship. Third, our study shows how the plural logics are not necessarily logics in conflict but rather the logics driving the incubators are in fact complementing each other at an aggregate level.

We argue that research on digital entrepreneurship would benefit greatly from depicting entrepreneurship as an outcome of dynamic processes influences by the dynamics of plural logics. Emerging theories of digital entrepreneurship have the greatest opportunity to advance if they explicitly allow for the fact that different logics either inhibit or stimulate the evolution of new startups, and that navigating in this landscape ultimately hinge on the roles of creative individuals.

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Tables and figures

Data source	Units collected
Interviews	**8**
Documents	**16**
Media reports	**64**

Table 1: Data collected

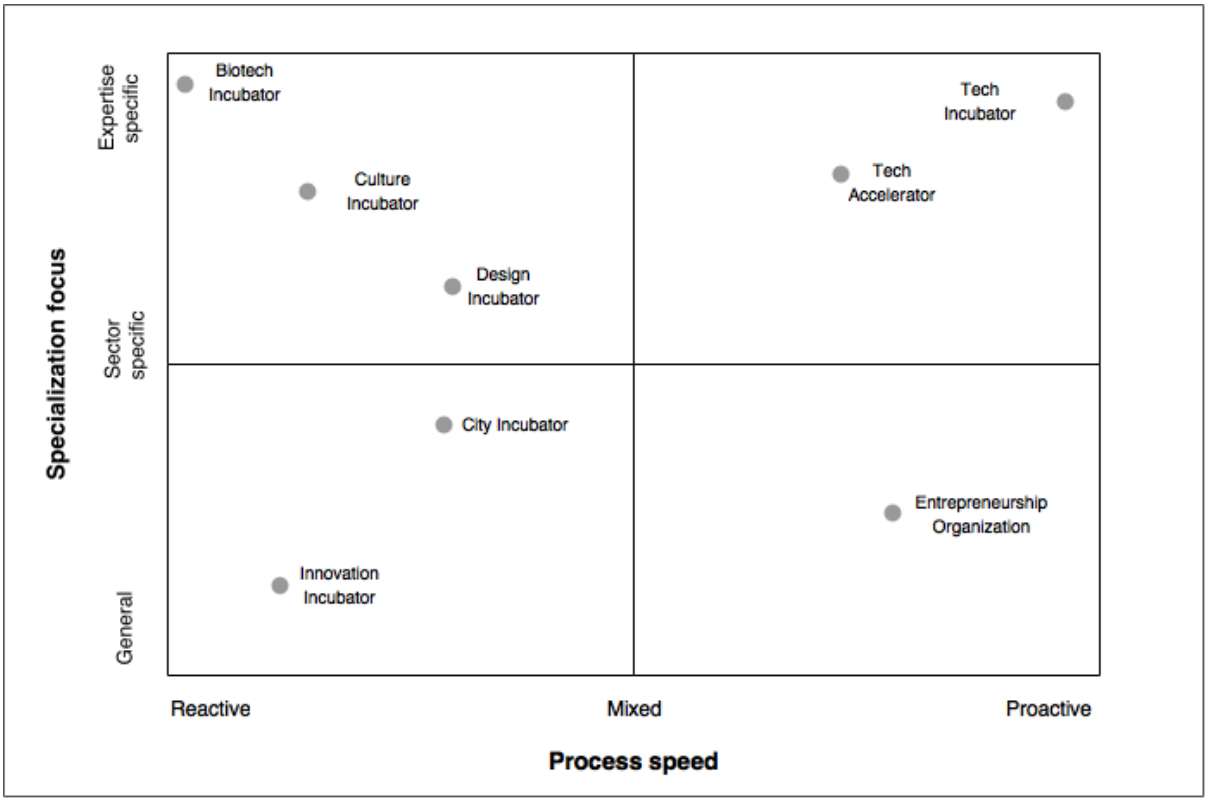

Figure 1: Speed/specialization matrix