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EVOLUTION IN INCUBATORS' BUSINESS MODEL, THE CONTRIBUTION OF INDIVIDUAL AND COLLECTIVE SENSING OF OPPORTUNITIES & DYNAMIC CAPABILITIES



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ABSTRACT

The incubators industry is undergoing changes. This paper focuses on these evolutions, through the prism of incubator business models. While the literature focuses on the incubators' strategies from a static perspective, we develop a dynamic approach to understanding the strategic adaptation mechanisms used by incubators and that influence business models. We mobilized the dynamic capabilities theory to highlight the role of the key actors: incubator managers. The results of our qualitative longitudinal study prove that they develop dynamic capabilities when they sense and seize opportunities. Our main contribution is to demonstrate that their individual and collective ability to sense opportunities leads to transform the business models of incubators.

INTRODUCTION

Many research papers have highlighted the recent increase in the number of business incubators in the world (Bruneel et al., 2012; Vanderstraeten & Matthyseen, 2012; van Weele et al., 2017). Such effervescence plays a part in questioning these actors. In response, they are transforming their incubation model in order to develop new competitive advantages (Vanderstraeten & Matthyssens, 2012). For instance, in the last decade, business accelerators have started to develop (Kaffka & Krueger, 2014; Pauwels et al., 2016). This new type of business incubator is designed to answer the entrepreneurs' need to enter their markets more quickly.

Incubators are organizations that provide entrepreneurs with resources for developing their entrepreneurial project or their business (Hackett & Dilts, 2003; Carayannis & von Zedtwitz, 2005; M'Chirgui et al., 2011; Bruneel et al., 2012; van Weele et al., 2017). They provide them with offices, shared services, access to financial resources, advice for developing their business, and networking with many professionals. Evolution in the incubation models of these actors now influences the literature (Bruneel et al., 2012; Pauwels et al., 2016). Researchers increasingly consider incubators as strategic and value-creating actors (Aaboen, 2009; Vanderstraeten & Matthyseen, 2012; Bruneel et al., 2012; Baraldi & Ingemasson Havenvid, 2016). For instance, they study the strategies developed by incubators in answer to the evolution in entrepreneurs' needs (Clarysse et al., 2005; Vanderstraeten & Matthyssen, 2012). However, in the current turbulent context, the adaptation mechanisms that ensure that these strategies are implemented remain unknown. In the literature, there is a lack of focus on the dynamic approach to business incubators as an explanation for evolution in their business models (Zott et al., 2011; Demil & Lecocq, 2010; Achtenhagen et al., 2013; DaSilva & Trkman, 2014; Brush et al., 2015; Kulins et al., 2015). This perspective is developed in research through the prism of dynamic capacities theory (Teece, 2007; Andersson & Evers, 2015; Helfat & Peteraf, 2015; Wu et al., 2016).

The dynamic capacities theory (Teece, 2007; Wu et al., 2016) has been used to explain how companies evolve in dynamic environments and transform their business model in a coherent manner (Teece, 2010; Achtenhagen et al., 2013; DaSilva & Trkman, 2014). This theory is used here to understand how business incubators implement their strategy by sensing and seizing opportunities (Teece, 2007). The opportunities pursued may thus transform their business model (Zott et al., 2011; Demil & Lecocq, 2010; Achtenhagen et al., 2013; DaSilva & Trkman, 2014; Brush et al., 2015; Kulins et al., 2015). The literature also emphasizes that managers can create dynamic capacities when they sense opportunities (Andersson & Evers, 2015; Helfat & Peteraf, 2015). In this research, we focus on these key players: business incubator managers. We answer the following research questions: how do incubator managers sense opportunities? How does this detection influence evolution in the business model of the incubators that they lead? To respond to these questions, a multiple and longitudinal case study was carried out in 2016. It focused on three cases of business incubators (a regional business incubator, a business accelerator, and a coworking space). 48 semi-directive interviews were conducted with stakeholders. In this paper, the first part exposes the theoretical framework for this research. The second part details our research method. The third part highlights the individual and collective dimensions of manager's sense opportunities and the incubators' dynamic capabilities. The results are discussed in the fourth part.

SENSING OPPORTUNITIES FOR ADAPTING THE INCUBATOR BUSINESS MODEL

Over the last decade, researchers have transformed their definition of business incubators. Originally, these incubators were presented as organizations serving entrepreneurs and promoting local economic development (Aernoudt, 2004; Hackett & Dilts, 2004; Somsuk & Laosirihongthong, 2014). Recent research has adopted a more entrepreneurial approach to studying them. They are now defined as strategic and value-creating actors (Clarysse et al., 2005; Aabo, 2009; Bruneel et al., 2012; Vanderstraeten & Matthyseen, 2012; Baraldi & Ingemasson Havenvid, 2016). To develop this approach, many researchers rely on the literature of strategic management. For instance, Aabo (2009) studies business incubators through the prism of the company. Another example is the strategic six-dimensional model proposed by Baraldi and Ingemasson Havenvid (2016). This model analyzes how business incubators create value. Studying value creation also makes it possible to question evolution in the actors. Bruneel et al. (2012) present three generations of incubator value propositions that have succeeded each other as an answer to the changing needs of entrepreneurs. Incubation models are still changing today. For instance, Pauwels et al. (2016) highlight the development of business accelerators. More than these new incubation models, it is the incubator business model that is now being questioned.

The business model is a concept that explains how an organization creates and captures value (Zott et al., 2011; Demil & Lecocq, 2010; Achtenhagen et al., 2013; DaSilva & Trkman, 2014; Brush et al., 2015; Kulins et al., 2015). Incubators have changed their business model over time to create the value expected by entrepreneurs. This value has evolved thanks to transformation in the business model's components, in particular the value proposition, questioned by Bruneel et al. (2012), the value chain (Baraldi & Ingemasson Havenvid, 2016), the value network (Pauwels et al., 2016) and the revenue and cost model (Clarysse & Yusubova, 2014; Clarysse et al., 2015; Baraldi & Ingemasson Havenvid, 2016). This paper contributes to the literature by providing a new element for understanding evolution in the creation and capture of value of these organizations. In the literature, researchers have failed to study the strategic mechanisms that lead to adaptation of the incubator business model. We make use of the theory of dynamic capabilities (Hackett & Dilts, 2004; Teece, 2007; Wu et al., 2016) to study this evolution in incubators within a changing context.

These capabilities are presented as being at the origin of the transformations in business models (Teece, 2010; Achtinger et al., 2013; DaSilva & Trkman, 2014).

Dynamic capabilities are defined as strategic elements that allow organizations to adapt and develop competitive advantages in a changing environment (Teece et al., 1997; Eisenhardt & Martin, 2000; Teece, 2007; Arend et al., 2014; Wu et al., 2016). The literature provides multiple definitions for dynamic capabilities. Some of them emphasize an entrepreneurial dimension by considering the sensing and seizing of opportunities (Zahra et al., 2006). They particularly suit the entrepreneurial behavior of incubators in search of innovative value propositions (Bruneel et al., 2012). We rely in particular on the definition by Teece (2007, p.1319) who indicates that dynamic capabilities make it possible "(1) to sense and shape opportunities and threats, (2) to seize opportunities, and (3) to maintain competitiveness through enhancing, combining, protecting, and, when necessary, reconfiguring the business enterprise's intangible and tangible assets". In this study, we focus on the sense, and not on the shape, of the opportunities. This was shown to be better adapted to the nature of the opportunities of the managers studied in our sample: they spoke of the opportunities they observed in their environment. The literature emphasizes that managers play a leading role in sensing opportunities, and therefore in the development of dynamic capacities (Andersson & Evers, 2015; Helfat & Peteraf, 2015). We can thus question the ability of incubator managers to demonstrate this type of opportunity recognition (Ahsan, 2015). Thanks to this, they are able to develop the dynamic capacities of the incubators, and transform the incubator business model in a way that is in keeping with their turbulent environment.

METHOD

This research is based on a multiple longitudinal case study (Eisenhardt & Graebner, 2007; Myer, 2013; Yin, 2013). Three cases of French incubators were chosen: two independent commercial incubators, (a business accelerator and a coworking space), and one regional business incubator (Carayannis and von Zedtwitz, 2005). We selected these three organizations because: (1) their managers ask themselves questions about the evolution of their business model. (2) These managers develop actions to transform their business model. (3) These three specific incubators also illustrate the heterogeneity of business models in the business incubation industry. This sample helps us to understand how each type adapts and anticipates evolution within their dynamic environment.

The regional business incubator was created in 1988. Its manager supports innovative firms for several years with a team of four people (two employees specialized in business support, and two assistants). In the course of the study, the manager tried to transform his business model. There are two reasons for this strategic decision. First, the incubator had to reconstruct its legitimacy following the end of a close collaboration with another incubator. Second, there was a decrease in the regional funds that finance it. The business accelerator has also encountered financial issues. The private school that finances it in part has encouraged the manager to develop a more autonomous business model. Hence, the manager is searching for new sources of revenue for his small incubator, created in 2013. There is only one employee in his team: he supports technological entrepreneurs for just a few months. The objective of the manager of the third incubator, the coworking space, is also to find new sources of funding. This incubator is one of the first coworking spaces in France, and it was created in 2008. It employs six people, supporting social entrepreneurs over unlimited periods of time (one coordinator, one facilitator and four assistants). The manager is always alert to new ideas or opportunities for transforming his business model.

Two immersions per structure, carried out between April and October 2016, allowed us to study evolution in their business model. A total of 48 semi-directive interviews were carried out with various incubator stakeholders (managers, employees, supported entrepreneurs and support partners). We also collected internal documents and made non-participatory observations. The analysis was designed as follows: (1) we defined codes on the basis of the literature. (2) Depending on these themes, and other themes that emerged from the data, we first processed the primary data and then the secondary data from the intra-site analyses, carried out per period of immersion and per category of respondent (using the software NVivo10). (3) We constructed chronological matrices (Miles and Huberman, 2003) that summarize the analyzed data in tables to complete our intra-site study. (4) We carried out an inter-site study by comparing our intra-site matrices so as to highlight the specificities of each case.

RESULTS

We demonstrate that the development of dynamic capabilities is not necessarily individual. Managers do it either individually or working together with the stakeholders. We present these results in accordance with Teece's (2007) three dimensions of dynamic capabilities: (1) *Sensing*: certain incubator managers individually detect opportunities, while others do it collectively. (2) *Seizing*: collective sensing leads to the collective pursuit of opportunities, while individual sensing limits collective seizing. (3) *Asset evolution*: collective seizing results in a deeper transformation of the incubators' business model, with stronger asset modifications than individual seizing.

(1) *Stakeholders are involved in the managers' sensing of opportunities*: Incubator managers sense opportunities in two different ways. Some act individually while others rely on their stakeholders. The regional business incubator manager senses opportunities in an individual way. In our first immersion period, he needed to find solutions to deal with an imminent relocation and the problems associated with financing it. He detected a new form of business support developing in his region, coworking spaces, which could respond to his issue. He decided to seize it. The accelerator manager acted in a similar way. His revenue model had slowed down and he was trying to renew it. During our first immersion, he sensed three possible opportunities within his environment. He decided to focus on one of them. It aimed to develop a support program for intrapreneurs financed by large companies.

Unlike the other types of incubator, the manager of the coworking space adopted a collective level of detection. He relied on many partners to sense opportunities. During our first immersion, he was managing a network of coworking spaces and wanted to develop it. One of his team members saw an opportunity based on a partner's idea and submitted it to the manager: develop a new coworking space. With the manager's agreement, the team member decided to seize the opportunity. She described her role in sensing the opportunity: "At first, [the team] found it difficult to see how we could create an economic model [with the new coworking space]. This project pleased me so much that I said to the manager: I really like this project. Give me the opportunity to work on it." Having stakeholders involved in this way is also essential if managers seize opportunities.

(2) *Incubator managers rely on stakeholders to seize opportunities*: One of the key factors of success for managers in the evolution of their business model seems to be their ability to involve stakeholders in sensing and seizing opportunities. The managers in the sample faced two types of behavior when they presented opportunities to stakeholders: involved or refractory behavior. During our first immersion, a regional incubator employee was completely opposed to the changes

made necessary by the manager seizing opportunities. He indicated his lack of involvement in the project and his desire to not participate in seizing the opportunity. The regional incubator manager was also quickly confronted with problems of resistance to change. The obstacle lay within his team and did not allow him to transform his business model in depth, as he wanted.

The accelerator manager was alone in seizing the opportunity he had identified. His employee had just joined the organization and still needed time to adapt. The manager thus did not want to include him in the project. During our second immersion, he announced that he had finally decided not to seize the opportunity. He chose to focus on a mentor opportunity. They are seizing it jointly. The manager gave details of this change: "I had chosen another path last time [...]. I did not set it up because we did not have time to fully explore it. This is not something [the mentor] wants to do." The coworking space manager seized the opportunity he had detected in a similar way. During our second immersion, a team member indicated that all the members of the organization had participated in pursuing the opportunity. The employee that sensed the opportunity thus included the entire team in seizing it, in addition to her usual work with the manager. This collective project transformed every aspect of the coworking space business model.

(3) *The degree at which opportunities are sensed reconfigures the business models of incubators in different ways:* with the various ways of sensing opportunities, plus the stakeholders' level of involvement, there are different transformation scenarios for incubator business models: (1) business models that are modified in terms of few (one or two) of their components, (2) business models that are completely transformed. After the opportunity for a coworking space sensed and seized by the regional incubator's manager, the incubator business model underwent only a minor evolution. The value proposition addressed to entrepreneurs was the only change. A new, friendly area, which is also open to non-supported entrepreneurs, is at their disposal. A project to develop new sources of income through the coworking space has not been carried through. The manager explained why: "This project is at a standstill because, for me, it is directly related to the change in business support method. Also, to be perfectly honest, I haven't had time to deal with it." The employees' refusal to change their business support for a form including more events organized, has blocked the development of this initiative. Thus, reconfiguring the incubator's assets to transform the business model has limited impact.

The manager of the accelerator did not face this type of problem. He has involved many stakeholders in the transformation of the accelerator business model. Following the opportunity he seized jointly with a mentor, he enhanced and reconfigured some of the organization's assets in his business model. He transformed the value proposition made available to supported entrepreneurs, as well as his value network by integrating new volunteers. The value chain has grown with the new business activity. Its cost and revenue model will be strengthened by the turnover generated by this new activity. The coworking space business model has also undergone profound changes with the collectively sensed opportunity. This organization's assets have been reconfigured to transform it. The employee and the manager together have adopted strategic choices to achieve this goal. These choices concern the value proposition: the manager makes available to entrepreneurs a new place that needs to be accommodated and supported. The value chain has been transformed by a new commercial coordination activity. It is developing thanks to new stakeholders who have been integrated into the value network. These stakeholders are thus involved in developing the incubators' new sources of revenue.

DISCUSSION AND IMPLICATIONS

The first theoretical contribution of this paper is to focus on a gap in the literature: understanding the strategic adaptation mechanisms of incubators. The literature on incubators highlights evolution in incubation models (Pauwels et al., 2016) but does not explain how these organizations transform these models to adapt them to their environment. Like Teece (2007), who demonstrates the role played by dynamic capabilities in the business context, we argue that these capabilities are an essential key for incubators, allowing them to adapt and anticipate environmental changes (Zahra et al., 2006; Teece, 2007; Wu et al., 2016). The incubators in our sample sense and seize opportunities. They also reconfigure their assets to transform their business model thanks to these opportunities. They are thus able to maintain their competitive advantages (Teece et al., 1997).

We also demonstrate that the role of incubator managers is key in the development of the dynamic capabilities of incubators (Andersson & Evers, 2015; Helfat & Peteraf, 2015). Our study reveals how these managers are able to detect opportunities. We confirm the theory developed by Andersson & Evers (2015) and Helfat & Peteraf (2015) regarding the existence of dynamic managerial capabilities making it possible to sense opportunities. We place it in the incubator context. Incubator managers mobilize these capabilities in the same way that entrepreneurs develop entrepreneurial alertness (Tang et al., 2012; Andersson & Evers, 2015; Helfat & Peteraf, 2015). This paper also goes further from the research of Andersson & Evers (2015) and Helfat & Peteraf (2015). We add a new dimension to the manager's sensing ability: detecting opportunities collectively (Tremblay & Carrier, 2006; Tremblay, 2014). Managers in our sample rely on their team or partners to detect opportunities. This collective level of sensing is our second theoretical contribution: this has not been highlighted in the literature before. Sensing opportunities collectively is also a means of deeply transforming the incubator business model (Zott et al., 2011; Demil & Lecocq, 2010; Achtenhagen et al., 2013; DaSilva & Trkman, 2014; Brush et al., 2015; Kulins et al., 2015).

To make evolution in incubator business models, managers' ability to sense opportunities relies on the involvement of stakeholders. Our results indicate that this involvement depends on the implication of the team or partners in detecting (Tremblay & Carrier, 2006; Tremblay, 2014) and seizing opportunities. In comparison with minor evolutions that concern one aspect of the business model, the involvement of stakeholders can transform the entire business model. The stakeholders thus also participate in enhancing, combining, protecting, and reconfiguring the assets of the incubators (Teece, 2007, p.1319) as a means of transforming the incubator business model. One originality of this research is thus that it mobilizes the business model concept, within the framework of dynamic capabilities theory, from a collective perspective. In line with Aaboen (2009) and Baraldi & Ingemasson Havenvid (2016), we borrow concepts from the literature on strategic management to emphasize that business incubators are becoming firms like any other. Our managerial contribution consists in recommending that the managers of business incubators focus on sensing opportunities by surrounding themselves with stakeholders in order to co-construct their business model. We also advise public institutions to leave an increasingly large number of entrepreneurial initiatives and their promotion within the business incubators they finance.

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