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All That Glitters Is Not Gold – How Motives for Open Innovation Collaboration with Startups Diverge from Action in Corporate Accelerators

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Abstract

Prior research has shown that investing into startups through corporate venturing is a sufficient tool for inter-organizational learning, harvesting innovation and engaging in entrepreneurial activities. Recently, a new model of open innovation collaboration between incumbents and startups has gained popularity in practice. In corporate accelerator programs both partners collaborate to advance entrepreneurial products by leveraging their complementary resource bases. In our study we, firstly, analyze the underlying external and internal motives that impel established firms to initiate a corporate accelerator and, secondly, which personnel is responsible for this. Further, we examine the adoption of the corporate accelerator practice for collaborating with new firms. In order to shed light onto the phenomenon, we use interview data from ten corporate accelerators (30 interviews with program managers, corporate employees and startups) from various industries in Germany. By drawing on institutional theory our findings show that the diffusion of the open innovation collaboration practice is either imitatively or normatively driven, depending on the position of the initiator. Further, we demonstrate, that incumbents adopt a corporate accelerator program for sourcing external exploitative or explorative knowledge. However, the degree of adoption of the practice is low and, thereby, not internalized. Although the corporate accelerator has still a short history and many programs follow a trial-and-error approach regarding program structures, established firms seem not to be interested primarily in promoting the collaborative usage of complementary assets with startups. It resembles a rather symbolic action utilizing open innovation collaboration as a marketing tool to let the incumbent's innovation activity glitter more. Therefore, we conclude that established firms seem to practice entrepreneurial washing with corporate accelerators similarly to green-washing activities in the field of corporate social responsibility.

Keywords: Corporate accelerator, open innovation collaboration, incumbent, startups, complementary resources, degree of adoption, symbolic action

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"But times have changed. Internet usage. Coding, apps, networking, big data… that's what drives progress today.
It is no longer nations that are funding and leading the revolution. It is more and more individuals. Entrepreneurs. Disruptors. […]
So we need to pay more attention to the new players – not only their products, but also their perspective – their philosophy of innovation."

(Tom Enders, Airbus Group CEO, 2015)

1 Introduction

Nowadays, as a result of rapid technological changes and digitization established companies face several challenges with regard to innovation and retaining their competitive advantage as well as relevance within the respective industry (Lyytinen, Yoo, & Boland Jr., 2016; Rindfleisch, O'Hern, & Sachdev, 2017; Teece & Pisano, 1994). According to the resource-based view the tangible and intangible resources of a firm are essential for its ability to innovate and as a result to sustain its competitive advantage (Barney, 1991).

Further, due to the increasing digitization especially intangible resources gain in importance for organizations. These comprise, for instance, customer data, technological know-how or sticky information and are widely dispersed among several actors (Rindfleisch et al., 2017; von Hippel, 2005, p. 70). Especially dynamically acting young ventures have been identified in high technology fields, which are rather knowledge than capital intensive (Baker, Miner, & Eesley, 2003; Katila & Shane, 2005; Rothwell, 1989). As firms are further posed to challenges like accelerated product development cycles as well as democratized

innovation processes (Lyytinen et al., 2016; Rindfleisch et al., 2017; von Hippel, 2005), scholars posited a paradigm shift from a closed to an open innovation logic assuming that not all resources, abilities and ideas for developing and commercializing innovation need to be located inside the firm (Chesbrough, 2003).

As a result, the application of the open innovation practice does not only pertain incumbents but also young ventures – *new players* (Airbus, 2015) –, which gain in significance for innovation management (Bogers et al., 2017; Gassmann, Enkel, & Chesbrough, 2010; Usman & Vanhaverbeke, 2017). So far, studies on the open innovation collaboration between incumbents and young ventures, primarily through corporate venturing, have focused on either organization's perspective and are hence, bound to one of the three major stages of the innovation process (e.g. van de Vrande, de Jong, Vanhaverbeke, & de Rochemont, 2009; Vanhaverbeke, Van de Vrande, & Chesbrough, 2008). Incumbents benefit from investing into young ventures as they learn about new technologies and market opportunities. Those intangible insights are especially valuable at the fuzzy front end of the innovation process (Chesbrough, 2003; Vanhaverbeke et al., 2008). On the other side, new firms receive support of established organizations, for instance tangible financial or administrative resources, in exchange for providing insights on their entrepreneurial ideas and opportunities. These resources are particularly relevant for the last phase of the innovation process, commercializing inventions and thereby turning them into innovations (Gans & Stern, 2003; van de Vrande et al., 2009).

However, since 2010[1] (Heinemann, 2015) a new open innovation activity not explicitly bound to one of the innovation process phases for either organization type has rapidly gained popularity (Hochberg, 2016; Jackson & Richter, 2017; Weiblen & Chesbrough, 2015). Within corporate accelerator programs incumbents and external startups collaborate in order to advance product development and thus, venture creation by making use of complementary assets (Kohler, 2016; Pauwels, Clarysse, Wright, & Van Hove, 2015).

One of the first studies on corporate accelerators by Kanbach and Stubner (2016) suggests a typology of four program configurations along two primary objectives: strategic and financial. Strikingly, the authors concurrently criticize that "[…] different objectives and motives of the established companies behind these programs often remain unclear" (Kanbach & Stubner, 2016, p. 1773). As opposed to the above mentioned two main objectives, Weiblen and Chesbrough (2015) state that corporate ownership is not encompassed in corporate accelerator programs in comparison to corporate venturing activities. Unfortunately, existing research could neither clarify these contradictions nor identify the underlying motivation of incumbents for initiating a corporate accelerator program for collaborating with new firms. Beyond the aspect of motives, recent research demonstrates that the actual open innovation collaboration between incumbents and startups in corporate accelerators is burdened with conflicting cultural beliefs due to ontological contradictions. Further, personal and material interests of both partners are opposing owing to competitive objectives and as a result, hamper collaboration (Jackson & Richter, 2017).

Accordingly, it is the objective of this paper to develop a deeper understanding of the motives of corporate organizations to initiate the new open innovation practice to collaborate with startups, often in addition to more established corporate venturing activities. Furthermore, the paper aims to analyze the adoption of the open innovation practice by established firms to co-develop an entrepreneurial idea with the respective new firms. We take a phenomenon-based research

[1] According to Heinemann (2015, p. 18) Microsoft (USA), ImmobilienScout (Germany) and Telefónica (Spain) were among the first companies initiating such open innovation activities between 2010 and 2011.

approach to explore the open innovation practice of corporate accelerator programs. By drawing on a multiple case study design and analyzing interviews with 32 informants related to ten corporate accelerator programs from various industries in Germany, the paper seeks to answer following two research questions:

(1) Which internal motives and external factors impel established firms to initiate a corporate accelerator program and which personnel fosters the initiation?

(2) How do established firms execute and adopt a corporate accelerator program for collaborating with new firms?

Due to the increasing adoption of corporate accelerators among established companies and as a result participation of new firms in such programs, it is of interest by which motives and personnel the diffusion of the practice is affected and if those finally correspond with the actual adoption and execution.

The study contributes to theory in three ways. Firstly, we explore the initiation and diffusion of the corporate accelerator phenomenon by drawing on institutional theory. Thereby, we identify that the diffusion is either imitatively or normatively driven, depending on the initiator. However, due to their fairly broad diffusion corporate accelerators can be described as a semi-institutionalized open innovation practice. Secondly, we suggest that corporate accelerators lay at the intersection of entrepreneurial opportunity and open innovation. Thus, we follow a call for further research by Bogers et al. (2017). Thirdly, we suggest that the corporate accelerator practice is not fully adopted and thereby, internalized. It resembles a rather symbolic action utilizing open innovation collaboration as a marketing tool to let the incumbent's innovation activity glitter more. Thereby, the action in corporate accelerators display facets of entrepreneurial washing similar to green-washing activities in the field of corporate social responsibility.

The remainder of this paper is structured as follows: In section 2, we explain the theoretical background of our study. Subsequently, the explanation of methodology and dataset follows (section 3). In section 4, we present our main findings and in section 5, we discuss our results and propose implications for future research and practice.

2 Theoretical background

2.1 Complementary resources of established and new firms

Young ventures and established companies mainly differ regarding the duration of their existence (Katila & Shane, 2005; Sørensen & Stuart, 2000), which is related to their firm size measured in number of employees (Katila, Rosenberger, & Eisenhardt, 2008, p. 312; Kazanjian, 1988). Furthermore, both company types vary regarding their existing respectively non-existing experience in selling any kind of product or service (Helfat & Lieberman, 2002; Tushman & Anderson, 1986). Due to the characteristics of size and experience new and established organizations possess strongly varying resource bases. Resources are defined as physical assets as well as human and organizational capital respectively knowledge, which enable a firm to determine and follow a specific strategic agenda. Additionally, research demonstrates that firm's performance differences depend on heterogeneous and partly idiosyncratic resource bases and strategies (Barney, 1991; Wernerfelt, 1984).

Established firms are associated with strength in innovation and entry of new fields due to their preexisting relevant tangible and intangible resources as well as scale and scope advantages (Arrow, 1962; Helfat & Lieberman, 2002). However, the extent of previous experience affects the organization's attainments regarding the radicalness of its innovation performance (Henderson & Clark, 1990). Established firms with prior experience, knowledge and routines tend to innovate more incrementally, while startups often

initiate radical innovation on the basis of profoundly divergent expertise (Bower & Christensen, 1995; Tushman & Anderson, 1986). Furthermore, Sørensen and Stuart (2000) demonstrated that quantitative innovation outcome increases with the age of a company. However, due to missing adaptation of routines to changes in the environment innovation results do not meet current market demands as effectively as young firms do with their products. Yet, new firms lack particularly tangible resources for commercializing their ideas (Gans & Stern, 2003; van de Vrande et al., 2009).

Based on the importance of all three types of assets – physical, organizational and human capital – for an organization's innovation performance, the "[…] large/small firm complementarity further emphasizes the need to look not only at large firms or small firms, but in addition to look at the relationship between them" (Rothwell, 1989, pp. 62–63). As new firms lack what established firms possess and vice versa both types of organizations could complement and benefit each other at all major phases of the open innovation process.[2]

2.2 Open innovation as a means for resource acquisition

The open innovation logic assumes that not all resources, abilities and ideas for developing and commercializing innovation need to be located inside the firm. Consequently, open innovation is "[…] a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology" (Chesbrough, 2003, p. xxiv). Following this definition, the collaboration with external partners allows for three distinct open innovation processes depending on the direction of knowledge flows. Firstly, the outside-in process enhances a company's knowledge base and as a result its innovativeness by sourcing external knowledge (inbound). Secondly, the inside-out process allows for external exploitation of a company's internal knowledge. By leveraging internal ideas through licensing or selling IP to organizations outside the boundaries of the firm a company generates additional profits (outbound). The third process links both approaches into a coupled open innovation mode (Gassmann & Enkel, 2004).

2.3 Open innovation collaboration between established and new firms

The application of the open innovation practice does not only pertain incumbents but also new firms (Bogers et al., 2017; Gassmann, Enkel, & Chesbrough, 2010). Firstly, external knowledge sourcing allows entrepreneurs to identify new ideas and market opportunities (Gruber, MacMillan, & Thompson, 2012; van de Vrande, de Jong, Vanhaverbeke, & de Rochemont, 2009). Secondly and particularly important, young ventures are often forced to collaborate with external actors to develop and commercialize their innovative ideas as they lack mainly tangible resources due to their size and short existence (Gans & Stern, 2003; van de Vrande et al., 2009).

A common and often studied open innovation practice allowing incumbents and new ventures to collaborate and thereby profiting from complementary resource bases is the corporate venturing activity (e.g. Chesbrough, 2003; Vanhaverbeke, Van de Vrande, & Chesbrough, 2008). On the one hand, incumbents benefit from investing into young ventures as they learn about new technologies and market opportunities. Those insights are especially valuable at the fuzzy front end of the innovation process (Chesbrough, 2003; Vanhaverbeke et al., 2008). On the other hand, new firms receive support of established organizations, for instance financial or administrative resources, in exchange for providing insights on their entrepreneurial ideas

[2] Based on an extensive literature review West and Bogers (2014) have identified a four-phase open innovation model, comprising the phases i) obtaining, ii) integrating and iii) commercializing of an innovation. These three phases are moderated by an iterative iv) interaction phase, as the path from invention to innovation is not a unidirectional linear one.

and opportunities. These resources are particularly relevant for the last phase of the innovation process, commercializing inventions and thereby turning them into innovations (Gans & Stern, 2003; van de Vrande et al., 2009). As a result, studies on the open innovation collaboration between incumbents and young ventures through corporate venturing have focused on either organization's perspective and are hence, bound to one of the three major stages of the innovation process (e.g. van de Vrande et al., 2009; Vanhaverbeke et al., 2008).

2.4 Corporate accelerators as a new open innovation practice

Since 2010 (Heinemann, 2015), a new open innovation activity in form of established and new firms jointly advancing entrepreneurial ideas and products has been widely adopted in practice (Hochberg, 2016; Jackson & Richter, 2017; Weiblen & Chesbrough, 2015). A Google search (October 2017) reveals 76,900 hits for "corporate accelerator" and thereby the popularity of the new open innovation practice, particularly in business and consultancy. Furthermore, a global database on corporate accelerator programs (December 2016)[3] discloses 79 established firms offering these programs. Some incumbents operate their corporate accelerator programs in several different locations[4], so that the number of corporate accelerator programs is even higher. Yet, academia has shown much less interest in the phenomenon with 53 publications including four journal paper on the "corporate accelerator", illustrated by Google Scholar (October 2017). As all journal paper have been published in 2016 and 2017, it seems that academics begin to acknowledge the relevance of corporate accelerator as a new open innovation practice.

Corporate accelerator programs are based on the general idea and concept of incubation, which aims at accelerating young venture growth through various support services (Bruneel, Ratinho, Clarysse, & Groen, 2012; Gassmann & Becker, 2006; Pauwels, Clarysse, Wright, & Van Hove, 2015). The programs are based on the model of commercial accelerators, but are run by or on behalf of an established company. The first accelerator model was introduced by Y Combinator in Cambridge, Massachusetts in 2005.[5] Since then the number of accelerators has risen enormously and established companies have adopted this model in order to access external innovation of startups (Hochberg, 2016). However, Hochberg notices, that corporate accelerators do not follow rigid program structures "[…] but also follow other, more fluid definitions" (Hochberg, 2016, p. 44).

Within corporate accelerator programs incumbents and external startups collaborate in order to advance product development and thus, venture creation by making use of complementary assets (Kohler, 2016; Pauwels, Clarysse, Wright, & Van Hove, 2015). During a short period of time, usually three to six months, incumbents assist a cohort/batch of startups with educational, financial, networking and mentorship opportunities. After a fixed duration the program culminates in a public pitch event (Cohen & Hochberg, 2014; Pauwels et al., 2015). Some researchers argue that in comparison to corporate venturing activities corporate ownership is not encompassed in corporate accelerators (Weiblen & Chesbrough, 2015). Others argue that established firms invest into startups in exchange for a small equity stake (Jackson & Richter, 2017).

[3] https://www.corporate-accelerators.net/database/archive.html; Accessed on October 17, 2017.

[4] For instance, Microsoft operates its corporate accelerator program in seven cities worldwide (http://www.microsoftaccelerator.com/; Accessed on October 17, 2017).

[5] The first startup accelerator Y Combinator was founded among others by Paul Graham and is now based in Mountview, California (http://old.ycombinator.com/start.html; Accessed on April 27, 2016).

By drawing on the structural perspective of open innovation (Gassmann, Enkel, & Chesbrough, 2010), it can be concluded that both parties enter into a voluntary agreement to expedite the development of the startup's product, which resembles a dyadic, non-equity inter-organizational collaboration mode (Bianchi, Cavaliere, Chiaroni, Frattini, & Chiesa, 2011; Gulati, 1998, p. 293). Such partnership falls between the modes of market and hierarchy (Powell, 1987) and, consequently, allows the focal firm and its partner for exchanging and recombining knowledge through regular interaction, for instance in project-based working groups (Felin & Zenger, 2014; Hagedoorn, 2002; Hagedorn, 1993; Powell, Koput, & Smith-Doerr, 1996).

Previous research has demonstrated that inter-firm collaborations are primarily motivated by cost-economizing, strategic or inter-woven motives (Hagedorn, 1993). Although Kanbach and Stubner (2016) follow the assumption of primary strategic and financial objectives with their typology of four program configurations, they strikingly criticize at the same time that "[…] different objectives and motives of the established companies behind these programs often remain unclear" (Kanbach & Stubner, 2016, p. 1773). Unfortunately, existing research could not yet clarify the underlying motives of incumbents for initiating and utilizing such open innovation instrument.

Further, successful open innovation collaboration between established and new firms in corporate accelerators is not self-evident due to ontological and competitive contradictions. The collaboration is among others challenged by power imbalances, cultural differences, divergent modes of operation as well as conflicting interests in resources (Jackson & Richter, 2017; Weiblen & Chesbrough, 2015, p. 67). So far, research has identified barriers of the collaboration between incumbents and startups, but has neither analyzed the adoption of the collaboration in such programs nor the execution itself.

2.5 Research questions

To summarize, although established and new firms seem to complement each other regarding their resource bases in all phases of the innovation process (Bianchi et al., 2011; Rothwell, 1989), research has largely focused on the fuzzy front end and commercialization phase by examining corporate venturing as the primary open innovation activity between both types of partner (e.g. Dushnitsky & Lenox, 2005; Gans & Stern, 2003). However, a detailed review of existing research on the resource bases of established and new firms reveals that new firms possess intangible resources, such as technological expertise and flexibility, that especially incumbents lack for the development phase in today's quickly changing information era. Furthermore, in practice incumbents and startups co-develop entrepreneurial products in corporate accelerator programs (Jackson & Richter, 2017). So far, research is scarce and the few existing studies could not yet prove which primary objectives established firms pursue with initiating such new open innovation approach in addition to more established corporate venturing activities.

Accordingly, our paper aims at assessing the underlying motives as well as potential external factors impelling established companies to utilize a corporate accelerator program as an open innovation instrument. Furthermore, the study's purpose is to identify which personnel acts as a driving force and decision-maker for initiating the open innovation practice. Therefore, we seek to answer following first research question:

(1) What internal motives and external factors impel established firms to initiate a corporate accelerator program and which personnel fosters the initiation?

Additionally, research has demonstrated that several barriers inhibit the collaboration between established and new firms in corporate accelerators. However, research has largely neglected to examine if and how both partners actually collaborate and exchange information during the development phase. Hence, it is the

objective of this study to analyze the adoption and execution of the open innovation collaboration for developing a deeper understanding on corporate accelerators. In order to doing so we strive for answering the second research question:

(2) How do established firms execute and adopt a corporate accelerator program for collaborating with new firms?

Generally, it is indispensable for academics and practitioners to discuss these two research questions in order to advance the general understanding of corporate accelerators as a widely adopted new open innovation instrument. Additionally, the research questions address the efficacy of the programs for incumbents as well as startups.

3 Methodology

Due to the topicality of corporate accelerators, we take a phenomenon-based research approach (von Krogh, Rossi-Lamastra, & Haefliger, 2012) to conceptualize corporate accelerators as an instrument for the open innovation collaboration between incumbents and startups. We explore the phenomenon by drawing on multiple case studies, since knowledge on corporate accelerators is limited. Our study primarily builds on qualitative interview data and is complemented and triangulated by secondary data, such as websites, press releases, newspaper articles, annual reports as well as company presentations (Ghauri, 2004; Miles, Huberman, & Saldana, 2014; Yin, 2014). We explicate our discoveries within the phenomenon by using at least one interview per case, following an inductive approach for data reduction and thereby identifying as well as contrasting patterns of the studied cases (Eisenhardt, 1989; Ghauri, 2004; Gioia, Corley, & Hamilton, 2013; Miles et al., 2014).

3.1 Sampling and data collection

The basis of our organizational sampling was built by a global database on corporate accelerator programs[6] and was complemented by our own research. We selected cases over all industries[7] that complied with following three conditions: 1) they are located in Germany, 2) they accept external startups into their programs and 3) they have run at least one batch with startups. Our final data set was compiled of 20 programs and we conducted interviews with ten out of the 20 cases. We stopped adding new cases when interviews did not add new knowledge to our study and therefore saturation was reached (Eisenhardt, 1989).

The informant sampling procedure and interview data collection was conducted between April and July 2016 as well as from January until June 2017. At the second point in time, each organization had run 4,8 batches on average. In order to avoid informant bias, interviews were conducted with managers from corporate accelerator programs, corporate employees as well as founders or members of startups that have participated in nine different programs. In nine cases, we collected data from at least two informants with different organizational origins and functions (Phillips, 1981, p. 411). Informants from the corporate accelerators were selected on the basis of their knowledge of the program. Corporate employees were identified after compulsory assessing their knowledge of and experience with the corporate accelerator and not mandatory their experience regarding collaborating with startups from the program. All startup informants possess knowledge and experience as participants/graduates of the corporate accelerator (Kumar, Stern, & Anderson, 1993). We were provided with new insights by and triangulated our primary interview data with following additional sources (Dubois & Gadde,

[6] https://www.corporate-accelerators.net/database/archive.html.

[7] Aerospace, Banking and finance, Consumer electronics, Energy, Healthcare, Media and publishing, Mobility and infrastructure, Software and Wholesale trade.

2002; Miles, Huberman, & Saldana, 2014; Patton, 2015): several informal discussions as well as secondary sources, such as websites, newspaper articles, corporate presentations and press releases as well as annual reports.

In total, we conducted 30 semi-structured interviews with 32 interview partners (see Table 1). In total, only three interviewees were female. In all ten cases, we interviewed at least one operative manager from the corporate accelerator program. In half of the cases, we additionally were directed to corporate employees. Their work was related to the corporate accelerator and/or they have been collaborating with startups from the respective program. Additionally, eleven startups that participated in nine different programs were willing to conduct an interview with us regarding their experiences. The total duration of all interviews was about 18 hours. Each interviews lasted about 36 minutes on average (average duration of interviews with: a) corporate accelerator managers: 40 minutes; b) corporate employees: 38 minutes; c) startups: 30 minutes). One outlier interview with an entrepreneur lasted only 16 minutes and one interview with two corporate accelerator program managers ended after 70 minutes. All interviews were recorded and subsequently transcribed, except for one startup interview. The entrepreneur preferred an interview without being recorded, so that the dialogue was written down from memory after the meeting.

Table 1: Overview of dataset and informants from three origins

Case	Origin and Function of Informants		
ID	**Program**	**Corporate**	**Startup**
CA 1	Program manager 1 Program manager 2	Production manager R&D associate Quality innovation associate Quality innovation manager	Startup 1 – Founder Startup 2 – Founder Startup 3 – Founder
CA 2	Portfolio manager	Digital project manager (and former program manager)	Startup 1 – Founder
CA 3	Program manager	-	Startup 1 – Founder
CA 4	Program manager	Business development manager	Startup 1 – Employee
CA 5	Program manager (and simultaneously corporate strategy manager) Startup manager	Corporate strategy associate Corporate development manager	Startup 1 – Founder
CA 6	Third party program manager	-	Startup 1 – Founder (and simultaneously corporate employee)
CA 7	Program manager	-	Startup 1 – Founder
CA 8	Program manager	Site operations manager	Startup 1 – Founder
CA 9	Program manager	-	Startup 1 – Founder
CA 10	Marketing manager	-	-

For all interviews we used a semi-structured interview guideline with different questions for each informant group. The first part of the interview included questions about the interviewee's background (tenure, function and position in the program, established or new firm). The main part of the interview guideline was focused on the motives of the established firm to adopt a corporate accelerator, the initiating personnel and driving forces, the program structure as well as the collaboration between established firm and startups within the program.

Startup informants were additionally asked for their motives to participate in the program. The last part concluded with the evaluation of the program for the corporate firm on an individual and organizational level in general as well as in comparison to other open innovation initiatives of the incumbent. Furthermore, the benefits for the startups were assessed. All three interview guidelines were constantly adapted during the data collection period, since we gained new insights into the phenomenon. 13 interviews were carried out face-to-face and 17 interviews via telephone. Except for five interview (in English), all interviews were conducted in German.

Besides the interviews, we also had the chance to participate in three pitching events, which enabled observing the corporate accelerator field and interactions of different stakeholders. During those events we spoke informally with program managers, corporate managers and employees, startups, as well as external guests, such as investors. The conversations lasted between five to 30 minutes, and were recorded from memory afterwards.

3.2 Data reduction and analysis

We mainly transcribed and coded 30 interviews using MAXQDA 12. To reduce our data, we followed a three-tiered approach including first-order analysis, second-order analysis, and aggregation (Gioia, Corley, & Hamilton, 2013; Miles et al., 2014). Since our research focus lay on the initiation and adoption of the open innovation practice our first-order coding of concepts was rather broad. As we did not exclude any information beforehand, in a second step we clustered the concepts into following themes: initiators, external and internal motives for a program initiation, three phases and characteristics of the acceleration process, as well as different degrees of adoption (Kostova & Roth, 2002) and striking performance measurement instruments and indicators. In a third step, we aggregated the themes into three dimensions (initiation, execution, and adoption). Finally, we connected the identified themes to the existing open innovation paradigm, institutional theory as well as literature on corporate social responsibility approaches and respective contradictory activities.

As stated before, we triangulated our data with secondary data and ensured investigator triangulation by performing parts of the data reduction independently. Subsequently, results were cross-checked by each other (Patton, 2015).

4 Findings

4.1 Inititation

We find that the idea of *initiating* a corporate accelerator program is mostly fostered by one individual of the organization. In six out of the ten cases the driving force is either the CEO or board, while in three cases one motivated employee initiated the introduction of a corporate accelerator program (see Table 2).

The top management initiators understand the open innovation instrument as an opportunity to cope with *external environmental challenges*, like the digitization (five out of ten) and/or industrial restructuring respectively weaknesses (two out of ten). Except for one case, the original source of the idea respectively inspiration is unknown:

> *"He has met Techstars and R/GA and then has visited an accelerator on a roadshow. Thus, the idea has grown […]."*
> *(CA 9, program manager)*

In contrast, all of the corporate employee initiators were inspired by other corporate accelerator programs, either in another division or location of the group, and wanted to establish the open innovation practice themselves. However, none of the employee initiators mentioned his individual motives for or any environmental factor that drove the organization towards introducing the program.

In these 90% of the cases (nine out of ten), the corporate accelerator program is considered to be an open innovation instrument for becoming more innovative and/or digitized via the equity or

non-equity collaboration with startups. *Internal motives* of the organizations are rigidity as well as innovation and digitization deficiencies, which are aimed to be overcome by investing into startups (three out of ten; all CEO initiated) and/or sourcing external ideas of new ventures (six out of ten) (see Table 2).

Two of the three financially driven programs search exploratively. In one case, the idea is to secure the survival of the firm by acquiring young ventures:

> *"The company knows that it is attacked from various sides, including startups. Therefore, the idea behind the program is: 'We invest into 80 to 100 [startups] ourselves, before anyone else does it.'"*
> *(CA 6, third party program manager)*

The third financially driven case uses the accelerator program to obtain a first mover advantage in a very little innovative industry. Therefore, the search scope is more exploitative and the program duration is used for a due diligence process in order to decide for or against subsequent investment afterwards.

Regarding the six more strategically driven programs, established firms have the idea to search for external knowledge and innovation. Three programs search for exploitative knowledge that either solves internally unresolved problems or is related to the existing knowledge base:

> *"The moment I hear of the idea I scan through potential use cases inside our company: 'Where do we have existing solutions? […] Is the entrepreneurial solution an additional component or a replacing one?'"*
> *(CA 1, program manager 2)*

Informants of the remaining three cases report that their companies aim for a more explorative search. One established firm aims at identifying new solutions more quickly and thereby selling innovative products to their customers at an early innovation diffusion stage. Another organization scouts for disruptive ideas, while the third firm seeks specifically for entrepreneurial ideas connecting different business sectors of the group.

One out of the ten cases does not conform with the above mentioned motives and thereof derived objectives. The established firm aims at supporting startups without any financial investment in its corporate accelerator program and does not act upon any strategic knowledge sourcing objective. In contrast, the organization aims at acquiring new customers for their own products by supporting young firms through its accelerator program. The incumbent can be described as an ecosystem builder (Pauwels, Clarysse, Wright, & Van Hove, 2015).

Table 2: Characteristics of examined cases

ID	Initiator	Primary objective	Search scope	Location of program[8]
CA 1	Corporate employee	Strategic (external knowledge sourcing)	Exploitative	Headquarters
CA 2	CEO	Financial	Explorative	Same city
CA 3	Corporate employee	Strategic (external knowledge sourcing)	Exploitative	Headquarters
CA 4	Corporate employee	Strategic (external knowledge sourcing)	Explorative	Different city
CA 5	CEO	Strategic (external knowledge sourcing)	Exploitative	Same city
CA 6	CEO	Financial	Explorative	Same city
CA 7	CEO	Strategic (external knowledge sourcing)	Explorative	Different city
CA 8	Board	Strategic (external knowledge sourcing)	Explorative	Headquarters
CA 9	CEO	Financial	Exploitative	Different city
CA 10	-	Strategic (ecosystem building)	-	Different city

[8] In relation to location of incumbent.

4.2 Execution

To understand how established companies adopt a corporate accelerator program, we identified a three-staged acceleration process and several services startups are provided with during their participation. In sum, all informants from the corporate accelerators reported that the program's objective is to support young venture growth through various services, for instance infrastructure, mentoring, training and networking (ten out of ten). In seven out of ten cases, startups are also provided with investment, however, only four programs take equity stakes in exchange.

All of the ten cases follow a three-staged acceleration process. This is comprised of a first *application phase*, followed by an acceleration phase, in which the startups' ideas are advanced. The process ends with the evaluation phase, in which the new firms present their ideas on a pitch event. The first phase provides all established firm (ten out of ten), notwithstanding their primary objective, *access* to a high amount of *external ideas and knowledge*, although the number of applications differs tremendously from 80 to 500:

> *"We have received 400 submissions, which include an incredible high amount of innovation and all of it is in our hands, we can see it."*
> *(CA 3, program manager)*

With regard to the *open innovation collaboration* between incumbents and startups during the *acceleration phase*, we found that formal exchange on operative or product specific questions between startups and internal experts is seldom (seven out of ten). Formal interfaces are, for instance workshops on specific topics or two pre-defined meetings during the entire acceleration phase of three months. The arrangement of a formal meeting with an internal expert often relies upon the startups' pro-activeness to ask a program manager to act as a liaison manager:

> *"Of course you will be supported and get help, if you ask for it. But if you do not ask for help and support, you won't get it, or you will get it only when it fits into the schedule coincidently."*
> *(CA 2, founder)*

Therefore, most of the startups have only irregular and few formal content-related exchange with corporate employees during the acceleration phase. On the one hand, this is due to the fact, that four out of the seven programs and their corporate firms are situated in geographically distant locations (in total: seven out of ten) (see Table 2). On the other hand, corporate employees have to perform their daily businesses and have only few time or interest to collaborate with startups.

Only in three out of ten cases, informants of different origins reported on regular collaboration between entrepreneurs and corporate employees or departments. In two of the three cases, the search scope was an exploitative one. Generally, all formal meetings between the startup and the respective corporate counterpart took place in the headquarters. In two cases, the startups had to travel from the corporate accelerator location to the premises of the established firm. One corporate employee described the collaboration as follows:

> *"We collaborated in cycles: I provided them [entrepreneurs of a startup] with problems and relevant issues, they processed and presented them again. They tried to stay in close contact with me."*
> *(CA 1, quality innovation associate)*

During the *evaluation phase*, all corporate accelerator programs offer a demo day, which serves as *informal interface* for entrepreneurs and corporate employees. During the final pitching event both sides have the opportunity to exchange. Furthermore, in three out of ten cases, a constant informal exchanged is targeted, as the corporate accelerator is located in the headquarters:

> *"It essentially becomes a co-working space that contains external and internal people working on their separate businesses or projects. So, there are interactions that organically happen here."*
> *(CA 8, program manager)*

However, corporate accelerator informants of two cases reported that neither side utilizes the opportunity sufficiently.

4.3 Adoption

As seen from the analysis above, the execution of especially the acceleration phase varies considerably between the different programs. Two out of ten established firms that follow primary financial objectives collaborate with a commercial accelerator provider. The third party provider operates the program on behalf of the company. The achievement of the financial objective is evaluated by a *KPI* measuring the internal and external follow-up investment into the supported startups. In comparison, informants of six out of ten cases report that they do not operate their accelerator program by any quantifiable objectives. Further, five of these six corporate accelerators follow rather a *trial-and-error* program execution:

> *"We do not have any results or criteria, no KPI's. Firstly, it is important for us to learn and afterwards we can develop criteria."*
> *(CA 4, program manager)*

Strikingly, six out of ten programs measure the success of their programs by tracking the *number of applications* although the KPI is not deduced from one of the reported objectives:

> *"[…] the external attractiveness of your accelerator has to be a success factor, too. In case you receive less applications of startups, the work of your accelerator is unsuccessful."*
> *(CA 2, digital project manager)*

Even more interestingly, three out of these six established firms do *not* strive for *further collaboration or investment*:

> *"Regularly, we do not manage to establish long-term partnerships, as the startups are too early stage. […] We have to ensure that all partnerships make sense from a business point of view, and even more importantly, are justifiable regarding communications."*
> *(CA 3, program manager)*

As a result, startups have begun to collaborate with a direct competitor after finishing the corporate accelerator program in one case. The other two of the three cases rather try to support young ventures in finding external investors. Therefore, one startup criticized the established firm for its *missing intention and commitment to collaborate* during and after the corporate accelerator program:

> *"The outcome was zero. They [established company] could gloat over by saying: 'We have fancy, cool startups, the makers.'"*
> *(CA 2, founder)."*

Similar to the disenchantment of one entrepreneur regarding the missing seriousness and commitment of the established firm, three startups that collaborated regularly and formally with corporate employees in two different programs also expressed their disappointment. Owing to red tape within the corporate organization, collaboratively developed products could not be introduced or existing collaborations could only be continued with tremendous delay.

5 Discussion

Our study examines why and how corporate accelerator programs are initiated by established firms as well as which personnel acts as a driving force and initiator. The purpose of this study is to confront our empirical results not only with the open innovation concept but additionally with institutional theory in order to advance insights for theory and practice and explain our finding sufficiently.

5.1 Theoretical implication

Firstly, we shed light on the initiation and diffusion of the corporate accelerator practice by drawing on institutional theory. The initiation of a corporate accelerator program is either fostered by a corporate employee or by the management board of the established firm. In case of corporate employee initiators, the program introduction results solely from the inspiration of an already existing program as an external stimulus. As

additionally neither external motives for nor objectives of the programs were clearly communicated, following institutional theory (Tolbert & Zucker, 1996) the program initiation can be described as an imitative action. In case of initiators from the management board, the diffusion of corporate accelerators seems to be more normatively driven as the open innovation practice was described as a helpful instrument to cope with idiosyncratic problems (Ahuja & Katila, 2004) as well as digitization challenges. Although corporate accelerator programs are imitatively introduced by corporate employees and therefore can still exhibit a "fashionable" (Abrahamson & Fairchild, 1999) character, established companies of our study mostly introduce them based on gathered experiences from various sources. For instance, corporate accelerator program structures are modelled upon those of commercial accelerators (Jackson & Richter, 2017), the phenomenon has a broad media coverage and the studied incumbents have already gathered evidence from 4,8 batches offered on average. As a result, corporate accelerators can be described as a semi-institutionalized open innovation practice that has gained some degree of normative acceptance in business practice (Tolbert & Zucker, 1996, p. 182f.).

Secondly, we contribute to a call for research on the intersection of open innovation and entrepreneurial opportunities (Bogers et al., 2017). We identify that the initiation of a corporate accelerator program is also a response to internal innovation and digitization deficiencies by identifying entrepreneurial ideas, and is hence comparable to other open innovation practices. Less innovative firms that additionally face challenging industry environments invest into participating startups in exchange for equity stakes and thereby acquire external knowledge (Zhao, 2009). Other established firms primarily utilize the open innovation collaboration with young ventures for searching for novel solutions in local business fields or distant locations outside their boundaries (Katila & Ahuja, 2002; Lopez-Vega, Tell, & Vanhaverbeke, 2016). In either case, incumbents have the opportunity to benefit from the startups' external, more advanced technology positions (cited by Gassmann & Enkel, 2004; Hermes, 1993).

Our third contribution relates to the literature on adoption of organizational practices by using institutional theory. Similarly to other open innovation practices corporate accelerator programs resemble a trial-and-error learning process (Argyris, 1976) so that the open innovation collaboration between incumbents and startups does not underlie a goal-oriented management (Gassmann, Enkel, & Chesbrough, 2010, p. 216). Further, formal or informal interaction between corporate employees and entrepreneurs necessary for collaborative product development is seldom fostered by the accelerator management. Consequently, the open innovation collaboration between incumbents and startups can be described as implemented, however, not internalized (Kostova & Roth, 2002). Established and new firms purport to collaborate through the accelerator, yet, actual operative collaboration and product development between corporate departments and startups is neither actively facilitated nor are corporate employees specifically committed to the practice. Accordingly, experiences and result for startups are rather sobering than advancing their growths. Our findings further show, that incumbents primarily benefit from receiving a high number of submitted ideas during the application phase. On the one hand, the number of applications displays a KPI for measuring the program's external attractiveness, similar to a marketing tool. On the other hand, established firms benefit from a high inflow of exploitative and explorative ideas without any requirements for interaction or high expenses (Felin & Zenger, 2014). As a result, corporate accelerator programs display characteristics of a symbolic action, as the open innovation collaboration is decoupled from the startup support action and services (Meyer & Rowan, 1977). Moreover, in case of substantive

regular open innovation collaboration between established and new firm during the accelerator program, a continuation of the collaboration fails resulting from conflicting cultural beliefs as well as interests due to ontological contradictions (Jackson & Richter, 2017). Thus, corporate accelerator programs as open innovation practice exhibit symbolic characteristics, for instance an opportunistic scouting for innovative ideas could be assumed, similarly to green-washing activities in the field of corporate social responsibility (Marquis & Qian, 2014; Walker & Wan, 2012). Although the corporate accelerator has still a short history and a trial-and-error process is lengthy, established firms seem not to be interested primarily in promoting the collaborative usage of complementary assets with startups. Thus, established firms seem to practice entrepreneurial washing to let the incumbent's innovation activity glitter more instead of fostering substantial open innovation collaboration with young ventures.

5.2 Practical implication

We have shown that the phenomenon of corporate accelerators is a semi-institutionalized open innovation practice that communicates support for and open innovation collaboration with young ventures but rather exhibits characteristics of a symbolic action. In case that established firms are still in a trial-and-error learning process, corporate accelerator managers should focus on improving regular formal and informal exchange mechanisms between corporate employees and entrepreneurs. This is especially important for an exploitation oriented open innovation approach so that the collaborative development of an innovative solution does benefit both partners. However, incumbents could specifically profit from a collaboration with startups for their explorative innovation performance due to startups' strength with regard to digitization and more radical innovations. Notwithstanding the search scope, managerial boards could foster the internalization of the corporate accelerator practice by allowing and supporting corporate employees to participate in these programs by taking responsibility for a startup and its idea. By offering inducements regarding "free" time as well as structural assistance through the general as well as direct management employees could more easily collaborate with young ventures on innovation project. As a result, the commitment of corporate employees and in return of the established firm in general towards its corporate accelerator program could be enhanced.

If an established firm adopts a corporate accelerator primarily for entrepreneurial washing in order to source entrepreneurial ideas or benefit from signaling effects as an innovative organization, it should communicate its support service to startups more unambiguously. Otherwise, news about and reactions of disillusioned accelerator graduates could harm the company, similarly to green-washing activities (Walker & Wan, 2012).

Our research has also implications for startups. Young ventures should inform themselves about the program structure conscientiously beforehand in order to decide, if the provided services suffice for their requirements. If their development necessitates a substantive collaboration and the reference of the incumbent as a symbolic partner on their homepage is insufficient, participation in a commercial accelerator might provide more promising opportunities.

5.3 Limitations

Our research has some limitations, which might serve as avenues for future studies. Firstly, our results are mainly based on interview data and no official reporting that could serve an analysis regarding signals of entrepreneurial washing. Consequently, we cannot make inference about the usage and efficacy of corporate accelerators as a marketing instrument to comply with stakeholders' expectations regarding innovation activities. Secondly, our research does not examine success factors for the open innovation collaboration between established and new firms. Qualitative research on factors enhancing a

collaboration would be highly valuable to foster substantive action in corporate accelerators. Thirdly, our research method does not allow us to identify if established firms use their learning experience in order to improve the open innovation collaboration from symbolic to substantive action. A dynamic perspective on trial-and-error learning in corporate accelerators would help to further understand incumbent's objectives for adopting the corporate accelerator practice.

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