



# Business model innovation in corporate entrepreneurship: exploratory insights from corporate accelerators

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## Abstract

Corporate accelerators are a rapidly growing entrepreneurial phenomenon occurring in different business contexts and business models within corporate entrepreneurship. Corporate accelerators are considered as an innovation fostering approach within new ventures provided by start-ups. The aim of the paper is twofold: firstly, to explore the motives behind corporations' engagement with start-ups in launching corporate accelerators, and secondly, to identify the corporate benefits and challenges of this business model innovation. The research design is based on a qualitative interpretative approach exploiting a triangulation of methods by using in-depth interviews (IDI) with corporate managers involved in development of corporate accelerators as well as a focus group interview (FGI) with industry experts. In addition, secondary data were applied to strengthen the exploratory research. The study demonstrates that a wide range of benefits stem from the accelerator activities which can ultimately can initiate changes in large companies. Our research expands on prior findings and suggests that corporate accelerators are driven by internal and external push and pull motives. The study contributes to expanding the scope of corporate entrepreneurship research in regard to the challenges and benefits of corporate accelerators. It provides evidence that corporate accelerators are a source of innovation that can be used to foster entrepreneurial-market logic and entrepreneurial learning.

**Keywords** Corporate accelerators · Business model innovation · Corporate entrepreneurship · Corporate venturing · Entrepreneurial-market logic · Entrepreneurial learning

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## Introduction

Business organizations increasingly recognize that the development of new products and services requires different approaches. Recent studies demonstrate that corporate entrepreneurship, as a firm-level phenomenon, plays an important role in stimulating innovation, revitalizing the organization, increasing productivity, and ultimately creating superior market advantage (Karimi and Walter 2016; Zahra 2015). In order to meet the challenges of the contemporary market, corporations look for new business models of value creation involving a wide array of market players in the process of generating innovation that foster corporate entrepreneurship. Business models are defined as a system of interrelated activities that determine how the company “does business” with its customers, partners and suppliers (Amit and Zott 2012; Trimi and Berbegal-Mirabent 2012). The latest sub-stream of corporate entrepreneurship research focuses on the involvement of external partners, as well as significant company resources in innovation generation processes through exploitation of new business models. Given the intense market competition and numerous technological developments, large mature companies experiment with new business models that are atypical for large-scale business, based on open innovation approaches Crowther (Chesbrough and Crowther 2006).

Recent studies on corporate entrepreneurship report a growing interest in new business models of outsourcing innovation to the start-up sector (Kanbach and Stubner 2016; Kohler 2016; Trimi and Berbegal-Mirabent 2012; Weiblen and Chesbrough 2015) which leads to an optimal exploitation of available opportunities for corporate entrepreneurship initiatives. Corporate engagement with start-ups leads to new forms of business models, ranging from incubators, spinouts and accelerators to corporate venture capital (CVC). These developments force a change in the perception of the role of cooperation towards greater efficiency (in terms of cost effectiveness and time to market) in generating innovations. In particular, corporate accelerators have increased in number significantly in recent years (Hochberg 2016; Kanbach and Stubner 2016; Kohler 2016; Pilewicz and Maria 2017). They are defined as business models that support cohorts of startups in early stages of development for limited duration via access to office space, mentoring, training, and other company-specific resources (Cohen 2013; Kohler 2016; Shankar and Shepherd 2019; Yusubova and Clarysse 2016). The majority of current studies dedicated to corporate accelerators focuses on their success factors and provides evidence that corporate start-up accelerators present promising returns to both corporations as well as start-ups (Yusubova and Clarysse 2016). Research results suggest that corporate business accelerators present a promising opportunity for business model innovation in existing mature companies; authors point out that innovations are often costly and time-consuming, requiring significant initial investment ranging from research and development to specialized resources, new plant and equipment, and even entirely new business units (Amit and Zott 2012). Business model innovation, such as corporate accelerators, is an alternative to or can complement corporate product or process innovation. Through a common initiatives with small ventures, large organizations can develop and launch innovation faster, with less risk, while they can ultimately learn how to be flexible in developing innovation (Connolly et al. 2018). Additionally, it may be harder for competitors to imitate or replicate an entire innovative business model than a single new product or process. Hence, business model innovation can be considered a potentially powerful competitive tool (Casadesus-Masanell and Ricart 2007).

Despite the growing scope of corporate accelerators as a fairly new business phenomenon, and the initial research results suggesting their high potential in terms of innovation generating, there is still a lack of common understanding of the motives and effects of corporate accelerators (Kohler 2016; Weiblen and Chesbrough 2015). It can be assumed that corporate accelerators significantly differ from regional ones, run by technology parks, universities or municipalities, and therefore demonstrate specific business logic (Fehder and Hochberg 2015). In general, logic shapes mindsets and “provide[s] a coherent set of organizing principles for a particular realm of social life” (Besharov and Smith 2014). Therefore, it is important to identify the core drivers in this young research field, as they may provide an explanation for contemporary business dilemmas related to innovation and firm-level entrepreneurship. Considering the increase in significance of corporate accelerators, it is important to gain a deeper understanding of the motives, as well as challenges, associated with this form of corporate venturing. This understanding appears to be critical for companies experimenting with new business models of generating innovation.

The aim of the article is to explore the driving factors behind corporate start-up accelerators and to identify the benefits and challenges associated with this business model innovation. Based on five in-depth interviews and a focus group interview (FGI) with corporate representatives this study focuses on identifying the core dimensions (motives, challenges and benefits) of collaboration between corporations and start-ups carried out by corporate accelerators. This study increases the scope of both the theoretical and practical body of knowledge on corporate entrepreneurship and innovation acceleration through cross-sectoral collaboration.

The remainder of the paper is organized as follows: “[Literature review](#)” section provides a literature overview on corporate entrepreneurship and the role of business model innovations exemplified by corporate accelerators. “[Material and methods](#)” section clarifies the methodological approach and justifies the employment of qualitative data analysis methods. “[Research findings](#)” section deals with the research findings, and “[Discussion and conclusions](#)” section presents concluding remarks and a discussion along with the identified contributions and limitations.

## Literature review

### Business model innovation in corporate entrepreneurship

Corporate entrepreneurship, although variously defined by researchers (Morris et al. 2010; Sharma and Chrisman 1999b; Zahra 2015), has been long recognized as a potentially cost-effective way to promote and maintain competitive advantage (Covin and Miles 1999). It refers to a set of distinct and multidimensional organizational phenomena, including the development of innovation, and is the driving force behind purposefully redefining organizations, markets or industries to foster competitive advantage. Covin and Miles (1999) indicate that corporate entrepreneurship is associated with many distinct organizational phenomena, e.g. when (1) an established organization enters a new business; (2) individuals or teams are in charge of new product ideas in a corporate context; and (3) the entrepreneurship philosophy permeates the perspectives and activities of the entire organization. These phenomena are not

inherently alternative (i.e. mutually exclusive), but they can co-exist as separate dimensions of entrepreneurial activity within one organization. Based on the literature review, different attributes of corporate entrepreneurship phenomena can be identified (Sharma and Chrisman 1999a; Zahra 2015): corporate venturing, strategic entrepreneurship and innovation. Corporate venturing refers to entrepreneurial phenomena that are reflected in the creation of new enterprises or invested in existing organizations (e.g. as internal, cooperative, and external corporate venturing). Conversely, strategic entrepreneurship consists of a wide range of entrepreneurial initiatives (including organizational innovations) that are adopted towards gaining competitive advantage (including strategic renewal, sustained regeneration, redefinition, organizational rejuvenation, and business model reconstruction) (Kuratko and Covin 2015; Kuratko et al. 2015). In addition to these two attributes of corporate entrepreneurship, innovation, as the third stimulus refers, to the creation and introduction of new products, processes and systems (Sharma and Chrisman 1999a; Vanacker et al. 2017). This means that corporate entrepreneurship occurs in “formal or informal activities aimed at creating new businesses in established companies through product and process innovations and market developments” (Zahra 1991, p. 262). Innovation is considered as a sufficient condition for entrepreneurship to exist (Table 1).

Given the various attributes of corporate entrepreneurship, companies use different business models to exercise entrepreneurship. A business model can be defined as a system of interrelated and interdependent activities that determines how the company “does business” with its customers, partners and suppliers (Amit and Zott 2012); (Trimi and Berbegal-Mirabent 2012). In other words, the business model is a set of actions carried out to meet market needs, along with specification of which parties (the company or its partners) operate and how these activities are interrelated. Therefore, business model innovation is an important sub-stream of research in the corporate entrepreneurship domain (Amit and Zott 2012; Hacklin et al. 2018; Karimi and Walter

**Table 1** Conceptual framework on core attributes of corporate entrepreneurship

Attributes	Specification
Strategic renewal	<ul style="list-style-type: none"> <li>• significant changes in strategy and/or in the structure of the organization at both business and corporate level</li> <li>• transforming the firm by revitalizing its operations and reordering its core capabilities</li> <li>• development of new processes and structures aimed at exploiting market opportunities that have been overlooked by competitors, by introducing current products into new markets or new products into existing markets</li> </ul>
Corporate venturing	<ul style="list-style-type: none"> <li>• undertaking a new corporate activity</li> <li>- Internal – when it remains within the existing organizational framework by integration into a given unit or can be developed through the creation of a subsidiary organization</li> <li>- External – when developed through autonomous or semi-autonomous bodies located outside the organization’s existing framework, e.g. joint ventures</li> <li>• diversifying the degree of innovation of a new activity by imitating pioneering competitors and market innovations</li> </ul>
Innovation	<ul style="list-style-type: none"> <li>• creating and launching new products, production processes and organizational systems</li> <li>• introduction of invention or original idea that can be commercially exploited, which is new to the market and has the potential to generate a new competitive environment</li> </ul>

Source: Own study based on Benavides-Espinosa and Suanes (2011), Sharma and Chrisman (1999a)

2016; Wu et al. 2019). It relates to the implementation of entrepreneurial ventures that are new to the firm. The logic behind business model innovation relates to the entrepreneurial-market logic. An entrepreneurial-market logic is considered as a specific set of actions focusing on the pursuit of innovation, creativity, and the development of new business models (Cunningham et al. 2002; Roundy 2017). It is critical for the creation and functioning of new business models. Karimi and Walter (2016) analyzed how corporate entrepreneurship attributes disrupt model innovation. Using empirical data from the publishing industry, they demonstrated that corporate entrepreneurship activities often lie at the core of the response to disruptive innovations. According to the research findings of Pohle and Chapman (2006), companies that put more emphasis on the creation of new business models have increased their operating margin faster than their competition. Based on prior research, business model innovation can occur in many ways (Amit and Zott 2012):

- by adding new activities - this form of business model innovation is called the “content” of the new activity system,
- by combining activities in new ways - this form of business model innovation is called the new “structure” of the system of activities,
- by changing one or more activities - this form of business model innovation is called the new “management” management system.

From an innovation perspective, business model generation relies on the company’s ability to acquire and operate new skills and capabilities including those outside of their immediate expertise (Casadesus-Masanell and Ricart 2007; Trimi and Berbegal-Mirabent 2012). Over time, extended business relations have gained increased attention in research on new business models. For example, Huse et al. (2005) examined the characteristics of the modern business environment and the impact they exert on the innovative performance of enterprises. Bai et al. (2016) argue that innovation performance is the result of networking opportunities, and that networks and interdependencies across them have a positive impact on generating innovation. Taking into account the challenges associated with the development of networks, various difficulties may arise (Birkinshaw et al. 2007). The first is finding new partners, unknown and removed from the company, geographically, technologically and institutionally. The second is the opportunity to work together and share knowledge, which may be an obstacle for reasons of competition, culture or law.

For a large mature company, the development of connections with smaller companies, and specifically with start-ups, presents numerous problems, as neither may come across each other’s path naturally; however, large companies use various means to develop new connections. Their goal is to tap into the technological and market areas, in order to identify innovative projects that are at an early stage of development, or already existing innovations. Connecting with external entrepreneurs who are distant from the company, and who recognize and understand new market needs well is a quick way to enrich corporate perception of market needs. As emphasized by Griffin et al. (2014), a perfect understanding of customer needs is a key trait that is shared by all outstanding innovators. Drawing on the early works of Damanpour (1992) dedicated to the relationship between company size and the degree of innovation, it can be assumed that start-ups play a potentially vital role in introducing innovations.

This kind of cross-sectoral connections can lead to win-win relationships between large companies and start-ups. A large company can help start-ups market their innovations by offering their experience in project management for the planned launch of the product on the market. As Terziovski (2010) noted, small players must learn from large companies how to manage an innovative project. Large mature companies are complex organizations that must have formal processes in order to be effective. Thus, cooperation with small companies can stimulate innovation processes in large companies (Schaeffer 2015).

Since large companies and start-ups are distant stakeholders and do not operate in the same arena, start-up competitions are organized (e.g. hackathons, accelerator programs) within an industry to increase their visibility and tap into the emerging technologies. Start-up competitions organized by large companies are increasingly frequent in recent times, but have not been thoroughly studied in the corporate entrepreneurship literature (Kanbach and Stubner 2016; Lambert and Schaeffer 2011; Schaeffer 2015). The competitions allow large mature companies to identify external innovations which might be potentially beneficial to their business. In its quest for innovation, the technology industry in particular, has experimented with a variety of business models involving start-ups, e.g. corporate accelerator programs. Hence, corporate efforts to reach out to the start-up ecosystem seem to be an important strategic goal.

### **Corporate accelerators as a business model innovation**

For decades, corporate accelerators have been an inherent part of entrepreneurial ecosystems supporting businesses in their post-incubation phase (Cohen 2013; Roundy 2017). They have been defined in the past as programs that help entrepreneurs bring their products into the marketplace and expand operations (Kupp et al. 2017; Pauwels et al. 2016). The literature distinguishes among:

- internal corporate accelerators (Hochberg 2016; Kohler 2016; Weiblen and Chesbrough 2015),
- non-corporate accelerators, e.g. independent acceleration programs (Hoffman and Radojevich-Kelley 2012; Kim and Wagman 2014) and
- public accelerator programs (Malek et al. 2014).

Corporations which want to pursue innovation activity through corporate accelerators must consider whether to build an accelerator program independently or outsource activities to an external partner. Alternatively, corporations can work with other companies to build a shared accelerator or join an existing one as an additional partner (Hochberg 2016). Hence, recently, attempts have been made to classify corporate accelerators.

Pauwels et al. (2016) indicated that accelerators have become an umbrella term for any program providing a service structure of mentorship, networking opportunities and access to funding. Based on comparative analysis of the 13 accelerators across Europe, three distinct themes were revealed characterizing three different types of accelerator: the “ecosystem builder” (an accelerator typically set up by corporate companies that wish to develop an ecosystem of customers and stakeholders around their company), the “deal-flow maker” (an accelerator that receives funding from investors such as

business angels, venture capital funds or corporate venture capital and primarily aims to identify promising investment opportunities for these investors), and the “welfare stimulator” (an accelerator that focuses on stimulating start-up activity and fostering economic growth, either within a specific region or within a specific technological domain, where typically government agencies are as a main stakeholder).

Kanbach and Stubner (2016), based on in-depth empirical research of 13 case studies of corporate accelerators, identified four types that are unique in terms of programmatic of organizational goals and configuration. These are: the listening post, the value chain investor, the test laboratory corporate accelerators and the unicorn hunter corporate accelerators. While the first three types of corporate accelerators are focused on specific strategic goals (e.g. understanding recent trends and developments in respective markets, and initiating relationships; identifying, developing, and integrating new products and services into the parent company’s value chain; creating a protected environment to test promising internal and external business ideas), the latter is used for financial purposes (investing in promising start-ups, making them more valuable, and earning a financial premium).

Corporate accelerators have distinctive characteristics, which differentiate them from regional ones, run by technology parks, universities or municipalities (Cohen 2013). Corporate accelerators are usually time-limited programs that perform selective adoption of a start-up cohort on a given date. These programs can be set up and run as part of a corporate entrepreneurship strategy. In contrast to existing corporate venture initiatives, corporate accelerators not only provide direct and indirect financial support for start-ups, but also strive to achieve additional goals with comprehensive business models supporting digital transformation (Kanbach and Stubner 2016). Additionally, corporate accelerators are often a global cross-sectoral phenomenon, which often includes companies from various industries (e.g. Walt Disney and Spring in the US, Citigroup and Samsung in Israel, METRO and Bayer in Germany) across the globe (e.g. the Microsoft Accelerator Program operating in seven cities in Europe, Asia, North America and the Middle East; Google in three Latin American countries) (Kanbach and Stubner 2016). In addition, they provide other services such as office space, mentoring, training and networking opportunities, in addition to investment capital for start-ups (Cohen 2013; Hallen et al. 2014; Hochberg 2016; Malek et al. 2014). Kohler (2016) points to the additional strategic goals of corporate accelerators, such as rejuvenating of corporate culture and attracting talent.

The existing literature emphasizes that corporations usually have rather uniform goals for their corporate accelerator activities, namely providing external innovations, and stimulating and achieving corporate innovation through interaction with entrepreneurial start-ups. Corporate accelerators are considered as a business model innovation when the companies strive for continuous improvement of their performance and innovativeness. Therefore, it can be stated that corporate accelerators serve as a means for mitigating the risk inherent in highly innovative projects. High-tech investments pose a significant risk, so companies make small investments at the beginning and sometimes provide external partners with access to internal resources for joint development (Clarysse et al. 2015; Ryabokon and Pikalov 2018). In the short term, the goal is not to generate income, but to monitor and evaluate new technologies.

Although research on corporate accelerators is growing quickly, there is still a lack of common understanding on why corporate accelerators are launched and what the



effects of this business model innovation are. Research on corporate accelerators remains modest and lacks established research framework and concepts. Due to the relative novelty of accelerators, there is also little systematic research on their impact on participating companies and the start-up community. This is largely related to the various business model logics of corporate accelerators (Pauwels et al. 2016; Pilewicz and Maria 2017; Yang et al. 2018). The categorization of business models of cooperation between corporations and start-ups offers initial guidelines but lacks further conceptualization of the specific motives and challenges associated with it. This gap provides the basis for further study to expand the existing research findings.

## Material and methods

### Sampling

This study seeks to identify the motives, challenges and barriers associated with corporate accelerators. The object of the research involves multiple partners engaged in new types of relationships, and has been rather under-researched to-date. The study is based on purposive sampling selection according to relevance (Flick 2009, p. 121). Corporate representatives with hands-on experience in corporate accelerators in Poland were selected. In the past ten years, Poland has witnessed dynamic growth of business accelerators of different types, including corporate accelerators (Serwatka 2018; Staszewska 2018). One of the largest networks of business accelerators, Business Link, operates in ten Polish cities. Several corporate accelerator programs established by international corporations are already in operation (mainly in IT, telecommunications and electronics) and new ones are currently being established. Further, in 2016, the government launched a large-scale government co-funded acceleration program, designed to be the largest of its kind in Central Eastern Europe (Pilewicz and Maria 2017). Its aim is to support innovation, cross-sector collaboration and develop the start-up ecosystem. In its initial phase, ten Polish companies (including public ones) received funding for launching start-up accelerator programs. Overall, Poland is currently witnessing significant activity in the area of business accelerators and cross-sectoral cooperation offering an array of valuable case studies for this research. Our sample will complement the existing body of knowledge with evidence from an Eastern European country, whereas most other studies focus on Western European countries, namely the UK, France and Germany (Yusubova and Clarysse 2016).

The sampling strategy was based on several selection criteria. The intent was to include established players (international and public corporations) from different sectors. A crucial selection criterion in order to explore the benefits and challenges of a corporate accelerator was for it to be operational for at least one year. In total, seven accelerators operating currently in Poland were selected for this research. Three were run by multinational corporations and two by large Polish companies with international reach (Table 2). Two entities rejected the invitation to take part in this research. All of the corporate accelerators sought start-ups both from within and outside Poland.

As this is an exploratory study, respondent selection ensures diversity of the research phenomena (Eisenhardt and Graebner 2007; Reddy 2015) within the given geographical context. In line with this, data were collected for all three categories of corporate



**Table 2** Cases included in the research

Company	Sector	Corporate accelerator	Duration	Success rate**	Scale	Accelerator Impact
A	Electronics	Internal	4 years	ca. 1.5%	4 programs	international
B	Tobacco	Internal	1.5 years	3.5%	4 programs	international
C	Energy	External*	3 years	ca. 8%	3 programs	national
D	Chemical	Internal	1.5 years	ca. 10%	1 general program	international
E	Energy	Public	3 years	unavailable	1 general program	national

\*Developed jointly with external operator

\*\*Percent of start-ups selected with signed contracts out of the applying pool

Source: Own study

accelerators identified in prior studies, i.e. internal, external (independent provider) and public acceleration programs (run and co-financed by a government agency). The study delivers data from three internal acceleration programs, one external and one public (Table 2). The initial list of potential respondents was created by analyzing data available online regarding corporate accelerators in Poland. The respondents were purposefully sampled to obtain perspectives on the corporate accelerators from multiple standpoints. The interviewees included: (i) executives of the accelerators; and (ii) experts from intermediary institutions connecting corporations with start-ups. The final selection was based on respondent accessibility and willingness to share information.

## Data collection

The study is based on different sets of data: five in-depth interviews (IDIs) with corporate accelerator executives, one focus group interview (FGI) with experts, and secondary data sources. Using multiple data facilitates triangulation (Denzin and Lincoln 2005; Flick 2009), which helps join multiple lines of inquiry and raises research validity. The intention was to take advantage of the strength of a qualitative approach to deliver contextualized and detailed descriptions related to exploring new theoretical insights. This can be achieved by focusing the research on one specific target group of respondents (Eisenhardt and Graebner 2007; Woodside 2010). Hence, the respondent sample included only corporates representatives without consideration of entrepreneurs and start-up representatives involved in corporate accelerators. This choice results from the research evidence that both corporations and start-ups use different business model logics, as explained in the literature review. Data collection was conducted in three phases. First, the selected accelerators were researched online to collect any available secondary data. External data were obtained from publicly available media, accelerator and company websites, and newspaper articles. We were able to access sources dating back to the inception of every accelerator program, as they are all fairly new projects, which helped us gain valuable insights on each accelerator's development from inception. These data provided important information on: (1) when and how the accelerator was launched; (2) if and how the accelerator changed over time; (3) how the accelerator engaged and interacted with start-

ups; and (4) how the accelerator communicated their goals. The use of multiple secondary data sources, in addition to interviews, mitigated respondent and retrospective bias, as the data were constantly compared and validated.

In the second phase of the research, potential respondents (executives of the selected corporate accelerators), were contacted directly in order to conduct in-depth interviews (IDI). The interview protocols consisted of open questions and included issues derived from the literature review. The operationalized interview themes were kept hidden from the respondents and were often introduced as follow-up questions depending on the momentum of each interview. The interviews were loosely structured, as within the applied research framework it is the respondent who largely sets the course of the conversation (Cope 2011). The interviews started with broad questions, then proceeded to more narrow issues. Questions addressed the following broad thematic areas: (1) aim and scope of the accelerator; (2) motives of launching the accelerator; (3) challenges; and (4) direct and indirect benefits. The primary guideline applied was ensuring freedom of expression for the respondents. Each initial interview was carried out outside company premises, lasted between 60 and 180 min, and was recorded for content analysis purposes. Follow-up interviews were conducted via skype. All respondents were assured of their anonymity. A total of approximately 12 h of recorded material was collected between February and May 2019.

The third phase included a focus group interview (FGI) with four experts of corporate accelerators, who were not involved directly in their implementation. The objective of this stage was to gather additional evidence from a different standpoint in order to enhance the data collected by individual interviews with corporate experts and to increase validity. Therefore, we contacted organizations responsible for connecting corporations with start-ups (and the other way around), which specialized in running events (hackathons, competition programs) and setting up accelerator programs for corporations. Heterogeneity in the group was ensured (Flick 2009) by short phone conversations prior to the focus group interview. The experts invited to the focus group served as start-up consultants and/or intermediaries for international corporations in joint projects, corporate accelerators, outsourcing projects, corporate incubators and other. The focus group method provided valuable quality controls to data collection, as respondents “provide[d] checks and balances on each other and weed[ed] out false or extreme views, so that a shared consistent view [was] quickly assessed” (Flick 2009; Patton 2015, p. 386). Valuable group discussion took place during the focus group interview, as “it correspond[ed] to the way in which opinions are produced, expressed and exchanged in everyday life” (Flick 2009, p. 197). The focus group was scheduled for October 2019, lasted two hours, and similar issues with the individual interviews with corporate accelerator executives were covered in order to obtain the participants’ interpretations of other data sources (Gibbs and O’Neill 2014) and validation of priorly gathered data.

## Data analysis methods

Given the new and multidimensional object of this study, a qualitative interpretative approach was used to explore it incrementally (Denzin and Lincoln 2005). All interviews were transcribed (in two cases they were translated into English) and carefully read in an attempt to recall the stories and details for the purposes of sense making and

textual analysis (Denzin and Lincoln 2005). Secondary data were employed to back up the evidence provided by the respondents. During this phase, respondents were sometimes re-contacted to clarify or elaborate on certain facts or issues and to control for interpretation bias. This inter-case reflective analysis and interpretation process was carried out for all five transcripts separately. Open coding was applied to each case transcript by each of the authors separately in order to mitigate interpretation bias. Potentially significant excerpts were highlighted and transferred to an excel sheet. The extracts, along with observations and notes, were then grouped into common clusters of meaning. This process was carried out for each of the transcripts and led to the horizontalization of identified themes (Moustakas 1994).

Next, a cross-case analysis was conducted by comparing similarities and differences across cases, along with outtakes from the focus group interview, for each research area. The purpose was to identify shared aspects of experiences (patterns) across accounts. This led to the development of further categories reflecting relevant experiences and meanings related to the research phenomenon (Smith and Eatough 2006). During this process, additional topics were identified. The analysis relied on Yin's (2018) replication logic, typical for a multiple case study for two reasons: (1) capturing the rich descriptive context of corporate accelerators; and (2) enhancing the patterns of the results. The outcomes of this cross-case analysis were also recorded in an excel sheet. The following stage of data analysis included interpretation of the interplay between the respondents' testimonies and the writing process by the researchers. The final stage was the analytical discussion, engaging the existing literature to provide theoretical explanations for the findings at a higher level of abstraction. The strengths of the case study approach is its ability to examine not only the phenomena in question, but also their context, different activities over time, and complex outcomes that are beyond the capabilities of single-factor analyses (Yin 2018).

## Research findings

The results focus on four key research areas designed in the conceptual phase: (1) organizational framework of the accelerator; (2) motives of launching the accelerator; (3) challenges; and (4) direct and indirect benefits related to the corporate accelerators.

### Organizational framework of the corporate accelerators

The five accelerators included in the research have considerably different spans of experience, ranging from 18 months to four years. One of the accelerators is run by an external intermediary and one as a joint project with a government agency. Two of the accelerators demonstrate exploratory business model logic in their aims, meaning that they have been set up with the primary goal of monitoring current innovation trends taking place in the start-up sector within their relevant industries. These two accelerators seek to engage in joint research projects with external partners, which may not necessarily lead to specific business outcomes. The rest of the accelerators follow a more exploitative business model logic and their driver is to bring in concrete business cases for their respective corporate lines. In two cases, the heads of business lines lead the start-up cooperation, providing needs and gaps specifications when issuing a call.

The accelerator programs often influence the key performance indicators (KPIs) of companies. Accelerators of an exploratory business model logic typically have a higher success rate, as this is measured through joint projects (including research projects) which are not specifically ready for market deliverables.

The scale of the accelerators varies as well. They run from one to four programs and receive a varied number of applications per year, depending on the industry and the duration. Some accelerator programs are well known and, thus, receive more applications from start-ups. Within the studied sample, two accelerators are limited in their impact on a national level, while the rest are international companies seeking both domestic and foreign entries. The impact of the latter is international (Table 3).

While the corporate internal accelerators have an open application policy, the corporate external accelerators are time-limited. Each accelerator has its own criteria for selection, evaluation and collaboration frameworks within a given project. Innovation governance takes different forms across the sample, depending on the framework in which collaboration is implemented. These forms range from start-up acquisitions, through to technology buy-outs, licensing and investment schemes, and simple project-based contracts, where the corporation becomes the customer. Some accelerators tend to favor certain solutions, but in general they declare that they are all open for negotiation.

### Motives of launching corporate accelerators

All companies within the sample admit to having innovation at their core, although the history, culture and innovation systems vary within the sample. One of the companies has a hundred-year-old tradition of extensive R&D, a large patent portfolio and multiple innovation projects per year. Other firms in the sample have a relatively new strategy adapted recently (2–5 years ago), which places innovation at the core of their growth. Launching the accelerator was part of their strategy implementation.

All respondents admit that start-up accelerators were set up as a listening and monitoring device: “*we want to know more about the market and its developments*” (company C), “*start-ups tell us more about the market; they bring in information from niche areas we often overlook*” (company D), “*it’s a shortcut to staying up-to-date*”

**Table 3** Organizational background of examined corporate accelerators

Company	Range of the accelerator	Accelerator business model logic	Strategic goal of the accelerator
A	international	exploratory	monitoring current innovation trends taking place in the start-up sector within their relevant industries
B	international		
C	national (public sector)	exploitative	bringing in appropriate business solutions (products or services) for their respective corporate lines
D	international		
E	national (private sector)		

Source: Own study

(company A).” Two respondents also mentioned the factor of controlling risk: “it’s mitigating risk – start-ups are quick to the market and some may pose a realistic threat in the near future, so it’s important to be in the loop” (company C), “we want to keep start-ups in our ecosystem to monitor our potential competition.” (company B).

Specific motives behind the accelerator initiative vary depending on the company’s strategic goals and business model logic (Table 3). Two exploratory accelerators were established with the intention to monitor the market and industry-specific technological developments. These industries (Electronics and Tobacco) are currently being strongly disrupted by consumer expectations, as well as shifts in demand and technology developments. These companies recognize the need to diversify their product/service portfolio and are proactively seeking innovation opportunities: “the accelerators are actually our innovation outposts, purely exploratory – innovation seeking is at the core of our strategy now” (company B), “we have to stay relevant for our clients and diversify our product portfolio, so we are looking around” (company D), “hedging growth is important today - looking for alternative scenarios based on new technologies” (company B). The three remaining accelerators are more driven by delivering specific business cases and market implementations, thus fall in the category of exploiting innovation: “we have to maintain our market position and are urgently seeking new technologies, new products and services” (company A), “we want to revolutionize the market and lead this revolution” (company C). The sense of urgency and time sensitivity is quite different between these two groups.

Based on the cross-case analysis of the collected material, four groups of factors contributing to the implementation of the accelerator programs were finally identified (Table 4).

Although all four types of motives were identified across the sample, corporate accelerators with exploratory business model logic are dominated by external pull motives, while accelerators with exploitative business model logic expose a strong saturation of internal push motives. Table 4 demonstrates the types of motives dominant within the two types of accelerators. Based on the data gathered, we bring forward a hypothesis, which can be verified by future studies.

Hypothesis 1: While exploratory corporate accelerators are dominated by external pull motives, the exploitative accelerators exhibit a strong saturation of internal push motives.

## Challenges

Establishing the accelerator programs involves developing new managerial processes. Engaging in a structured and formalized collaboration with start-ups engenders numerous challenges, as signaled by all respondents. First of all, they emphasized the challenges associated with human capital. The decision to establish a corporate start-up accelerator is made by the top management of the company. Both employees and managers may not always be converted to the idea. Another aspect of human capital limitations is the inherent skill gaps due to the novelty of the experience. The testimonies often reflect the problem of timing, the lack of necessary competences and expertise, and the need to respond quickly to market pressures.

**Table 4** Driving factors of launching corporate accelerators

Core motives	Specification of influencing factors
External push factors	<ul style="list-style-type: none"> <li>• industry disruption,</li> <li>• new technology developments,</li> <li>• lower market entry barriers than previously,</li> <li>• new market entrants,</li> <li>• global trend of cross sector collaboration</li> </ul>
Internal push factors	<ul style="list-style-type: none"> <li>• endangered market position,</li> <li>• need to develop new products/services,</li> <li>• need to develop new market segments,</li> <li>• internal R&amp;D focused on industry mainstream,</li> <li>• efficiency and excellence,</li> <li>• little innovation development and working in long cycles</li> </ul>
External pull factors	<ul style="list-style-type: none"> <li>• market and demand transitions,</li> <li>• new niches on the market to be addressed,</li> <li>• customers more tech savvy and demanding new technologies,</li> <li>• extended package solutions, large enough numbers of start-ups,</li> <li>• higher maturity of start-ups (awareness of their rights and advantages) reflected in taking advantage of the ecosystem infrastructure</li> </ul>
Internal pull factors	<ul style="list-style-type: none"> <li>• new knowledge and inspiration for employees,</li> <li>• organizational learning,</li> <li>• new talent acquisitions,</li> <li>• upgrade of organizational competence,</li> <li>• new managerial practices, systems, frameworks,</li> <li>• development of company experts</li> </ul>

Source: Own study

Another challenge that was flagged was the mindset and habits of corporate managers. Respondents repeatedly reported that large corporations are systems, which tend to avoid risk and are not very flexible and quick to action. These features go against the modus operandi of start-up ventures. Moreover, further challenges are associated with the fact that every start-up applying to the accelerator program requires evaluation and that each new project coming in is different. The evaluation process of each application requires a different skillset, knowledge and experience, as well as cooperation with various experts within the accelerator process (see Fig. 1).

The next group of challenges addresses the problem of fit and the gap between corporate and start-up expectations. Respondents admit that, often, the applying start-up does not have enough knowledge about the nature, requirements and specific needs of the corporation. Instead, they are focused on their new business idea. This lack of understanding of the broader corporate context by start-ups seems to be a common problem.

The data analysis has revealed that corporate accelerators experience collision effects when large mature organizations cooperate with start-up ventures. These effects are the product of different business model logics and management practices. Respondents report that start-ups do not have insight into end-customer needs, as well as the financing schemes of corporations. In addition, both corporations and start-ups have different time orientation and decision-making processes. While start-ups favor short-term decisions and quick returns, corporations exhibit a long-term outlook. Respondents repeatedly indicate that

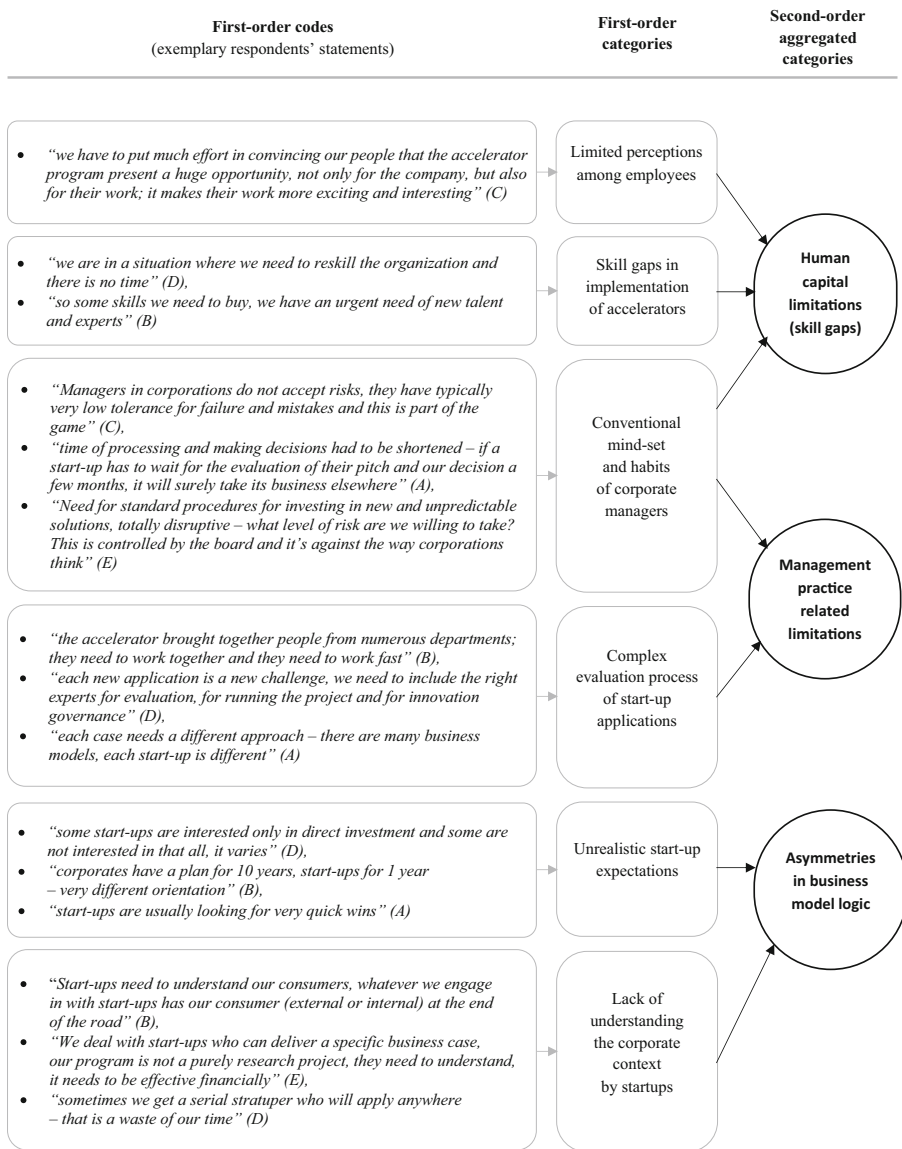


Fig. 1 Challenges associated with corporate accelerators. Source: Own study

cross-functional evaluation and decision-making takes more time than most start-ups are able to accept. Another recurring issue in respondents' testimonies is the limitations of corporate skillsets, which are not always aligned with the ones necessary to work effectively within corporate accelerators. Based on the data analysis, we make the following hypothesis:

Hypothesis 2: The main challenges faced by corporate accelerators are associated with limited human capital skills, complex management practices and distinct business model logics between corporations and start-ups.



## Benefits

The respondents all agreed that a corporate start-up accelerator holds substantial potential and brings in both direct and indirect benefits. The analysis revealed several areas of benefits occurring at different levels. The key benefit for corporations is strategic. In the short term, corporate accelerators generate new market knowledge about customers' expectations, industry trends, new technologies and competition. This new knowledge accumulation takes place both through formal and informal interactions. The long-term benefits resulting from this new knowledge are vast and different for each of the organizations. The strategic benefits relate to human capital, and specifically unique competences. All respondents admit that during the course of the accelerator program, the people involved develop high-profile expert skills, which generate further gains for the company. These skills refer predominantly to evaluating new ideas and funneling the projects through the corporate processes effectively and quickly. The final most important group of strategic benefits is organizational learning. Through acceleration programs, corporations learn to do new things in new ways. Mistakes and failures are perceived as regulatory mechanisms.

Financial benefits were seldom mentioned by the respondents. It appears that the overarching goals of corporate accelerators are not financial. Respondents of the exploitative type of accelerators admit that income generation is very important, although it can be problematic to measure. Financial benefits are long-term and moderated by the scope of the operations, as explained by the respondents: *"this is the sowing phase, the long-term effect is dependent on the number of successful projects we carry through"* (company C). The respondents also admit that there are no short-term financial benefits from the projects, rather the contrary: success is never guaranteed, some projects are cost-intensive and risk tolerance can be lower. Two respondents, however, pointed out that the accelerator expands the company's networks and can positively influence its image (Fig. 2).

Based on the data analysis of the reported benefits of corporate accelerators, we make the following hypothesis:

Hypothesis 3: The key benefits of corporate start-up accelerators refer to long-term strategic gains, such as access to new market knowledge, organizational learning, expanding the company's networks and improving the company's image.

The cross-case analysis of challenges and benefits revealed that two factors are critical to mitigating the collision effects of the distinct business model logics between corporations and start-ups. The problem of "fit" between them can be mitigated by the development of new human resources skills and by applying an agile (flexible) management approach to corporate accelerators that supports the entrepreneurial-market logic. Skills are a critical factor to initiate, implement and evaluate the outcomes of a corporate accelerator. This study proposes a fourth working hypothesis. The results suggest that the challenges experienced by corporations engaged in corporate acceleration programs create opportunities for potential benefits. The corporations who can adapt flexibly by upskilling their human capital and/or acquiring new external talent can introduce more effectively fast-forward communication, feedback and decision-making processes. In order to unlock the potential of corporate accelerators, managers need a deeper understanding of how to design processes that add value to the start-ups and the joint projects and, hence, can

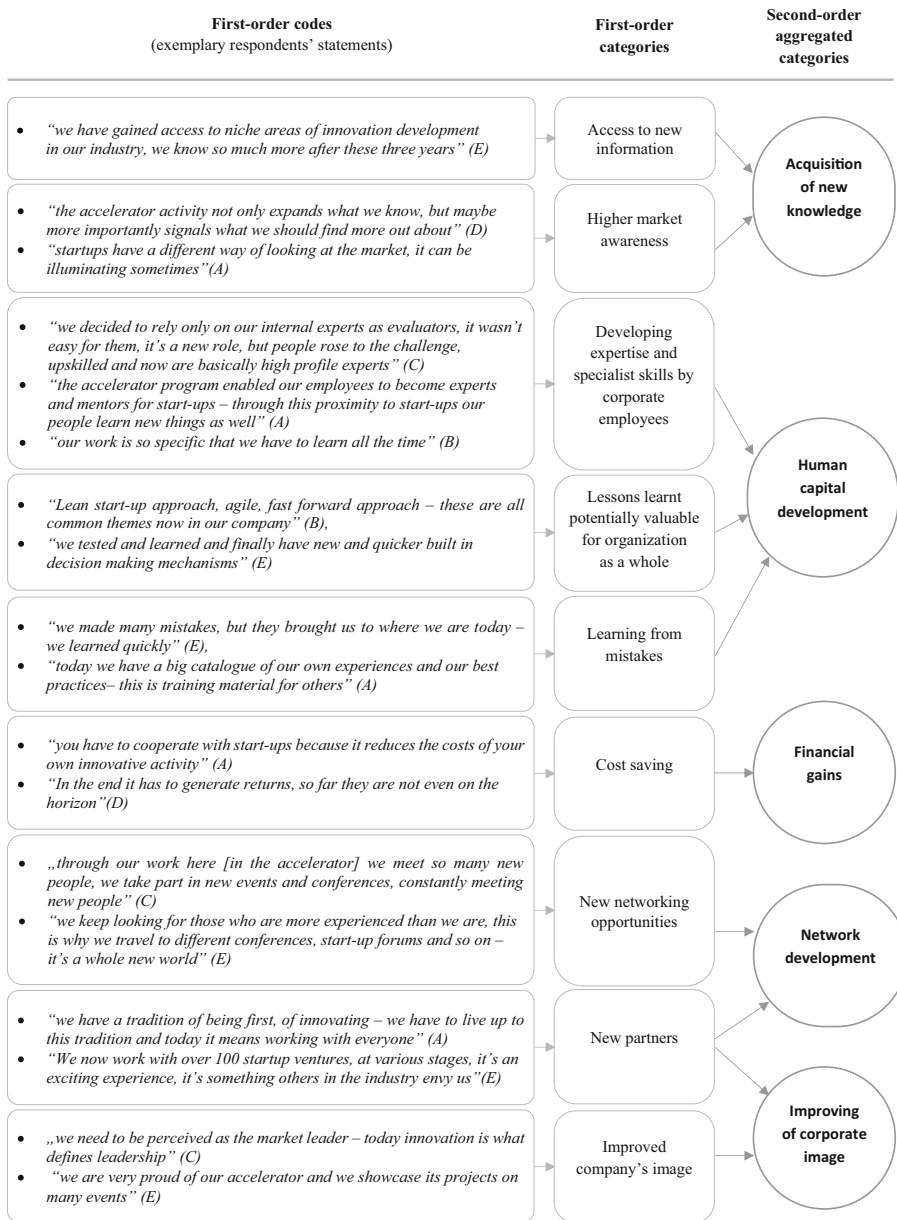


Fig. 2 Benefits associated with corporate accelerators. Source: Own study

generate fast-to-market innovation. These new management approaches refer, for example, to quick risk assessment or the timely cross-functional evaluation of accelerator projects. Based on our findings, we claim that:

Hypothesis 4: The problem of “fit” between corporations and start-ups can be mitigated by the development of an agile business model orientation and entrepreneurial market logic by corporations.

The process of upskilling and changing corporate mindsets appears to be a valuable learning exercise for corporate employees, as well as for the organization as a whole. Managers directly involved in corporate accelerators are exposed to new knowledge pools, wide networks and report constant learning acquisition. These learning effects, according to the interviewed respondents, are often transferred to the core organization and have an impact on strategic changes in the corporate business model.

## Discussion and conclusions

The goal of this study was, on the one hand, to identify the motives that drive corporations in seeking collaborations with start-ups and, on the other hand, to explore the challenges and benefits that are associated with this entrepreneurial process. The study focused on corporate accelerators operating in Poland that demonstrate exploratory and exploitative business model logics. Based on the triangulation of data and methods, the research analysis revealed a wide array of corporate motives in attempting to collaborate effectively with start-ups. Both push and pull factors were identified within and outside organizations. The results show that corporate accelerators operating with an exploratory business model logic are dominated by external pull motives, while accelerators with an exploitative business model logic expose a strong saturation of internal push motives. This expands on existing research and systematizes its practical significance.

Further, the results show that the challenges inherent in the acceleration process can be associated with the collision of these two distinct business model logics. Identified challenges refer to the planning orientation, management practices and human resources skills. Noteworthy contributions also emerge from the analysis of the benefits of corporate accelerators. The study established that the strategic long-term benefits stemming from the accelerator activities are the most important. These include new knowledge acquisition, human capital development and organizational learning. All these benefits have a multiplying effect. They initiate changes at different levels of the company, such as organizational structure, culture, new venture practices, faster feedback and agile decision-making, potentially resulting in reconfigurations of the existing business model.

Based on the research analysis of the corporate accelerators, the following hypothesis were formulated which can be verified by future studies:

- Hypothesis 1: While exploratory corporate accelerators are dominated by external pull motives, exploitative accelerators exhibit a strong saturation of internal push motives.
- Hypothesis 2: The main challenges faced by corporate accelerators are associated with limited human capital skills, complex management practices, and the distinct business model logics between corporations and start-ups.
- Hypothesis 3: The key benefits of corporate start-up accelerators refer to long-term strategic gains, such as access to new market knowledge, organizational learning, expanding the company's networks and improving the company's image.
- Hypothesis 4: The problem of "fit" between corporations and start-ups can be mitigated by the development of an agile business model orientation and entrepreneurial-market logic by corporations.

The proposed hypotheses contribute to future research on business model innovation through corporate accelerators. In particular, the empirical findings expand the existing knowledge in three research categories: motives, challenges, and benefits of corporate accelerators. Based on the empirical study, the results make several distinctive practical and theoretical contributions to corporate entrepreneurship by enhancing the understanding of the business model logic of corporate accelerators.

First, our study suggests that corporate accelerators are a source of business model innovation and can help companies evolve into more lightweight models. As identified in previous research, business model innovation can occur in many ways, e.g. by adding new activities, by combining activities in new ways, or by changing one or more activities (Amit and Zott 2012; Saebi and Foss 2015; Spieth et al. 2016; Zott and Amit 2015). This builds upon other studies on corporate accelerators suggesting that their contribution was mostly limited to strategic renewal and corporate ventures (Hoffman and Radojevich-Kelley 2012; Kanbach and Stubner 2016). In line with this, it should be stated that large corporations and start-ups are different organizations with a significant business model logic gap between their constitutive features and philosophy (Gonzalez-Uribe and Leatherbee 2018; Kohler 2016). While start-ups favor short-term decisions and quick returns, corporations exhibit a long-term outlook. This study contributes to the corporate entrepreneurship literature by identifying the key factors which can close the gap between different business model logics. Corporations should strive to develop both an agile business model orientation and entrepreneurial-market logic. This is a new thread in the existing literature and has important practical implications.

Second, the study demonstrated that corporation accelerators apply explorative and exploitive business model logics in striving for innovation development. This indicates different push and pull motives starting with strategic orientation and proactively seeking innovation opportunities, through to exploiting innovation. It has been shown that corporate accelerators with an exploratory business model logic have a typically higher success rate than those with an exploitative business model logic. The former are aimed at monitoring current innovation trends in the start-up sector. Drawing on Kanbach and Stubner's (2016) typology of corporate accelerators, the exploratory framework corresponds to a "listening post", while the exploitative one to a "value chain investor". Third, the study highlights also the typical challenges in the implementation of new collaboration models with start-ups. In contrast to our study, Hoffman and Radojevich-Kelley (2012), based on an exploratory case study of five accelerator programs, identified that the greatest challenge accelerator companies' face is finding companies with great ideas as well as a funding supply chain (to fund the next level or early stage after seed level).

Our research brings to the foreground the skill gaps, limitations in management practices, and asymmetries in business model logic when working with start-ups. Managers need to adjust, keeping in mind that time is a critical issue given that start-ups have a short-term planning horizon and are looking for quick turnover. The notion of buffering start-ups from corporate bureaucracy and creating a start-up friendly interface has been signaled by previous research (Kupp et al. 2017; Weiblen and Chesbrough 2015). Our research suggests that corporations must create new and agile management practices, which are not limited to the accelerators, since critical decisions regarding contracts with start-ups are made outside of the accelerator framework, at a top management level with corporate managers often involved in the evaluation phase.

Fourth, given the research findings, corporate accelerators can initiate changes in different areas. The identified benefits of corporate accelerators suggest that collaborating with start-ups holds the potential to rejuvenate large corporations by infusing new knowledge and ideas, new ways of doing things, and new skills and expertise. It can initiate a process of organizational learning that might ultimately lead to business model reconfiguration (Dada and Fogg 2014; Lumpkin and Lichtenstein 2005; Nielsen 2015; Sambrook and Roberts 2005). Our findings are consistent with various recent streams of entrepreneurship research that support entrepreneurial learning in corporate ventures (Brockman 2013; Cope 2011; Haneberg 2019; Politis et al. 2019). By approaching the inherent challenges as opportunities for change, corporations can take advantage of the wide range of potential benefits and multiply their effects. The research analysis suggests that the employment of organizational learning theory might help to understand more about how the knowledge, experience and practice generated through accelerator activity is diffused within the organization as a whole (El-Awad et al. 2017). A sub-stream of organizational learning theory referred to as “theory-in-use” describes the loose, flowing and social way employees learn and solve problems. Compared with other studies, there are different benefits identified. According to Hoffman and Radojevich-Kelley (2012), the most commonly cited benefit of accelerators is the networking and mentorship opportunities it provides to nascent firms. In general, all these benefits support organizational learning at a corporate level, which is important in terms of innovation, entrepreneurship, technological change and economic growth, especially in the context of knowledge sharing and learning between organizations (Bonfanti et al. 2019; Nielsen 2015). This concept helps to understand the transfer of knowledge between organizations. Heterogeneous experience for both corporations and start-ups gives better learning results than homogeneous experience (Cope 2011; Farahzadi et al. 2009; Pisano et al. 2010; Sambrook and Roberts 2005). Therefore, the diffusion of knowledge and experience acquired under acceleration programs spreads heterogeneous experience within organizations in the long term.

The study has some important limitations. The size of the sample was small and limited to one country. Two of the accelerators, however, were hosted by international corporations. Additionally, we have no reasons to believe that corporate accelerators operating in Poland differ significantly to those operating in other developed economies. Poland is a country with a relatively high GDP growth; it is a stable, yet dynamic economy and has a large share of multinational corporations in its total of business entities. Data saturation was not reached, as it is not a prerequisite of exploratory studies. Due to the nature of qualitative research, the findings cannot be generalized and serve as potential hypotheses or basis for replication studies. Given these limitations, several distinctive contributions emerge from the findings.

Future research on corporate accelerators can focus on testing the proposed working hypotheses in order to establish the reliability of our results. In particular, it would be important to verify the critical factors that enable effective collaboration between corporations and start-ups. Upcoming studies should also use previous findings to conduct quantitative and theory testing research regarding these and other factors of effectiveness within corporate start-up accelerators. In this article, we provided an empirical overview of the motives of the corporate accelerator model and new evidence on its benefits and challenges for entrepreneurial ventures based on different types of accelerator. Further research may

consider identifying more detailed results for specific types of accelerators, e.g. public accelerators versus internal corporate accelerators. Finally, an interesting research prospect would be to examine motives, challenges and benefits from the perspective of start-ups. This would allow the identification, in greater detail, of the differences in business model logic between them and larger corporations.

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