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Streamliners, Switchmen and Bridge Builders: About the Mechanisms and Uniqueness of Accelerator Programs

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Abstract: Accelerators are a new and fast-growing element in entrepreneurial ecosystems. However, our understanding about their impact on the development of startups remains limited. Utilizing a grounded theory approach and in-depth interviews with 21 entrepreneurs, this study investigates the value-adding mechanisms of accelerators. Our analysis, however, is not limited to financial capital, which allows us to highlight the relative importance of different forms of capital in the context of accelerators. We aim to understand how accelerators stimulate the development of participants and extend the support landscape for early-stage startups. Our results are threefold. First, we demonstrate that accelerators facilitate every step in the resource mobilization by reducing uncertainties and compensating for deficiencies. Second, the founding process becomes more structured, as participants build a founder identity and the process itself is professionalized. Third, accelerators support startups in building a resource base, by providing immediate resources and building bridges to various other resources.

Keywords: accelerators; resource mobilization; entrepreneurial support landscape; founder identity; community

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1. Introduction

Successful startups are crucial to a country's innovative capacity and economic growth [1–3]. In particular, they develop new technologies, establish new markets and create new jobs, but they also play a key role in the encouragement of radical innovation and have a disciplining effect on incumbent companies [4–7]. However, the founding process involves a variety of challenges, uncertainties and liabilities associated with smallness and newness [8–10]. Additionally, startups are often characterized by a lack of resources, not only in terms of financial capital, but also human, organizational, social and symbolic capital [6,11,12]. Therefore, despite their immense economic importance, many young companies fail in early stages [12].

As a reaction to the different hurdles in the founding process, the numbers of private and public support organizations have skyrocketed in recent years. While the programs of these organizations are generally heterogeneous, they all share the common goal to improve the chances of success for founders [2,3,9,11]. One way to support startups is through accelerator programs, which have evolved impressively since the inception of the first program in 2005, Y-Combinator. Today, accelerators are an increasingly crucial element in entrepreneurial ecosystems [9,11,13,14], as they support startups in cohorts over a fixed period of time and through a variety of coaching and learning opportunities. Furthermore, participants gain access to a significant assortment of mentors as well as network opportunities with investors, industry experts and peers. Since accelerators usually invest in the participating startups themselves, the companies obtain financial capital as well [11,13–15].

The oldest, most prestigious and most successful accelerator programs are Y-Combinator and Techstars. Together, they have already supported over 2000 startups, raising more

than USD 16 billion in follow-up financing [13]. In light of their tremendous success, accelerators modeled after these pioneer programs have emerged around the globe. Today, every fourth startup that raises a Series A round in the United States has been part of an accelerator [16], as they continue to flock to these programs [13]. Despite the growing importance of accelerators, and although the volume of academic literature has increased significantly in recent years, important questions, particularly regarding their mechanisms, remain unanswered [14,17–19]. Our paper thus aspires to close this literature gap by answering the following overarching research question: how do accelerators affect the development of participating startups? In other words, we aim to identify mechanisms that stimulate the development of startups participating in accelerators and thereby create added value for founders.

By answering the research question, our contribution to the existing literature is threefold. First, we develop a dynamic framework, which illustrates the modus operandi of accelerators. We demonstrate that accelerators simplify every step in the process of resource mobilization by reducing uncertainties and compensating the deficiencies of the participating founders as well as their startups. Second, we identify two roles of accelerators, which highlights their uniqueness. In their role as switchmen, accelerators streamline the founding process by facilitating the development of a founder identity and professionalizing the launch of the startup. As bridge builders, accelerators support startups in building a resource base by providing immediate access to necessary resources and by building bridges to various other resource-holders. Third, we derive a set of practical implications for various stakeholders of the startup ecosystem due to the diverse and far-reaching applicability of accelerators.

The remainder of this paper is structured as follows. After this introduction, we outline the theoretical background in the second chapter and subsequently present our research design and methodology in the third section. Our main results are presented in the fourth section and discussed in Section 5. Finally, we summarize our findings and provide an outlook on future avenues for research.

2. Theoretical Background

2.1. Resource Mobilization

To exploit an entrepreneurial opportunity, founders need to acquire, combine and mobilize a variety of tangible and intangible resources. Since the startup process is necessarily a dynamic interplay between opportunities and resources, it cannot be understood without considering resource mobilization. In the accelerator, the mobilization of resources takes place in a compressed form, so that accelerators act as a window into this process [20,21]. The analysis of new phenomena such as accelerators does not necessarily require completely new theories [22]. We will therefore build our results on Clough et al.'s (2019) framework of resource mobilization, as accelerators try to streamline the resource mobilization of their participants in order to accelerate their development. The mobilization of resources can be divided into three phases, with each having its own particular challenges. In the first phase, which is dedicated to the resource search, the founder must identify individuals who control the required resources [21]. Here, founders face two challenges, as they need to know which resources are necessary at what moment in time and additionally have to identify the resource holders. However, founders in the early stages are exposed to not only a scarcity of resources, but also to great uncertainty and goal ambiguity, which inevitably makes the search for resources more complicated [23–26].

In the second phase, founders must gain the attention of other market participants who hold the required resources and convince them to transfer these resources [21,27,28]. To achieve this end, founders must allay concerns arising from the uncertainty associated with their startups. Gaining access to resources culminates in the founder and resource holders agreeing to use the resources for the venture [21]. Regarding access to resources, two categories relating to resource holders' motives can be distinguished: market logics and nonmarket logics. Market logics correspond to economic rationality, whereby resource

holders process information to make predictive decisions based on their calculations and follow the goal of utility maximization. Nonmarket logics aim at goals other than personal benefit, such as family or community [21,29,30].

Finally, the transfer of resources marks the third phase in which founders and resource holders agree on the form of cooperation and how to control the resources. This includes regulations regarding ownership rights, the use of the resources and how to allocate any value that will be created in the future. Concerning the transfer of resources, the literature emphasizes problems arising from the opportunistic behavior of one party [21]. While formal contracts are generally an appropriate way to reduce opportunistic behavior, early-stage startups often lack conditions for this form of contracting, in which case informal agreements are of great importance [21,31]. Here, establishing trust between the contracting parties embodies a crucial element, as mutual trust can lead to a transfer of resources without formal contracts, since opportunistic behavior is not to be expected [21].

2.2. Resources

Resources can generally be defined as "stocks of available factors that are owned or controlled by the firm" [32] (p. 35). In the entrepreneurship literature, resources correspond to all tangible and intangible assets that are controlled by the founding team or can be mobilized through social connections to exploit an entrepreneurial opportunity [21]. In this context, intangible resources are often identified as invaluable in building a competitive advantage in early stages [33,34]. It is also widely accepted that a company's ability to innovate is closely linked to its intellectual capital [35]. Building a resource base is understood as "the greatest challenge faced by entrepreneurs" [36] (p. 71), but neither the classification of the specific resources nor the distinction between intangible and tangible resources is addressed uniformly in the literature [37,38].

In line with Youndt et al. [34] and Bourdieu [39,40], we differentiate resources in five forms of capital: organizational, human, symbolic, social and tangible capital. Organizational capital comprises resources that are tied to the company and support the founders in realizing their business idea. It is "the knowledge, skills, and information that stay behind when an organization's people go home at night" [34] (p. 338). Human capital includes the knowledge, skills and competencies of individual employees of a company [34,41,42], elements of which, in the entrepreneurial context, encompass the knowledge and skills of the founders resulting from their education and experience [43]. As human capital is one of the most important assets of entrepreneurial companies, differences therein can denote a competitive advantage [33]. Symbolic capital is a term stemming from anthropology and sociology, and it is understood as something that exists only through reputation, i.e., through the symbolic apprehension of others [39,40,44]. In the entrepreneurship literature, symbolic capital is thus linked to the concepts of legitimacy and reputation [44–48]. Social capital refers to the resources that are available to a company from all relationships with external parties [34]. Since these resources can arise from the relationships of the company itself or those of the founders, social capital is divided into an organizational and an individual level [49]. In the literature, social capital is defined as the "sum of actual and potential resources embedded within, available through, and derived from the network of relationships possessed by individuals or social units" [50] (p. 243).

Finally, tangible capital consists of financial and other physical resources, which are shown on the balance sheet of a company [43]. Both the literature on accelerators and resource mobilization have so far focused primarily on financial capital as an outcome variable. The mobilization of many other and equally important resources remains largely ignored [21], but this one-sided perspective is avoided by our study, as we scrutinize the mobilization of all forms of capital.

Due to their innovativeness and growth potential, startups have a great need for resources. However, through their own network, founders often have limited access to the resources they need, which restrains them from implementing their business ideas. Additionally, it is difficult for startups in early stages to find external investors due to

the high degree of uncertainty regarding their prospects [6,11,12]. Accelerators support startups in overcoming these problems and speed up their development process [17] by helping them during the entire process of resource mobilization.

2.3. Accelerators

Accelerators are a new, fast-growing element in the entrepreneurial-support landscape [51]. Following the literature, we define accelerators as "[a] fixed-term, cohort-based program for startups, including mentorship and/or educational components, that culminates in a graduation event" [17] (p. 1782).

More precisely, accelerator programs usually last three to six months [13]. Startups are asked to move to the location of the accelerator for the duration of the program [19], as learning from peers is one of the key benefits of these programs [14]. The strong emphasis of accelerators on educational components distinguishes them from other forms of early-stage financing such as venture capital (VC) or business angel (BA) investors [51]. Another unique feature is the so-called demo day, where founders get the opportunity to pitch their ideas directly to investors. These features differentiate accelerators from incubators, which are often criticized for protecting companies from outside challenges and thereby making them less competitive. On the demo day, startups compete with the market and fight for scarce resources such as investors' time and money, thus eliminating the "dark side" of incubators [24]. Finally, accelerators invest equity in the startups and therefore have a strong interest in their success. Unlike other investors, accelerators apply the same financial terms for every startup in a cohort [11,13,14,52].

The literature distinguishes between four kinds of accelerators, as these programs can be sponsored by investors (independent accelerators), companies (corporate accelerators), universities (academic accelerators) and public institutions (public accelerators) [13].

Previous accelerator literature has mainly identified three mechanisms to support startup development. First, accelerators help founders verify the quality and validity of their business ideas more quickly by providing intensive feedback from mentors [19]. Second, the startups follow a systematic and structured learning process from mentors, experts and peers, which is defined as "broad, intensive, and paced" [14] (p. 379). Third, accelerators force founders to question many fundamental assumptions about the execution of their business idea and to adopt and internalize a way of working that is unlike the informal and chaotic structure of a typical early-stage startup [53].

Few studies investigate and provide evidence regarding the impact of accelerators on the performance of startups [11,52]. The findings of these studies vary considerably because the great heterogeneity of accelerator programs is not always sufficiently considered [11,13]. Empirical studies have shown that, especially, top accelerators are able to positively influence the development of startups [12,14]. Top programs better support portfolio companies in acquiring subsequent financing and improving human capital [12]. Compared to startups that do not participate in an accelerator, participants of top programs reduce the time to follow-on financing, improve market awareness, increase the equity valuation and expand the life expectancy of the startup [14,54]. In contrast, the participation in a lower-quality accelerator has no impact on the likelihood of a startup surviving [55] or subsequent financing [14].

Accelerator programs are extremely heterogeneous regarding their goals as well as their quality [56,57]. As it is our research objective to understand how accelerators can support startup development, we focus on programs that have been identified as top-tier accelerators by the literature, our interview partners and public rankings [13,14,54,58]. Additionally, we only consider accelerators focused on bringing startups and investors together by giving investors access to high-quality startups and providing startups with investments from vetted investors on good terms [13].

3. Materials and Methods

3.1. Research Approach

We adopted an explorative inductive qualitative research design, as this is explicitly recommended for research tackling "how" questions [59] and allows for the discovery of theories in a context where little is known about the underlying phenomenon [60]. Both characteristics are applicable to our study, since we aim to understand how accelerators provide value to participants and little is known about the value-adding mechanisms of these programs [14,17–19,61], which is especially true from a startup perspective [62].

We followed a grounded theory approach to create a framework that would clarify mechanisms behind accelerators. Building on Corbin and Strauss [63], Gioia et al. [22] developed procedures for qualitative research that guarantee qualitative accuracy while making the relationships between data, emerging concepts and resulting grounded theory apparent within the presentation of the results. The Gioia method is an interpretive case study design and seeks to understand, describe and reconstruct phenomena based on the meanings informants attribute to them, as it assumes that reality is socially constructed [63].

3.2. Data Collection

In line with most inductive qualitative research [60,64,65], this study uses semistructured interviews as its primary data source to investigate the impact of accelerator programs on the development of startups.

As a random selection of the sample is "neither necessary, nor even preferable" [60] (p. 537) in qualitative research, purposeful sampling was utilized [66]. The interview partners were selected based on whether their insights were suitable for answering the research question and whether their perceptions would be relevant to the development of our framework [67]. Concerning the number of interviews, data collection continued until theoretical saturation was reached [66]. Theoretical saturation means that "gathering fresh data no longer sparks new theoretical insights, nor reveals new properties of these core theoretical categories" [68] (p. 213). Since the researcher is responsible for recognizing this condition, we continuously scrutinized the collected data [69].

As required in grounded theory, our data collection and data analysis took place in parallel and in a reciprocal process. Based on the analyzed data, we decided which additional data would be necessary for the development of the emerging framework [69]. In this process, we used cases that are very similar (minimum contrast) as well as very different (maximum contrast). This allowed us to develop concepts and categories that are finely differentiated and to analyze miscellaneous perspectives to achieve sufficient variation [70].

In total, we conducted 21 interviews with entrepreneurs who had experience with top-tier accelerator programs (s. Table 1). Eleven startups were part of an independent top accelerator program, three were part of a so-called 'powered by' top-tier corporate accelerator program [71] and two participated in a top-tier academic accelerator (minimum contrast). Five of the startups did not join a top accelerator (maximum contrast). Three of the twenty-one founders were women and eighteen were men. The sample is very international, and the interviewees came from various Western industrialized countries, which reflects the global attractiveness of accelerator programs. Two of the founders participated in more than one top accelerator. The oldest startup in our sample was founded in 2015, and the youngest company was established in 2020. The young age of the companies is thereby in line with the target group of accelerators [13,19]. The startups in our sample participated in their accelerator programs between the years 2017 and 2021, so that the insights are very topical. Most of the founders interviewed (15) were the chief executive officer (CEO) of their startup. The remaining six founders were also in 'C-level' positions in their respective company. All interviewees were listed as either a founder or a cofounder of their startups, and nearly all companies in the sample had a technology-based business model, which is consistent with the literature indicating that accelerators focus predominantly on this industry [12]. In addition, almost all interviewees were first-time

founders, which matches observations from the literature regarding a 'typical' accelerator participant [19]. Following the qualitative research standards postulated by the grounded theory [22,52], we purposefully collected information from databases and websites (mainly from pitchbook.com, crunchbase.com and linkedin.com) to verify information on founders, startups and accelerators.

Table 1. Overview of interviews participants. **Source:** authors' illustration.

Case	Duration (Min)	Accelerator Type	Startup Industry	Position	Founding Year	Participation
G-1	30.55	Independent accelerator	IT/Hospitality	COO	2019	2020
G-2	26.38	Independent accelerator	IT/E-Learning	CEO	2015	2020
G-3	32.44	Academic accelerator	Food and Beverages	CEO	2017	2017
G-4	37.30	Independent accelerator	IT/Professional Training and Coaching	CEO	2019	2020
G-5	35.14	Independent accelerator	IT/Marketing	CEO	2019	2020
G-6	38.53	Academic accelerator	IT/E-Commerce	CEO	2017	2017
G-7	42.44	'Powered by' accelerator	IT/Sustainable Energy	CTO	2017	2018
G-8	32.39	'Powered by' accelerator	IT/Energy and Oil	CTO	2015	2018
G-9	34.25	'Powered by' accelerator	IT/Sustainable Energy	CEO	2017	2018
G-10	33.17	No accelerator	IT/Social Media	CEO	2017	-
G-11	29.44	No accelerator	IT/Logistics	CEO	2020	-
G-12	38.00	Independent accelerator	IT/Human Resources	CTO	2018	2019
G-13	3734	No accelerator	Food and Beverages	CMO	2018	-
G-14	33.26	No accelerator	IT/E-Learning	CEO	2017	-
G-15	32.08	No accelerator	IT/Human Resources	CEO	2020	-
G-16	35.30	Independent accelerator	IT/Environmental Services	CEO	2019	2021
G-17	22.07	Independent accelerator	IT/Computer Software	COO	2018	2021
G-18	47.48	Two independent accelerators	IT/Logistics and Supply-Chain	CEO	2020	2021 and 2021
G-19	21.36	Independent accelerator	IT/B2B Services	CEO	2020	2021
G-20	42.35	Two independent accelerators	IT/Logistics and Supply-Chain	CEO	2019	2017 and 2021
G-21	32.58	Independent accelerator	IT/Computer Software	CEO	2019	2021

3.3. Data Analysis

For the analysis, we followed [22] by using a systematic inductive approach that follows the empirical material closely at any time. As a starting point, we examined the complete transcripts of the interviews, from which we extracted terms, phrases and statements that seemed meaningful. We then coded them and developed concepts, categories and dimensions. During this process, we used our theoretical background knowledge about accelerators, as it helped to expand the repertoire to interpret the data [63].

Through repetitive open, axial and selective coding [69], the conceptual connections finally condensed into a framework. Therefore, the cognitive process is circular, iterative and reminiscent of the hermeneutic spiral [69]. As the analysis is generally iterative, we followed several recognizable steps [65].

We began by reading the interviews line by line in the order in which they were conducted. However, at the beginning of the analysis, the transcripts were not yet complete, as not all interviews were conducted before starting the analysis. Therefore, we had to adjust the interview guideline during the analysis and deepen aspects that were identified before [22]. This approach is consistent with the overall circular procedure of the grounded theory. The qualitative rigor of the Gioia method becomes particularly evident in a two-level analysis and with the organization of the data into concepts, categories and dimensions (Figure 1), which represents our data structure [22,72]. At the first level of our analysis, a series of codes were formed via open coding [69], the main objective of which was to capture the terminology used by the informants [22].

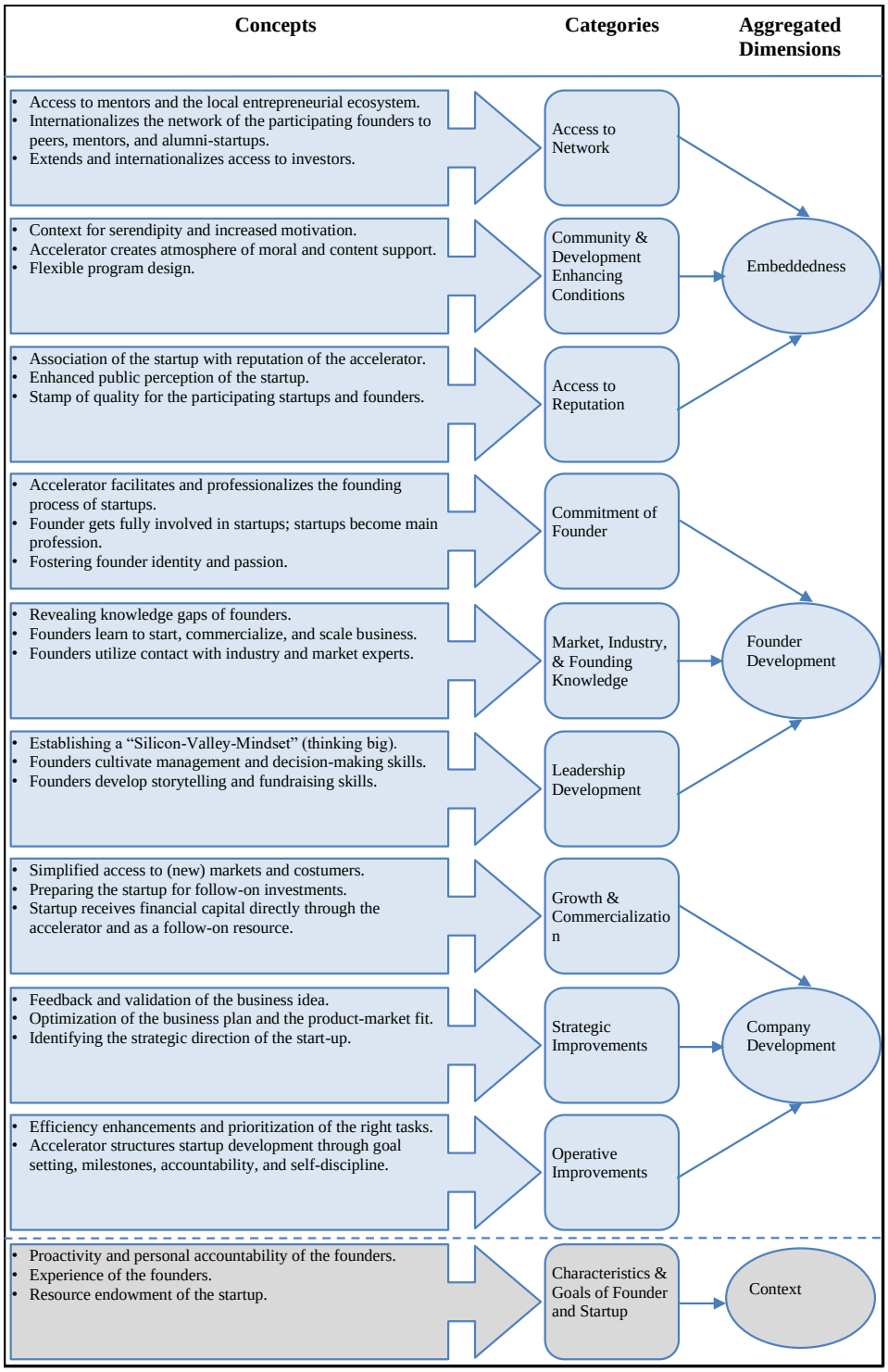

Figure 1. Developed data structure. **Source:** authors' illustration.

From the first ten interviews, 50–100 codes emerged, which is neither unusual nor problematic. In order to reduce these codes to a more manageable number (about 25–30), they were examined in a second step for similarities and differences and then grouped together (larger units of meaning) [22]. Names were then given to these first-order concepts. This procedure is similar to the idea of axial coding [69].

Once these steps were completed, the analysis began on a second level, where we tried to capture and match the observations that emerged from the first-order concepts with theoretical knowledge [22]. As a result, we assigned the concepts to a set of second-order

categories that are suitable for explaining the object of our investigation [22]. As soon as theoretical saturation was reached, we checked whether the second-order categories could be transformed into overarching dimensions, thereby corresponding to selective coding [22]. Based on this analysis, the data structure (Figure 1) could be formed, providing a graphical representation of how we got from the naked data to concepts, categories and dimensions.

To ensure validity, our findings were triangulated by using multiple data sources, researchers and perspectives. Through weekly debates with experts regarding the methodology and accelerators, repetitive, as well as unclear, codes were revised and improved [73,74]. This process also helped to ensure that the codes were readable, universal and nondiscriminatory [24]. Additionally, we used member reflections by discussing the identified codes with interview participants [75,76] to ensure that the participants' interpretations were correctly understood and reflected in the codes. This is important because interpretive research is primarily based on informants' interpretations of structures and processes, which are then analyzed by researchers [76,77]. To increase the validity, trustworthiness and reliability of the coding process further, the second author maintained an outsider's perspective in order to critically question coding and interpretations. This is a crucial factor, as by adopting the informant perspective during the first stage of coding, there is a risk of losing a higher-level perspective, which is crucial for theory building [22]. Finally, the interviews were repeatedly compared to each other and the collected internet data [24,75,78].

4. Results

4.1. Embeddedness

The first overarching dimension that represents added value for participants is their embeddedness into the ecosystem of the accelerator. In this regard, three essential aspects, summarized into categories, emerged. The first is gaining access to the extensive network of the accelerator. Admission to the program corresponds to an entry into the startup bubble for the founders.

> *"It [the accelerator] really helped us to (. . .) get into that startup bubble, (. . .) I always call it bubble because for me it feels like a bubble sometimes" G-12.*

By joining the accelerator, founders gain access to an environment in which everyone is directly or indirectly interested in the development of startups. An important aspect for the founders is that the accelerator connects them to a large number of mentors who can help with almost any issue, are always available and, in the best-case scenario, support the startup even beyond its participation. In addition to this network of mentors, access to an international network of peers and alumni companies is critical to the founders. The accelerator expands and internationalizes the participants' networks, and even famous players in the entrepreneurial ecosystem are now within reach of the founders. Entrepreneurs additionally emphasize the extended contact with investors, which can be activated both during and after the program.

> *"It also gave me an opportunity to not only start to build that network in London, but also to build that network in Berlin and other cities throughout Europe and connect with people through the European early-stage ecosystem, which I think is hopefully going to continue to be invaluable as we move forward" G-17.*

> *"I have regular contact with companies from my previous batch. I have regular contact with the managing director about every single step. We still have mentors that were mentors from Techstars that are now our official advisors in the company, and they are a strong reason for where we are today. We feel (...) like really a Techstars company, because we have mentors that were Techstars mentors" G-20.*

> *"Through that network, some investor somewhere on the other side of the world is also only one entry away now—and that's definitely not something we would have been able to do otherwise" G-5.*

These observations can be summarized in the following proposition:

Proposition 1. *Access to the network of the accelerators reduces the distance to almost any kind of contact that might be relevant for the development of startups.*

The second aspect with regard to the dimension of embeddedness is the creation of a community and a development-enhancing context in accelerator programs. Founders underline that the special environment in the accelerator enables the realization of serendipity, i.e., "making discoveries, by accidents and sagacity, of things they were not in quest of" [79] (p. 2). Their physical proximity to other founders, mentors, advisors, etc., plays an important role and can be inspiring as well as motivating. In addition, founders gain access to ad hoc assistance for problems that have already identified.

> *"The actually physically being in one space with other companies (. . .) was really valuable. I really liked that aspect. [I'm sure] taking people out of their normal environment and putting them into (. . .) an accelerator and sort of rubbing people up as a group and sort of building the atmosphere of the different companies feeding off of each other" G-8.*

> *"I see [the accelerator] like an environment where you can discuss your business with people, with smart people, with people that know about entrepreneurship and about your area specifically and how everyone in that environment can help your business" G-3.*

Overall, the founders point out that the atmosphere in the accelerator is characterized by mutual support and trust, encapsulated by the "give first" mentality, which strengthens the community idea and the development-enhancing context. The founders also stress the special interest of accelerators in the startups' success, thereby demonstrating an alignment of goals. A last aspect relating to the development-enhancing context is the flexibility of the accelerator. The founders see a clear value-added in the fact that the intensity and the design of available resources can be adapted to their individual needs.

> *"Techstars has one of the most amazing networks you can probably imagine. It's just amazingly good, and the people behind that were really rallying behind the give first mentality. That was incredible for us, and still, even after the program is over, we're still working with the mentors that we met there. They're doing that just because they love the job. They love helping startups. (. . .). They walk with you, and they're not trying to push you towards some goals (. . .), they want to see you succeeding with everything you want. It's like a parent. It's a very nice thing" G-21.*

> *"They did a good job selecting companies, so that none of them were really competing with each other. It was all sort of (..) different companies addressing different problems, and there was a lot of comradery—like everyone is in this together and we are not (..) competing against each other. That means that we could sort of really help each other out; if we had some sort of cool marketing thing that we were doing, we could help out the company making airplanes on how they could do that better" G-8.*

> *"[Y]ou get a lot of everything depending on what you need" G-2.*

The above findings can be summarized into a second proposition:

Proposition 2. *Serendipity, the atmosphere of support and trust, and the flexibility of the accelerator programs foster an environment conducive to solving the specific problems of the individual startup.*

Access to reputation is the third category associated with embeddedness in the accelerator's ecosystem. The founders state that participating in a top-tier accelerator changes the perception of third parties toward them and their startup. This refers not only to investors and potential employees, but also to customers or those interested in startups more generally. Just by participating in the accelerator, founders and startups receive a stamp of quality, which increases their legitimacy. Similarly, the association with the accelerator's name also increases their own reputation. Finally, the accelerator boosts the media presence—and thus the level of public awareness—of participating startups.

> *"The marketing that brings being [in] an accelerator is, even if I'm not happy to say that, the one single, most important thing about it" G-18.*
>
> *"Like, if you went to Y Combinator you have (. . .) a quality stamp on you, which for us was kind of weird to see, because we didn't feel like another startup after [the participation]. So, we were the same three people in the founding team, we had the same team, we had the same service, but like at the moment that you get out of Y Combinator and you do the public announcement, you're somehow like a quality startup" G-12.*

Based on these results, another proposition can be derived:

Proposition 3. *Accelerators equip founders and startups with symbolic capital, which subsequently facilitates access to further resources.*

4.2. Founder Development

The second overarching dimension that represents a value-added for participants is the development of the founders. Just like embeddedness, this dimension emerges from three subordinate categories (Figure 1). The first concerns the commitment of the founders. The interviewees indicate that acceptance into the program gave them the confirmation and validation to commit fully to their startup, meaning, for example, that founding a company is seen as a fulltime job. Additionally, the accelerator simplifies and professionalizes the concrete implementation of the business idea.

> *"It [the accelerator] gave us the validation point to kind of quit our jobs, go into this full time and really work on this" G-1.*
>
> *"[L]earn what is important to make a business real and how you should set up a business plan, so I feel like a professional" G-3.*

Furthermore, our analysis reveals how participating in accelerator programs fosters and stimulates the development of a founder identity, as the participants start to identify themselves as founders just because of their participation. The emergence of this identity is accompanied by a new self-confidence and an enhanced passion for the entrepreneurial journey. Additionally, the intensive time spent in the accelerator forces the founders to self-reflect, makes the startup process more serious and reveals their enthusiasm for the founding process.

> *"[The accelerator] makes everything more real. So, I think before we always think (. . .) I just started my own thing, and now we are doing this startup. We are a business, or we are on track to being a business. I think that [the accelerator] definitely made it a more real thing. I guess whenever you're starting something new, it feels like, you still talk about whatever you did before. For a long time, I introduced myself as I formerly did this and this, and now I'm doing a little bit of that. Now it's much more, hey, I'm a founder of this, this is the space we are in. I happen to have this background" G-5.*
>
> *"There were days when you could do 10 h in front of the computer doing calls, doing meetings. It's not something that everyone can do, but it really gives you a perspective on how hard and sometimes how lonely the life of a founder is. (. . .). I think it was hard, but it really made me realize that I wanted to do this job, this company. It made more confident about myself as a founder" G-21.*

This is summarized in the following proposition:

Proposition 4. *Accelerators strengthen the founder identity and create the self-confidence, as well as the individual conditions, to realize the startup idea.*

The second value-adding category in the dimension of founder development is that the knowledge of the participants concerning market, industry and startups improves. Knowledge gaps that could delay or hinder the founding process are quickly and efficiently unmasked. Additionally, the participants receive basic training for the startup process and

gather information about how to design, implement and commercialize scalable business models. In particular, the founders highlight how they can tap into the expertise and experiences of mentors and industry experts through the accelerator. This compensates for missing experience and gaps in their own competencies.

> *"The accelerator really kind of shored up our, like, worst knowledge deficiencies in a pretty quick manner—and that was super helpful as well" G-1.*

> *"Techstars gave us this push to actually grow our company, to understand how to build a scalable business model out of it, how to raise funds" G-20.*

> *"The part where my business (. . .) was analyzed by the mentors, and these mentors were able to give me some specific advice based on what they have as experience, I don't know if I could replicate that on my own" G-2.*

Thus, the following hypothesis can be stated regarding this category:

Proposition 5. *Accelerators unmask known and unknown knowledge gaps as well as weaknesses of the founders regarding the founding process, and they provide effective solutions.*

Furthermore, the founders state how they specifically learn to run a company and be a CEO. On the one hand, the accelerator changes the mentality of the founders by encouraging the participants to think in bigger dimensions and thus develop a mentality which is often associated with Silicon Valley. On the other hand, a key role in this context is attributed to communication. By improving storytelling abilities, the founders learn, for example, how to explain very technical business models to a broader audience. According to the founders, these storytelling abilities are particularly important when seeking to acquire investors and in subsequent financing rounds.

> *"[A] a lot of the value that I got was that I learned (...) about being a CEO" G-2.*

> *"I think they're showing you how big you can get (. . .). The Silicon Valley mindset, it's good because it pushes you forward" G-21.*

> *"I learned (. . .) just how important communication is and how complicated it is to distill down what a tech company does and communicate to a broad audience, especially because the investor community are very rarely technical experts in our very specific field" G-8.*

This results in the following proposition:

Proposition 6. *Accelerators prepare founders for their leading role in the company.*

4.3. Startup Development

The third overarching dimension relates to the development of the startups themselves. The founders assert that the accelerator helped them drive the commercialization and growth of the company by facilitating and catalyzing access to (new) markets and customers.

> *"We had a very good network of contacts in Spain and also in Latin America because I lived there, but in the US or in the north of Europe, we didn't have many contacts or customers. We got our first US customer thanks to the program (. . .) and [we are] having more access to specific markets" G-9.*

The growth and commercialization of the startups are additionally fostered by the preparation of a professional pitch deck, i.e., documents that showcase the startup's suitability for investments and thus help to attract potential new investors. How much importance accelerators place on a well-developed pitch is demonstrated by the fact that its preparation often takes up a large part of the total time in the program. This intensive pitch preparation ensures that founders feel "bulletproof" (G-6) in terms of their company presentation. After

the program, they feel prepared for any potential queries and can execute the fundraising process professionally. However, while the pitch deck is a crucial element, the development of the company as such is important for a follow-up investment.

> *"I spent a good month going through our company pitch and getting coaching (. . .) on how to actually succinctly communicate what our company does and what the value is and what the market size is" G-8.*

> *"I had a business plan before (. . .) and what they do is basically fine tune it and give you (. . .) advice on how to make this business plan even better. So (. . .) I feel like the business plan got way more solid and (. . .) was ready to present to investors. If I had my business plan before the accelerator and had to pitch to investors with that business plan, probably I wouldn't have got any fundraising" G-3.*

The acquisition of subsequent funding, which is facilitated by the preparation undertaken during the program and the accelerator itself, represents a significant value-added on its own.

> *"Generally what happens if you do YC is that after two days of demo day, you are oversubscribed and your valuation is probably $20 million and there [are] people wanting to give you money at $30 million and you say, 'No, I have enough money for now, I don't want to dilute myself. That's the self-fulfilling prophecy I was talking about" G-18.*

Furthermore, the initial investment of the accelerator allows the participants to take action immediately, even though the accelerator is generally regarded as expensive because the underlying company valuation is rather low.

> *"[A]t the end of the day, it's not a lot of money, you know, but it was enough for us to kind of get to where we need to go based on what we planned financially" G-4.*

This analysis leads to the following proposition:

Proposition 7. *Accelerators support company development by facilitating the scaling of the business model through access to capital and commercialization channels.*

The development of the startup is further advanced by the accelerator's advice on strategy. For example, the validation and evaluation of the business idea not only positively influence the commitment of the founders, but they also result in refining the business model. In particular, the founders highlight the development of new features, business plan optimization and other strategic decisions that help the participants to sharpen and improve their corporate strategy. The founders underline how accelerators enable strategy improvements, as they force them to focus on strategic issues and detach from day-to-day business. This is only possible because of the limited and short time horizon of accelerator programs.

> *"It's nasty to keep moving forward and learning that your idea might not appeal to everyone, but as well, it's your idea. It got there. Probably there's something that needs to be reworked, but it's worth fighting for" G-21.*

> *"[Y]ou don't talk to customers, you don't talk to users, of course, but you can accept that in those three months, you somehow defocus from your day-to-day life to try to adopt a critical approach to the company and focus on strategy, focus on restructuring stuff, killing stuff that doesn't work, pivoting and all that stuff" G-16.*

Finally, the development of the startups is positively influenced by optimizing operational processes, in that they are better organized, improve their work processes and prioritize the right tasks. Furthermore, the accelerator structures the participants' development by setting external goals in the form of milestones and establishing key performance indicators (KPIs). This structured development is additionally a result of the design of the accelerator itself. The time limit, which culminates in 'demo day' and an inherent

comparison with other startups, conveys a sense of urgency, which in turn leads to faster action and higher self-discipline.

> *"Working on the right things, asking the right questions, meeting the right people" G-12.*

> *"Here [in the accelerator] you're not able to lose focus, because you need to be accountable every single week, you need to defend your KPIs, your numbers, etc., and it gives this accountability, which is important (. . .) in the early days. When you don't have this company culture in place, you don't have this incorporation structure and responsibilities, you simply have a bunch of people that do everything—and that has been (. . .) a huge added value" G-20.*

> *"[Y]ou are competing with other startups, like you are in a very peer pressure environment" G-3.*

The following proposition summarizes the operational and strategic improvements:

Proposition 8. *Accelerators assist and streamline startup development by structuring the operational processes and accelerating strategic decision making.*

4.4. Context

The efficiency of accelerators is moderated by various context conditions. In particular, the value-added that can be realized is influenced by the characteristics and goals of the founders and startups. Regarding the founders, the interviewees attribute a pivotal role to being active or even proactive in the accelerator, which includes goal-oriented planning and accountability. They also emphasize that the value-added of accelerators is particularly high if the participants do not yet have extensive startup experience. Moreover, the characteristics of the startups also influence the benefits that can be derived from accelerators. Specifically, the phase and industry in which the startups find themselves, as well as the inevitably heterogeneous objectives and needs of different companies, play a significant role.

> *"[E]verything depends on you. If you were kind of passive, the value of the accelerator was zero to you. You really have to push, you really have to go out there, seeking opportunities. It is not like on a silver plate that they bring you (. . .). I actually believe that they give you the resources, but it demands a lot of effort on your side to go and get all those benefits that they give" G-6.*

> *"[T]he value for a first-time founder is definitely higher" G-1.*

> *"My really personal point of view is if I had to give suggestions to someone, it makes sense to join an accelerator if you are a first-time founder" G-18.*

> *"[H]ave the company at a stage where it can get the maximum amount of value from the mentors and introductions from the mentors. What I mean by that is, for example, have the product at the stage where it's possible for a lot of people to test the product, because during the accelerator, you can meet a lot of people who can connect you with all kinds of people. They can, in particular, connect you with people in your target group, and therefore it's important that the product is at a stage where the target group can easily test the product" G-19.*

Analyzing the context of an accelerator participation leads to the following proposition:

Proposition 9. *The heterogeneity of participating founders and startups impacts the value-added that accelerators can provide.*

5. Discussion

5.1. Mechanisms of Accelerators

Based on our findings, we derive a framework that not only presents the relationships between concepts, categories and dimensions in a static view, but reveals the dynamic relationships between these elements to shed light on the mechanisms of accelerators. As requested in the academic discussion to date [21,80–82], we analyze both resource mobilization and accelerators as a process.

In early stages, startups are forced to use external sources to compensate for a shortage of internal resources, and the openness to do so is a significant success factor [83–85]. As the literature points out that all important resources are mobilized via networks [21,86–88], the entrepreneurial process is also understood as a "networking activity" [83] (p. 306). This emphasizes the enormous importance of networks for the entrepreneurial and resource mobilization process [25,89–91] and holds particularly true in the early stages [92,93] as well as for first-time founders [21,86,94,95].

Potential resource holders are discouraged from investing in early stages because of the great uncertainty regarding the survival of young startups [27]. Therefore, the search for resources that cannot be provided by the immediate social environment, e.g., family and friends, requires an arduous, time-consuming and costly process [21,83,96]. Our study underlines the great value of accelerators in this regard, as they expand the limited network of the founders and thus facilitate the search for resources [83]. Accelerators reduce the distance to almost any kind of contact that might be necessary for the development of a startup (s. Proposition 1), and with the help of their network, they also solve the problem whereby founders may not know where to find specialized professional services [97]. This means the search for resources is simplified by the programs, since accelerators embody a resource environment that includes all types of capital. This is illustrated by the box on the left side of the framework, which portrays the accelerator as the holder of all resources (s. Figure 2) that are important to the development of startups [27].

Additionally, access to resources is supported by admission into the accelerator and being embedded into the ecosystem. Social embedding is defined as "the nature, depth, and extent of an individual's ties into an environment, community or society" [98] (p. 222) and identifies a community as a space that provides the context and mechanisms for embedding [24,98,99]. Accelerators can be understood as such a community that affects resource access, both in terms of market-logical and nonmarket-logical mechanisms (21). Founders gain access to the accelerator's network of mentors, investors, alumni and their local and international entrepreneurial environments. Thus, the accelerator directly simplifies the way in which key resources are accessed (s. Proposition 1).

Moreover, startups usually do not have a track record in the early stages, which makes it difficult to convince stakeholders to provide capital [26,38,100,101]. Furthermore, early-stage investments are associated with high uncertainty, as it is impossible for an outsider to judge the quality and prospects of a startup [27,102–104]. Therefore, third-party certifications play a crucial role in this regard [102], and an association with a reputable organization provides a solution through which to gain legitimacy [105]. Our results show that participants benefit from the accelerator's reputation, which positively affects their public perception; for instance, the accelerator enables access to resources indirectly by equipping startups and founders with a stamp of quality (s. Proposition 3).

Another market-logical mechanism is realized by the expanded community, which resource holders and seekers are now sharing. The social embeddedness literature highlights the importance of networks in creating trust [106], illustrating how social relationships stimulate the willingness of resource holders to grant access to resources, as private information about the founder's talents and tendencies toward opportunistic behavior can be better assessed [88,107]. In our study, the founders emphasized the creation of these social connections, both directly and indirectly, as an immense advantage of accelerator programs. In a community, trust is built in various ways, and even people who meet for the first time can immediately develop mutual respect, because they are part of the same

group [24]. Our results confirm these effects. Additionally, the accelerator community has a positive effect on trust by creating an atmosphere of moral and contextual support as well as a mentality of "giving first" and solidarity among participants and mentors. More specifically, this kind of understanding results in actors supporting each other without expecting a reward. Thus, resource access in accelerators can follow a community logic instead of purely market-logic-based mechanisms [21,108]. Like supporters of crowdfunding campaigns, affiliates of accelerator programs do not solely pursue economic goals but additionally strive to improve the startup community [108,109]. In the framework, the simplified access is illustrated by the box Embeddedness in the middle of the graphic (s. Figure 2).

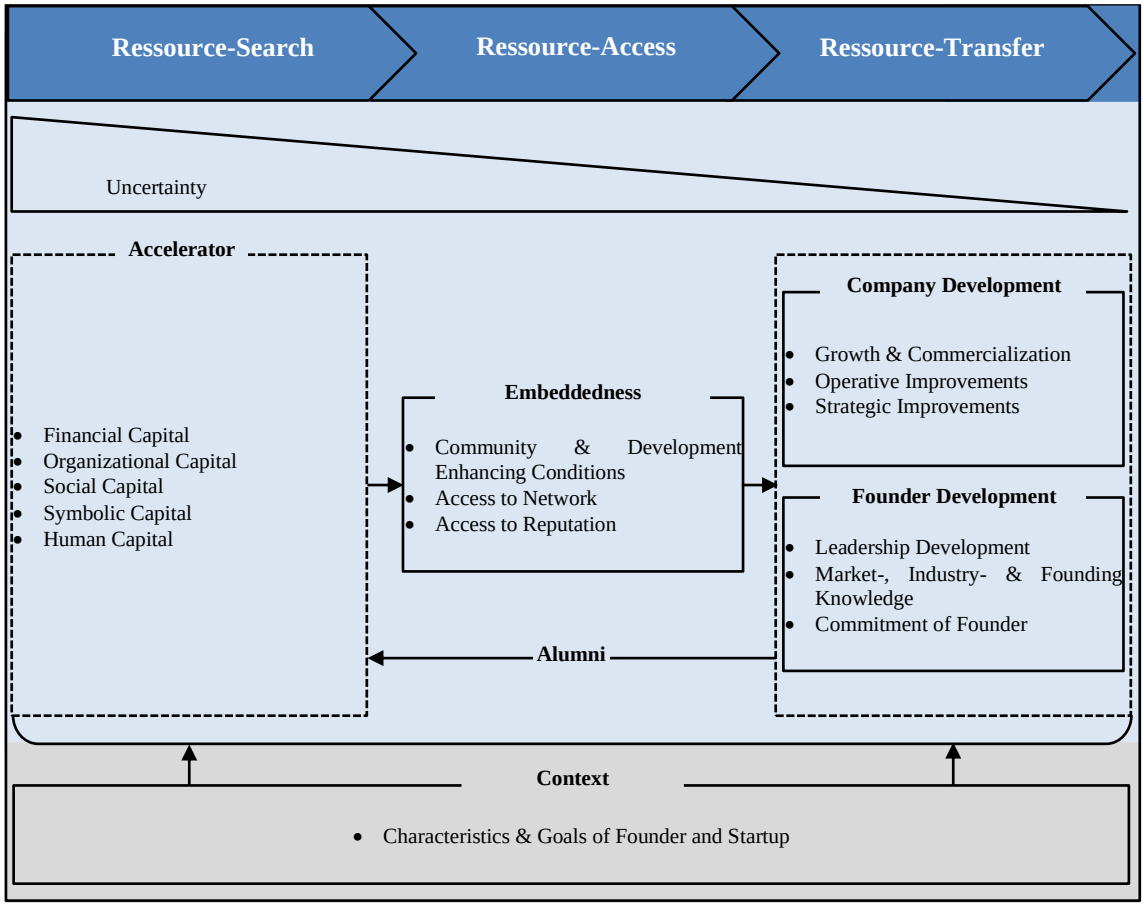

Figure 2. Framework of startup development in accelerators. **Source:** authors' illustration with elements of the framework of resource mobilization of [21].

Finally, accelerators also improve the transfer of resources through the embeddedness of the participants. As resource holders and seekers belong to the same community, trust-building social ties develop and both parties have little incentive to act opportunistically [21,87,95,110]. Relationships in such a community are characterized by mutual goodwill (relational trust), which can even lead to a shared identity [111]. On the one hand, the facilitated transfer of resources results in the better development of the founders, which includes enhancing participants' leadership skills, commitment as well as startup- and market-specific knowledge (s. Propositions 4 and 5). On the other hand, by sharpening strategy and improving operational processes, the development of the company in terms of growth and commercialization is fostered (s. Propositions 7 and 8). These developments are amplified by the time limitations of the programs, which generate a sense of urgency. In the framework, this is indicated by the box on the right, which contains the boxes Founder Development and Company Development.

In addition to relational trust, calculative trust prevails between the parties, which is linked to long-term self-interest. Like the alumni networks of business schools, accelerators can grant new participants access to a supporter platform consisting of successful alumni, and each generation of startups benefits from the experiences of the previous ones [112]. Additionally, a track-record of successful alumni helps accelerators to acquire sponsors and supporters for subsequent programs [97]. This track record is also crucial in building and maintaining a reputation for having the ability to assess the quality of startups, which is invaluable for sparking the interest of investors that use accelerators to screen startups [113–116]. This reverse effect is illustrated by the retroactive arrow in the framework. Founders, in turn, benefit from other successful startups and the accelerator's track record, as the reputation of the accelerator increases with each successful startup.

While our analysis shows that accelerators are able to improve every step in the resource mobilization process, it is important to note that the entire acceleration procedure depends on the context of participation (s. Proposition 9). In terms of the founder, this is in line with human capital theory [117–120] and findings from the literature that accelerators do not provide the same added value for all founders [121]. Our results underline that founders should be proactive in maximizing the benefits of accelerators. This matches the previous literature demonstrating the advantages of proactivity for the entrepreneurial process in other settings of the search for resources [21,122]. Since the context affects the entire process, i.e., searching for, accessing and transferring resources, it extends across the entire illustration of the framework (s. Figure 2).

5.2. Accelerator as Switchman

In addition to shedding light on the mechanisms that enable accelerators to speed up the development of participating startups (Figure 2), our research identifies two additional roles that are unique to accelerators: the switchman and the bridge builder.

The switchman role implies that accelerators provide assistance and important stimuli that facilitate the start of a company. As a switchman, the accelerator establishes a founder identity and ensures the structured start of the company (s. Proposition 4). In social psychology and identity theory, social roles are the starting point of any identity [123], and they involve society understanding the behavior of a social group, such as parents, teachers or founders. Identity emerges through the interpretation and internalization of these roles by an individual [123–125]. To form an identity, founders internalize their individual interpretation of a society's external view of their role [123,126]. This in turn makes the founder's identity authentic, which is not only important regarding their self-image, but also builds prestige, legitimacy and recognition for the startup [74]. It should be noted that the adoption of a founder identity, as with any identity, is not linear and depends on the individual's understanding of the role itself [123,126].

The construction of a founder identity influences the behavior of the entrepreneur [126–129]. Our analysis shows how accelerators strengthen participants' founder identities and can thus accelerate their development, and by joining the accelerator, founders begin to self-confidently label themselves as such (s. Proposition 4). Therefore, in the accelerator, a role change takes place, and participants define their own identity as founders.

Characteristics associated with the founder role are internalized by the participants and used to describe their own personality and self-image [123,130]. In the context of founder identity, this includes not only general actions involved in the founding process, such as discovering, assessing and exploiting entrepreneurial opportunities [123,131], but also specific actions, such as inventing new products and developing new businesses [123,127]. Once these identity characteristics are integrated into the founder's self-conception, there is high motivation to act accordingly [123,132]. It can therefore be assumed that the new identity has a strong motivating effect on the founding process itself and all activities and tasks associated with it [123].

Developing the founder identity is important, because passion arises from activities that affect one's own identity or self-image [127]. The identity-based perspective thereby

portrays founders not only as individuals who initiate startups, but also as a group who zealously pursue entrepreneurial activities that give them significant self-worth [133]. Without pushing the interpretation of our results too far, it could be assumed that founders' passion for startup-related tasks increases as a result of admission to the accelerator. This in turn positively affects numerous other aspects, such as motivation, the startup process in general [134,135] and the startup's ability to receive funding from BAs and VCs [136–138].

At the same time, accelerators fulfill the switchman function by helping the participants to turn a vague idea into a real startup. In such a situation, the company is transformed from a part-time job or a leisure activity into the founder's main occupation (s. Proposition 4). The accelerator gives the startups "a personality" and develops them from "just a product that was managed by someone" (G-2) into a legitimate operation. Furthermore, the founders are trained to become the CEO of their own company. After the intensive time spent in the accelerator, the founders see themselves as well-prepared for all future requirements as executives (s. Proposition 6). The accelerator thus increases entrepreneurial self-efficacy, which is defined as "an individual's confidence in his or her ability to successfully perform entrepreneurial roles and tasks" [139] (p. 1265). On the contrary, the involvement of a VC investor increases the likelihood that the founder of a startup will be replaced [140,141], and since this likelihood is greater with large equity investments from external investors [142], one explanation could simply be that the investments of the accelerators are too small to replace the founder.

5.3. Accelerators as Bridge Builders

The bridge builder role entails providing growth opportunities, establishing a community and connecting the startup to other actors in the entrepreneurial landscape. The role stems from the unique investment strategy of accelerators and their prioritization of the development of participants.

Accelerators are an expensive form of financing, but they do provide participants with a high level of intangible resources. Founders thus opt for "mentorship over the price of equity" [19] (p. 532) by participating in an accelerator. This decision is reasonable, as financial resources—unlike tailored training sessions—do not represent a competitive advantage [143]. Recent studies even question the importance of financial capital on startup development while emphasizing the importance of human capital improvements [12,144]. Nevertheless, financial capital is generally valuable and usually difficult to obtain, and any shortfall can jeopardize the growth and survival of startups [4,143,145].

With respect to this contradictory assessment, our research shows that founders see preparation for later investment as a key benefit of accelerators, while the financial resources acquired directly from the accelerator are not so crucial. In particular, the development of storytelling skills is invaluable, as they have a very positive impact on follow-on funding [21,27]. A good narrative about the company creates legitimacy in the eyes of other stakeholders [27,146], for example, by supporting the development of a corporate identity [147]. Our results are confirmed by the amount of time accelerator programs allocate to the process of attracting subsequent funding. For example, in Techstars accelerator programs, the entire last third is dedicated to a 'Fundraising Strategy' and 'Demo Day' [148].

Furthermore, the accelerator helps participants acquire financial capital by establishing connections with investors and providing startups with a quality stamp (s. Propositions 1 and 3). With a convincing pitch deck and a professional business plan, as well as strategic and operational improvements (s. Propositions 7 and 8), the accelerator prepares participants for follow-up investments at the end of the program. By prioritizing the development of participants and preparing them for subsequent investments, the accelerator acts as a bridge builder to other capital providers instead of providing the money itself [9,14,149,150]. In other words, the accelerator is not a substitute or 'foe' for other external investors but can rather be characterized as a complementary partner or 'friend' [121,151], since it connects high-quality startups with high-quality investors [13,149,152].

Furthermore, accelerators fulfill the bridge-builder role by creating a community. Due to the great uncertainty in which startups operate, learning plays a critical role in the entrepreneurial process [153–155]. However, the ideal design of such a learning process is not uniformly assessed in the literature. While the lean startup method highlights the importance of trial-and-error, e.g., [156], Hallen et al. (2020) emphasize, in the context of accelerators, the significance of external consulting, which they define as 'broad, intensive, and paced' for the learning process. As founders systematically satisfy themselves too early in many decisions, they benefit from a large and diverse amount of external information [17], and so the broad range of knowledge in accelerators helps in finding better solutions. In terms of breadth, our study can not only confirm this learning mechanism, but it can also add a new aspect. Founders often do not know what resources they need, and to make things worse, their needs can change over time [24,25,157]. Entrepreneurial action under uncertainty can therefore be compared to chasing a moving, invisible target [24,158], and random contacts are extremely valuable [24,159]. Our results demonstrate how, through the realization of serendipity (s. Proposition 2), the breadth of consulting opportunities is even greater than it appears at first glance. Additionally, we show that founders not only support each other in terms of content, but they also see considerable value-added in the moral support of their peers. We point out how the atmosphere in the accelerator and the physical proximity to mentors, peers and advisors has a motivating and performance-enhancing effect on the participants. A similar influence is identified in the context of coworking spaces, portrayed as "energizing and motivating" [160] (p. 14).

5.4. Practical Implications

In addition to theoretical insights, our results develop practical implications for various stakeholders. Due to the diverse and far-reaching applicability of accelerators, we can derive implications for founders, policymakers, accelerator managers and investors. In light of the high costs associated with accelerators [19], our results are particularly relevant for founders. We demonstrate that accelerators are actually able to support and accelerate the development of startups in early phases. Furthermore, with an eye on the importance of the context of participation, we display specific characteristics and behaviors that can maximize the value of participating in an accelerator program. As the startup support landscape in general and accelerators in particular are heterogeneous [61], it is invaluable for founders to know which mechanisms are effective and useful. Policymakers around the world have funneled a lot of resources into accelerators and other programs to stimulate startup activity and entrepreneurship [3,51,53,61]. However, the actual benefits of these initiatives are often not convincing [3]. By challenging "existing theories and assumptions, such as (. . .) value-add dynamics" [121] (p. 1843) and uncovering the mechanisms that are most valuable to participants, our study will help policymakers to hone their services. Similarly, accelerator managers might use our results to improve their programs by tailoring them to the actual needs of early-stage founders. Keeping in mind that even corporate accelerators of well-known companies have problems filling their cohorts with sufficiently qualified startups [71], a better understanding about value-adding mechanisms will prove priceless. The same applies to other investors, such as VCs or BAs, who may adapt their own selection of services by building on our findings. Finally, our results show that accelerators need to adapt carefully to a virtual approach. Virtual programs certainly have an upside, as it is easier, for example, to reach a larger and more international group of investors and mentors. However, our study reveals their drawbacks as well; for instance, serendipity and other benefits resulting from 'random' meetings will not be as effortlessly prevalent in virtual programs.

5.5. Limitations and Avenues for Future Research

As with every research study, our analysis does not come without its limitations. First, accelerators are extremely heterogeneous [56,161,162]. By focusing on top-tier accelerator programs, we purposely only looked at a very small section of the accelerator population,

and as we aimed to provide an in-depth analysis of accelerator mechanisms, it was important to choose a more homogeneous group of accelerators. Future studies could build on our results to extend the insights to less-renowned or public programs. The analysis of accelerators in developing countries seems especially fruitful, as it additionally allows for the shedding of light on broader questions regarding the impact of accelerators on the development of the entrepreneurial capacity of a region [13].

As our results are based on an inductive qualitative analysis and derived from a limited sample size, they can neither claim general validity nor derive causal relations. However, this represents not only a limitation but also an opportunity for further research. Building on our results, future studies could specifically analyze the impact of proactivity and experience. Examining demographic differences between founders in general also seems to be a promising avenue for future research. Initial studies suggest that accelerators should have a relatively greater benefit for female founders [163], one reason for which could be that female founders are perceived as more coachable, which has direct impacts on the added-value provided by mentors [164]. Additionally, key resources for the startup process, i.e., financial, human, social and organizational capital, automatically increase in line with the age of the entrepreneur [165], whereas coachability decreases with age. It could therefore be assumed that accelerators are particularly valuable to young founders [164]. We therefore call for more quantitative research to examine the relationship between founder characteristics and the effectiveness of accelerator programs.

Finally, future research should develop insights into how new forms of financing, such as accelerators and venture debt, transform the decision behavior of entrepreneurs. This research strand is currently mainly limited to the decisions of founders when choosing between traditional forms of early-stage financing, e.g., [166–172]. Similarly, it would be interesting to see if traditional forms of financing adapt their investment strategies or services offered in addition to the provision of capital.

6. Conclusions

Accelerators are a new and important player in the entrepreneurial support landscape, as they provide startups with a small amount of capital and a huge variety of intangible resources. By unmasking the potential nonintuitive benefits of accelerators and pressure-testing the seemingly obvious ones, this study has answered the question relating to how accelerators influence the development of participating startups. Our results are threefold.

First, founders face the major challenge of only having limited resources at their disposal and the need to make strategic decisions in an atmosphere of great uncertainty. Information that helps to reduce this uncertainty is therefore of great benefit and economic value [19]. Furthermore, accelerators help startups to compensate for resource scarcity and to reduce uncertainties by making resource mobilization easier and more structured. Thus, the unforeseeable entrepreneurial journey becomes at least partially predictable.

Second, in its role as a switchman, the accelerator facilitates, automates and speeds up the start of the entrepreneurial process. By enabling the development of a founder identity, accelerators change the mentality and the self-understanding of the founders. In combination with the supporting environment, they thereby set the course for a successful entrepreneurial process and professionalize the difficult and uncertain first steps in founding a company. Therefore, accelerators are labelled "a good way to start" and a "no-brainer first step" (G-6).

Third, our analysis reveals how accelerators act as bridge builders by helping founders obtain follow-on financing instead of acting as investors themselves. However, the support is not limited to financial capital. Through their community, accelerators shorten participants' paths to all forms of capital by building bridges between founders and other stakeholders in the broader startup environment. One founder sums up the uniqueness of the accelerator as follows: "It's completely different [from other forms of financing]. The accelerator is a way to connect you to investors or to other things, but (...) I don't see an accelerator as an investor itself" (G-3). This quote encapsulates our third result. Rather than

being another type of investor, accelerators should be understood as an environment that enables and speeds up the entrepreneurial process. All in all, accelerators as intermediaries help founders from various backgrounds to get started and navigate through the challenges they face in the early phases of the startup journey.

The implications of our study are twofold. First, our results should support founders in making better and more-educated decisions in the early phases. Second, they will help program managers, policymakers and investors hone their services and improve their decision making.

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