The startup selection process in accelerators: qualitative evidence from Turkey

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Submitted to Entrepreneurship Research Journal

Abstract:

Startup selection is an essential mechanism of how accelerators create value. Through in-depth case studies of ten accelerators in Turkey, our research explores the selection process in accelerators. Our findings indicate that accelerators overcome their context's extreme uncertainty by involving various actors in the selection process and reducing the information asymmetries for investors and startups. Accelerators tend to select effortlessly coachable startups, willing to collaborate with accelerators, mentors, or other actors, and passionate enough to overcome the pressure of creating a business at a fast pace. Our research also exhibits that the selection process serves startups by directing and training them to transmit the right signals to receivers, primarily investors. Accelerators prefer to work with entrepreneurial teams that are coachable, passionate, and collaborative to vibrate the right signals. Similarly, the accelerators' selection process helps investors by decreasing signaling noise and mitigate information asymmetry. By doing so, accelerators contribute to a well-functioning and more effective entrepreneurship ecosystem.

Keywords: accelerators, startup selection, selection criteria, signaling, startups

1. Introduction

Accelerators are one of the intermediaries that nurture startups to access initial resources to pursue entrepreneurial endeavors. An accelerator is defined as "a fixed-term, cohort-based program for startups, including mentorship and/or educational components, that culminates in a graduation event" (Cohen et al., 2019, p. 1782). Recent research on accelerators focuses on

mechanisms of accelerators or accelerators as a mechanism to support startups (Crişan et al. 2021; Shankar and Clausen, 2020; Stayton and Mangematin, 2019). These mechanisms mainly serve to test product-market fit, quick market entry, and achieving quick scalability. The motto of accelerators is "scale quickly or fail fast" (Shankar and Clausen, 2020). In order to be successful accelerators, need to select their startups based on the requirements of these mechanisms. Hence, our research contributes to the research by analyzing the startup selection process in accelerators.

Previous research provides clues about the importance of the selection process in accelerators (Prexl et al. 2019; Clarysse, Wright, and van Hove 2016; Pauwels et al. 2016). However, to our best knowledge, the selection process is not examined by considering that the signals of legitimacy are collectively created and reproduced by accelerators, startups, and resource holders. This research paper aims to answer the following question: what selection process do accelerators use to select startups? In order to answer this question, we analyzed the data collected from transcribed semi-structured in-depth interviews with directors of accelerators, site visits, and archival data such as accelerators' websites, blogs, newspapers, newsletters. All face-to-face interviews were conducted with ten accelerators at their offices in Ankara and Istanbul from March 2016 to January 2017.

Our findings indicate that accelerators build selection committees consisting of many stakeholders, especially potential investors. During this process, accelerators select their startups based on entrepreneurial opportunity and how the team suits to execute the opportunity, as many previous studies have already indicated (Huang and Pearce 2015). However, our study underlines the quality of the team as the key in selection decisions. We find out that accelerators pick startups with latent qualities that would be appreciated by other stakeholders. Thus, the selected

startups can access private funding. Startups that are effortlessly coachable, willing to collaborate with accelerators, mentors, or other actors, and passionate enough to overcome the pressure of creating a business at a fast pace possess such latent qualities.

Further, our findings show that the selection process is critical for accelerators to build a well-functioning acceleration process that serves startups and investors. Accelerators prefer to work with entrepreneurial teams which are coachable, passionate and collaborative to be trained to vibrate the right signals. By selecting such entrepreneurial teams that vibrate positive signals and by directing and training them to transmit the "right" signals to receivers, namely investors, accelerators support entrepreneurial teams access to external resources and scale quickly. Similarly, the research shows how the selection process helps investors by decreasing signaling noise and mitigate information asymmetry.

This paper is organized as follows. Section 2 reviews the theoretical underpinnings of startup selection and screening by focusing on signaling theory. Section 3 describes the data collection procedures and methodology. Section 4 reveals the main results of the research, and followed by a final section discussing the implications and limitations of the research and possible topics for future research.

2. Background

Y-Combinator, launched in 2005, is the first accelerator, and since then, 579 accelerators have started globally with investments in more than 11 thousand startups (Gust, 2016). For a decade, scholarly attention to understanding accelerators and their impact has been significantly increasing (Crişan et al., 2021). Some of the previous research aims to understand and explain the phenomenon of an accelerator and its specificities (Hausberg and Korreck, 2020; Cohen and Hochberg, 2014). Some others investigate how an accelerator differs from incubation programs

(Sansone et al., 2020; Galbraith, McAdam, and Cross, 2019; Hughes, Ireland, and Morgan, 2007). Nevertheless, several studies consider accelerators as a new form of organization with a diverse set of business models and operating in different contexts (e.g., university accelerator, social accelerator, corporate accelerator, ecosystem builder accelerator) (Prexl et al., 2018; Pandey et al., 2017; Pauwels et al., 2016). Further, some studies are interested in the impact of accelerators on cohort firms (Hallen, Cohen, and Bingham 2020; Stayton and Mangematin 2019) or entrepreneurship ecosystems (Qin, Wright, and Gao 2019; Goswami, Mitchell, and Bhagavatula 2018). However, as Shankar and Clausen (2020) underline, there is a dearth of studies in understanding the mechanisms of accelerators. This study focuses on the selection process at accelerators.

It is not easy to fully explain the rationale behind selection (Navis and Glynn 2011; Chen, Yao, and Kotha 2009; Hisrich and Jankowicz 1990). Navis and Glynn (2011) suggest that evaluators generally make their selection on gut feeling. The background and personality of entrepreneurs, the characteristics of management teams, and the chemistry between entrepreneurs and selectors are the main factors that influence gut feeling (Hisrich and Jankowicz 1990). Under extreme uncertainty and strong information asymmetries, quick decisions are made based on limited information hidden in various signals sent by startups (Huang and Pearce 2015; Kirsch, Goldfarb, and Gera 2009; Busenitz, Fiet, and Moesel 2005).

Signaling theory is used to explain the behaviors and actions of two parties -who have access to different information- that are taken to decrease the asymmetries between themselves (Connelly et al., 2011). In the entrepreneurship literature, signaling theory is used to understand how new ventures signal the possible future outcomes that they can achieve (Yang, Kher, and Newbert 2020; Connelly et al. 2011; Gimmon and Levie 2010; Higgins and Gulati 2006;

Busenitz, Fiet, and Moesel 2005). Entrepreneurial teams have better knowledge about team capabilities, the product they developed, the embedded technology, and possible market entry outcomes. Outsiders (i.e., investors) do not have the same information. In such an environment with information asymmetry, startups (signalers) take actions (signals) to communicate their value to investors (receivers) (Gubitta, Tognazzo, and Destro 2016; Connelly et al. 2011; Busenitz, Fiet, and Moesel 2005). For example, a startup in an accelerator could use its prototype as a signal to show investors the level of readiness of the idea or pass the reality test of the idea by showing its working sample, model, or just a simulation of the actual product (Yin and Luo 2018).

Not all signals are effective; efficacious signals are observable and costly (Connelly et al. 2011). Signal observability refers to how signals are noticeable by the outsiders, and the signal cost is linked to the associated costs of vibrating a signal (Connelly et al. 2011). In the case of accelerators, demo days increase the signal observability for each startup and their signaling costs because only the startups that have achieved certain milestones are allowed to present in demo days. Signals are created, sent, received, and interpreted in a social context (in our case, the entrepreneurial ecosystem). Therefore, whether signals are observable to receivers, and whether the signaler sends these signals to the receiver in forms that are easily observed and interpreted deserves further discussion.

New organizations can signal organizational legitimacy to affect the decisions of resource holders (Kirsch, Goldfarb, Gera 2009; Higgins and Gulati 2006; Busenitz, Fiet, and Moesel 2005). In an ideal situation, both signalers and receivers share common understandings of valuable signals. However, under extreme uncertainty, decision-makers rely on signals that mimic familiar, appropriate, and acceptable (Kirsch, Goldfarb, and Gera 2009; DiMaggio and

Powell 1983). Zacharakis and Shepherd (2001) suggest that VCs are more confident with decisions based on information framed familiarly. When decision-makers need to decide fast under extreme uncertainty, they categorize the actions and activities of new ventures by using some relevant templates, norms, and guidelines which point out some shared typifications regarding what is appropriate and acceptable (Navis and Glynn 2011; Barley and Tolbert 1997; Suchman 1995).

Nonetheless, every signal that startups vibrate does not easily fit into typical categories. Decision-makers can be blind to such signals, or, in some cases, the observability of a signal might be obscured by other signals that better fit these categories. Feeney, Haines, and Riding (1999) reveal that the poor management capacity of the entrepreneurial team is the main deal-killer for investors. Maxwell, Jeffrey, and Levesque (2011) argue that it is time-consuming for business angels to collect and evaluate all information needed to make a final decision. Therefore, they consider a smaller set of information to reject a large number of opportunities. The existence of red-flagged signals prevents investors from considering other positive signals in decision-making. Startups that are aware of such deal-killer signals can take actions not to vibrate these signals and manage their impression over possible investors (Maxwell, Jeffrey, and Levesque 2011).

The literature drives us to conclude that despite the heterogeneity among resource holders, they rely on the signals that conform to the prevailing norms of the legitimate venture when making a decision (DiMaggio and Powell 1983). These norms are collectively created, shared, and reproduced by resource holders and startups. Accelerators are part of this web of interactions in which common understandings regarding the appropriate and acceptable organizations are emerged, shared, reproduced, or reframed, and attain legitimacy. Accelerators

select startups based on these prevailing norms and mitigate the information asymmetry for investors and other resource holders. Guerini and Quas (2016) suggest that startups that are previously funded by government venture capital are more likely to receive private venture capital since government VC funding decreases the information asymmetry for private VCs by selecting and screening promising startups.

Accelerators are engaged in the entrepreneurial social context and share similar norms with investors and other resource holders. Shared values, norms, and common understandings increase interaction and communication, thus decrease information asymmetry and build trust among actors (Edwards and Cable 2009; Gulati and Sytch 2008). Endorsements by accelerators increase signaling costs and decrease the possibility of cheating or false signaling (Gubitta, Tognazzo, and Destro 2016). These reputable organizations mobilize their resources to enhance new ventures' potential (Lee, Pollock, and Jin 2011), thus reduce uncertainty (Gubitta, Tognazzo, and Destro 2016; Connelly et al. 2011). This situation increases the cost of signaling for accelerators. Since accelerators invest money, time, and effort to nurture new ventures, they risk their reputation in the case of false signaling to other stakeholders (Pollock and Gulati 2007).

This research focuses on accelerators' selection and screening process and the criteria they apply to select startups.

3. Methodology

This paper investigates the details of the entrepreneur selection process that accelerators implement. To answer what mechanisms and criteria that accelerators use to select startups and how those mechanisms and selection criteria serve startups and investors, we rely on qualitative inductive methodology using multiple cases (Eisenhardt and Graebner 2007; Eisenhardt 1989).

The number of cases increases the robustness and generalizability of findings and leads to more meaningful theoretical conclusions (Yin 2014; Eisenhardt and Graebner 2007). Even though we collected some secondary data to support our cases, this paper's primary method is a multiple case study, a separate and all-encompassing method with its research design (Yin, 2014).

3.1. Research context

Creating interfaces such as accelerators to establish and enhance innovation is a critical component of Turkish technology and innovation policy. Such interfaces as organizations, connected firms and entrepreneurs, and the professionals working in the interfaces define an environment where technology-based entrepreneurship flourishes.

As of 2020, there are 57 accelerators in Turkey (Investment Office 2020) in various sizes and forms, most of which are located in either Ankara or Istanbul. Accelerators have been well received by the other actors of the entrepreneurship ecosystem. The number of accelerators increased approximately ten-folds from 6 in 2010 to 57 in 2020. However, when the fieldwork started in 2016, there were 24 accelerators in Turkey. Most accelerators in Turkey were formed to organize certain elements (intangible services to obtain fast traction) of the entrepreneurship support activities already present in prominent universities in Ankara and Istanbul. Due to law, some accelerators are organized under the university technology park or the university's technology transfer office. Only a few of the accelerators are private or sponsored by corporations, municipalities, or non-government organizations.

3.2. Sample selection

Accelerators differ from incubators in many aspects (Sansone et al., 2020; Galbraith, McAdam, and Cross, 2019; Cohen et al. 2019; Pauwels et al. 2016; Cohen and Hochberg 2014); for instance, the duration of the program is shorter than incubators, and they accept startups in

cohorts. Due to the high number of applications, most of the accelerators use a staged selection system. At the first stage, applications are evaluated based on information provided by applicants through a web-based system. Then, at the second stage, the successors of the first stage receive an invitation for an interview (Yin and Luo 2018).

As a first step, we made a list of accelerators that we would interview for this research by collecting secondary data from newspapers, magazines, public agencies, and the websites of accelerators. We considered three criteria for selecting cases:

(1) a history of continued operations: Some accelerators have sustainability problems, some cease to exist, and some are very small in size. The selected accelerators have a certain scale and continuing operations for more than a year (see Table 1, column 2).

(2) the duration of the acceleration: It ranges from several weeks to one year (see Table 1, column 3).

(3) cohort-based selection: The selected accelerators have well-defined application and selection processes in cohorts (see Table 1, column 4).

We identified about 15 accelerators that fit the above criteria in Turkey (out of 24 that existed when the fieldwork started in 2016). The accelerators in Ankara and Istanbul were contacted, and ten accelerators agreed to participate in the research. All accelerators in our sample use a staged selection system where at least in the second stage, a jury or a committee decides on the applicants' faith. Turkish Economist (Ekonomist 2018) reports about more than six thousand startups that have benefited from the acceleration services as of January 2018, 75% of which were officially registered in six accelerators in our sample (Accelerators B, C, D, E, F, and I in Table 2). Table 2 provides brief information on the selected accelerators, the role of the interviewee, and the date of the interview.

Table 1: Selection procedure of accelerators

Accelerator	Year founded	Duration of the support	Selection procedure of applicants
A	2011	5 weeks intense + 3 months	Applications are collected online. Two-stage selection process: At the first stage of selection, the manager and a mentor make the selection. In the second stage, a jury of entrepreneurs, investors, and representatives from various corporations select.
B	2008	At most 1 year	Applications are collected online. Two-stage selection process: At the first stage of selection, the manager and the experts of the acceleration program make the selection. In the second stage, a jury of 40 people, including professionals from corporations, investors, entrepreneurs, and academics, select.
C	2012	At most 1 year, first 8 weeks intense	Applications are collected online. Single-stage selection process: Selection is made by a small group of evaluators, including the manager, the business development coordinator, and a few accelerator mentors.
D	2015	6 months with possible extension of six months	Applications are collected online. Two-stage selection process: At the first stage of selection, accelerator experts carry out the first evaluation. In the second stage, a jury of angel investors, representatives from VCs, managers of corporations select.
E	2013	9 months, first six weeks intense	Applications are collected online. Two-stage selection process: After evaluation by the experts in the first stage, the successors are assessed by a jury of about 10 people, in the second stage, including angel investors, representatives from VCs, managers of various corporations, and academics.
F	2012	5 months	Applications are collected online. Two-stage selection process: Applications are first evaluated by accelerator managers; the remaining projects are evaluated by a jury, in the second stage, including a minimum of 3 people from the sponsor organization.
G	2015	3 months	Applications are collected online. Two-stage selection process: At the first stage, accelerator managers assess the applications. At the second stage, a jury including representatives from sponsor organizations, mentors, and investors evaluate applicants.
H	2008	Flexible	Applications are collected online: A group of five selectors evaluates all applicants in several stages until they agree on a set of startups.
I	2005	6 months	Applications are collected online. Three-stage selection process: In the first stage, accelerator experts select through the information provided in the online application form. In the second stage, the remaining applications are evaluated according to written criteria, and at the third stage, the applicants with high scores are invited to present. The selection committee at the third stage

			includes members from university, sponsoring organizations, and entrepreneurs
J	2010	4 months intense then follow-up	There is no online application process. Accelerator managers first investigate the startups in technoparks, incubations etc. (first stage). From a set of identified startups, the ones which are positively evaluated by the managers and the experts, in the second stage, are selected to nurture.

Source: Our interviews, websites, and newsletters.

Table 2: Summary information on the selected accelerators

Accelerator	Location	Role of the Interviewee	Date of the interview
A	Istanbul	Program Manager	March 2016
B	Ankara	Program Director	August 2016
C	Istanbul	Program Coordinator	April 2016
D	Istanbul	Program Coordinator	March 2016
E	Istanbul	Program Coordinator	January 2017
F	Istanbul	Project Manager	May 2016
G	Istanbul	Managing Director	June 2016
H	Istanbul	Business Development Specialist	September 2016
I	Ankara	Program Director	November 2016
J	Ankara	Owner-Manager	November 2016

3.3. Data collection and analysis

The data used in the empirical research was collected from two sources: primary data came from the transcribed semi-structured in-depth interviews and site visits, while secondary data was collected on literature review and archival data (such as accelerators' websites, blogs, newspapers, newsletters). Archival data were mainly used to select accelerators, prepare for the semi-structured interviews, open up new questions in interviews, and supplement interview data. Thus, data triangulation has secured our interviews to be carried out with a representative group of accelerators. This approach of using supplementary data to improve a primary set of collected data has been widely used in the literature (e.g., Sklyara et al. 2019).

We interviewed accelerator managers at their offices face-to-face and observed their operations and their relationship with startups at these visits. All interviews were conducted from March 2016 to January 2017. During these interviews, a set of questions were asked to collect information about the organizational structure of accelerators, history of operations, general processes before and after the selection, detailed information about selection and selection committees, selection criteria, the definition of an ideal startup. The length of the interviews was between 45 minutes to 90 minutes. All of them were recorded and transcripted.

As consistent with inductive research methodology (Bryman and Bell, 2007), first, we tried to understand how startups are selected by different actors such as VCs, business angels, incubators, and accelerators. After an intense literature review on startup selection, the authors reviewed the transcripts and field notes. Two of the authors made the first contacts with accelerator managers, field visits, and face-to-face interviews. An iterative process was used to analyze the information embodied in transcribed interviews and compare and contrast the analysis with the theory. We conducted a peer evaluation process (Miles and Huberman 1994). All authors contributed to coding by carrying out independent parallel analysis of data items, but all codes are based on consensus (Bryman and Bell 2007). Thus, we did not conduct an inter-judge reliability test.

We searched for themes that we drew from previous research; however, we embraced the new ones. This iterative process involved drafting themes and sub-themes that emerged from face-to-face interviews and the data collected from secondary resources. We looked for emergent codes and statements in the transcripts, grouped these codes under sub-themes and themes, and re-read the transcripts to edge the sub-themes and interpret the findings (Bryman and Bell 2007; Denzin and Lincoln 2001; Stake 1995). The first read of the transcripts was based on the themes

from the literature and produced various codes (column 2, Table 3) that derives from actual statements (column 1, Table 3). Then these codes were refined and matched to sub-themes (column 4, Table 3) (Gioia, Corley, and Hamilton 2012). Once a draft code-sub-themes and themes structure was ready, a second read was conducted for the robustness of the analysis. The final analysis produced 20 codes grouped under five sub-themes of selection (columns 2 and 4, Table 3). Previous research that scrutinizes the role of sub-themes in startup selection is also provided in Table 3 (column 3). Finally, these sub-themes are grouped under two main themes of startup selection, "business opportunity" and "team" (column 5, Table 3). We reviewed each case and checked how these five sub-themes appear in the interviews at the final stage. The common recurring sub-themes can be viewed as criteria of startup selection to accelerators.

Table 3: Analysis of the interviews: codes and themes of the selection process

Statements from the interviews	Codes	Related literature	Sub-themes	Themes
Can it be commercialized? (C); how quickly can it go to the market? (D); a ready prototype takes the project far front (E); if it doesn't involve innovation and pursue in the existing market, we eliminate (F); at least we look for a prototype (G); what problem it addresses is very important for us (H); does the idea fix a problem? (J)	Tangible, realistic, innovative, prototype, time to commercialization	Audretsch, Bönte, and Mahagaonkar (2012); Tyebjee and Bruno (1984)	Business idea	Business opportunity
Spending money on entering a crowded market is meaningless (A); how big is the market? How many competitors? (D); once we see it is scalable, we say yes, this is it (E); is there a sufficiently large market? (I); once the idea comes, is it sustainable? can it expand globally? (J)	Size of the market, scalability, competition	Mason and Stork (2004); Feeney, Haines, and Riding (1999)	Market	
They talk about a technology business, but do they have such background, experience? (A); what do they want to do? Do they have experience? (B); if it is a technology startup, one founder should have a technology background (G); we want the nuclear competence within the team (J)	Technological competence, business competence, previous experience, expertise	Hisrich and Jankowicz (1990); Baum and Silverman (2004); Gimmon and Levie (2010); Foo (2010); Becker-Blease and Sohl (2015)	Capacity and competence	Team

We look whether they are open to change their mindset (A); some walk alone, but we guide them; take a seller; take a designer (C); if he/she does not want to try and is stubborn, it is not good for us (D); how loyal is the team to each other? Are there disagreements? (F); we look at team harmony (H)	Team level harmony, diversity in teams, Coachability of teams; team flexibility, team-accelerator harmony	Haines, Madill, and Riding (2003); Franke et al. (2008); Ciuchta et al. (2018)	Coordination harmony	
The kid genuinely dedicates himself (A); do they want to stick their neck out? (D); Ambitious? Will they give importance to the business; an entrepreneur must sacrifice or risk something (E); entrepreneurship experience is more valuable than corporate experience. We want them to have accomplished something (F); we want them to be full-time entrepreneurs and give their full energy (H)	Persistence, dedication, preparedness, entrepreneurship story	Busenitz, Fiet, and Moesel (2005); Chen, Yao, and Kotha (2009); Elsbach and Kramer (2003); Pollack, Rutherford, and Nagy (2012); Cardon, Mitteness, and Sudek (2017)	Commitment and passion	

4. Findings

The observations of the case studies explicate the significant role of selection committees and selection criteria in accelerators' selection process. The details are discussed in-depth below.

4.1. The engagement of various actors through selection committees

Accelerators aim to attract high-quality teams in each cohort. Social media and websites are the basic channels for reaching potential entrepreneurial teams. They collect applications on different occasions via web-based forms as well. In the first step, evaluations are made using the information in these forms, and most applicants are eliminated based on available or missing information. Application forms include questions which help applicants to better explain the entrepreneurial opportunity they have discovered, and their business model. One interviewee (Interviewee D) mentioned *"what you make different and how you make it different? Who are the customers? What are your unique resources? Applicants have difficulties answering such questions"*. This sharp trimming down makes further screening affordable. If acceleration experts are not sure about the appropriateness of a startup, they contact applicants face-to-face or on the phone to get the details about the entrepreneurial opportunity and the team. Sometimes

they are given advice on how to improve their projects. By spending time with startups in this process, accelerators get closer to startups.

In the second step, selection committees make the final selection. The size of the selection jury ranges from three to 40. Most of the accelerators in Turkey invite angel investors, industry representatives, sponsor organizations, mentors, or influential serial entrepreneurs to their selection committees. By doing so, they open up the communication channels and increases the interaction between investors and accelerators and also between investors and startups. Accelerators have the chance to learn more about the concerns and expectations of investors and the type of startups they are willing to invest. In these selection committees, norms and understandings regarding the new ventures are exchanged, discussed, and opened to negotiations. Accelerators interact vividly with potential investors. As stated by one interviewee, *"inviting investors to our selection committees is a signal to investors: These startups will be brought to you when they are seeking investment. Now, you need to tell us what you want. Then we will find those startups for you"* (Interviewee D).

The interaction between investors and accelerators is not limited to the selection process. It continues in different forms; for example, some investors serve as mentors in accelerations, and can benefit from information flow from accelerators about the startups under their tenants. These interactions help them select the most appropriate startups to invest and close the information gap between investors and startups. Thus, accelerators build trust on behalf of the investors that the accelerator will bring them what they want (as emphasized by Interviewee D). These interactions are also valuable to accelerators to learn more about the appropriate signals a startup needs to vibrate to access resources. In that way, they can sense the products, markets that

investors are most interested in, or the team qualifications that are concerned by investors and the appropriate ways of showing off these qualifications.

Our research indicates that program managers and experts make their decisions very quickly, especially at the first round of selection, where they need to downsize hundreds of applications into reasonable amounts. Nevertheless, the experts in accelerators have a chance to spend more time with applicants to observe them. They learn more about entrepreneurs' backgrounds, motivations, what they did so far for their project, and their future projections and work together to understand how teams take the feedbacks and respond to them. For example, "we are giving small assignments; such as a competitor analysis. Their returns and works in this process give us a lot of clues about how they are serious. Most of the time, an application form is not enough" (Interviewee E). Accelerators trim the most appropriate entrepreneurial teams and opportunities that are likely to be invested. They eliminate red-flagged startups, which cannot vibrate the "right" signals. Thus, accelerators clean the noise and find out the most appropriate new ventures for investors by reducing information asymmetry.

Accelerators bring investors into the startup selection process. Accelerators prefer to engage investors in the selection process to assess better startups' potential to achieve product-market fit and quick scalability. Additionally, it helps them build relations with investors that could provide private funding as quickly as possible since it is a matter of survival and the key to scaling fast for startups. As stated by Interviewee A, most of these accelerators have close connections with angel investors and most of these investors serve as mentors to startups: "we are well connected to angel investor networks… In one of the mentorship sessions, one of our angel investor mentors very much liked the presentation of a startup. He wanted to work with

them voluntarily. Now they are working together 2-3 days a week. He has not invested yet but wants to mentor them for now".

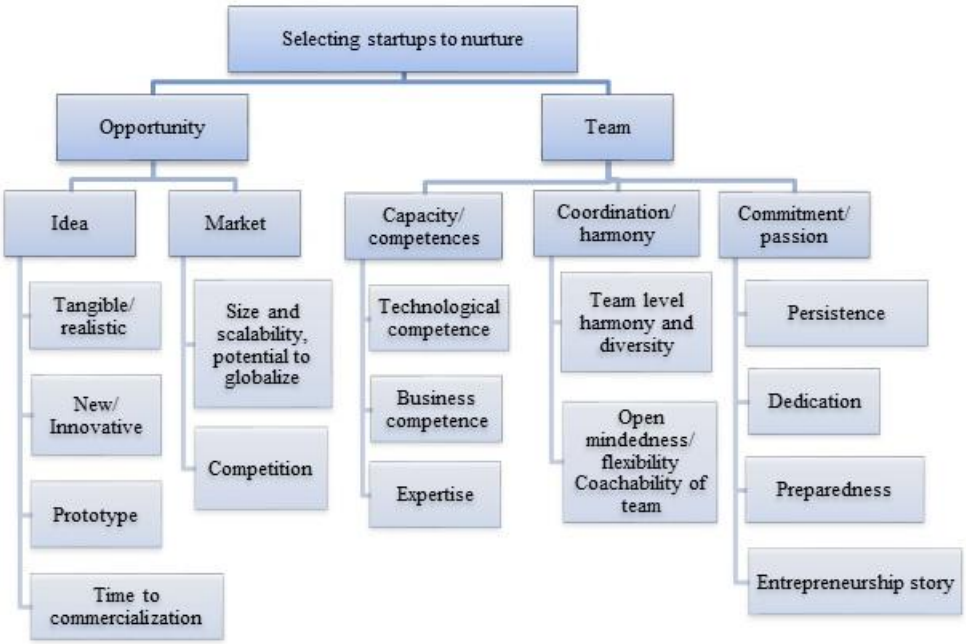
In connection with other supporting mechanisms, selection mechanisms applied by accelerators generate benefits for both parties by reducing the information asymmetries among investors and startups. They eliminate the red-flagged startups at very early stages for investors by bringing investors' concerns and expectations forward in the selection mechanisms and training startups to vibrate positive signals to investors. In this environment, private investment actors can shape the new ventures' context and growth (Baum and Silverman 2004).

4.2. Selection criteria for entrepreneurial teams

Due to high uncertainty and ambiguity, it is difficult to decide based on future projections of an entrepreneurial project. Therefore, most of the experts/managers of the accelerators emphasize that they do not consider the financial projections of a startup for selection and screening. From the interviews, two main selection criteria emerge the entrepreneurial opportunity and the team. Although these two criteria are common in the selection, there are still differences among accelerators. The criteria applied to startups are essential to understand how new ventures are selected by accelerators and the impact of selecting entrepreneurial activities and the ecosystem.

The first criterion is the entrepreneurial opportunity, consisting of concerns about the problem, value proposition, innovativeness, and market-related issues such as market size. The second criterion covers founder and team characteristics. It ranges from the technological and business-related competencies of founders to their passion. Figure 1 depicts salient signals which are considered by accelerators while selecting entrepreneurial teams to nurture.

Figure 1: Criteria applied to startups in the selection and screening process



Source: Interviews

The market addressed by the entrepreneurial team is critical in the evaluation process. One of the interviewees suggests that *"the problem gives us an idea about the market"* (Interviewee A). However, how the designated problem is solved is as important as the problem. The solution needs to be innovative and offer something new to customers. Nonetheless, acceleration managers are aware of the difficulties of creating a new market. One of the interviewees explained that *"it is meaningless to create a product which does not have an existing market"* (Interviewee H). This point reminds us of the concept of legitimate distinctiveness (Navis and Glynn 2011). Having an innovative idea is a positive signal to attract the attention of accelerator experts. However, this innovative solution must address an existing market that is easily identifiable by investors and other stakeholders. Creating an entirely new market is challenging, time-consuming, and expensive. The novelty of entrepreneurial opportunities is appreciated up to a limit. When the entrepreneurial opportunity is latent, target

customers and market size are not identified. Then, innovativeness and novelty can even turn into an obstacle. In such a situation, the signal does not fit the receiver's expectations.

Similarly, as the time needed to commercialize the entrepreneurial opportunity increases, the probability of being selected by any accelerator decreases. This criterion limits the technology fields that accelerators prefer. They mostly prefer technologies and products that can be developed quickly and have an easily identifiable market. A working prototype is the most valuable signal to measure the required time to market, which is a step toward being selected.

Interviewees frequently mention that team characteristics and composition are the most important factors they consider in screening and selection. Our research reveals that acceleration experts consider many different factors related to entrepreneurial teams. These factors consist of characteristics such as passion and commitment exhibited by entrepreneurs, fields of education, knowledge about markets, preparedness, coachability of teams, diversity in entrepreneurial teams, and chemistry among team members. The technical and business-related capabilities of entrepreneurial team members are interpreted as valuable signals of how well the team fits the opportunity. Acceleration experts generally do not have expertise in technological fields, and therefore cannot provide mentoring or training to support startups in relevant problems. Thus, the teams capable of solving technical problems are also seen as critical for the sustainability of startups. For accelerators, the educational background of founders is a signal to measure the capabilities of entrepreneurial teams. The signal of business-related capabilities is not formal education or relevant industry experience but instead team members' attitudes and willingness to engage in business-related activities.

In most cases, technical competencies create a disadvantage for entrepreneurial teams because they focus too much on the product's technical qualifications and ignore customers.

How team members work together, how long they know each other, and how they allocate the responsibilities within the team are also valued as "right" signals. One of our interviewees reveals that *"we are looking for people who are very good at technical issues but also they can easily communicate with people, be persuasive and be capable in bargaining, and develop themselves in selling and marketing"* (Interviewee E).

Two signals are remarkably voiced in the interviews: passion revealed by entrepreneurial teams and whether they are coachable or not. Though it is difficult to observe and measure entrepreneurial passion, we identified several signals regarding teams' commitment to the entrepreneurial process's overwhelming requirements and preparedness. The willingness of entrepreneurial teams to dedicate their full time to entrepreneurial activities is taken as a positive signal. The personal investments of team members in their project is also a "right" signal. One of the interviewees emphasizes that *"if an entrepreneur does not risk her savings for this project, it means that she does not believe in her project"* (Interviewee E). Signals of commitment are critical for accelerators to distinguish applicants who persist in their entrepreneurial endeavors. As previous research emphasizes, entrepreneurial passion is manifested in behaviors and narratives of teams (Pollack, Rutherford, and Nagy 2012; Chen, Yao, and Kotha 2009). We find that building a prototype, doing market research, building networks, benchmarking the product with existing competitors, even having some ideas about target customer segments, markets, and telling a consistent story about the emergence of business are perceived as the signals of preparedness and entrepreneurial passion by the interviewed accelerators. The flexibility of entrepreneurs and their willingness to collaborate with managers/experts are seen as eminent signals of coachable entrepreneurial teams. In literature, coachability is defined as "the degree to which an entrepreneur seeks, carefully considers, and integrates feedback to improve his or her

venture's performance" (Ciuchta et al. 2018). Our interviewees emphasize that entrepreneurs must be open to collaboration with accelerator managers, experts, and mentors to improve their entrepreneurial projects further. They must be open to constructive criticism and pivot their projects when it is necessary. Interviewee D states that *"in order to benefit from the services provided by our program, they have to be open to criticism and change… if an entrepreneur does not want to try what we advise her to improve the project, we do not want to work with her"*.

Due to the high uncertainty and ambiguity, it is difficult to make realistic projections for experts about a proposed entrepreneurial project. They focus on signals vibrating the quality of the teams, the fit of the team to the opportunity, and the founders' passion and commitment. If the experts observe positive signals in a team, they are more likely to invest in time and effort. Interviewees emphasize their unwillingness to spend their limited resources on teams that lack passion and commitment or those that would eventually disband due to disputes among the team members.

The criteria applied by accelerators resemble those applied by investors to make investment decisions (as shown in Table 3). In most cases, accelerators include a wide range of audiences (i.e., entrepreneurs, business angels, VCs) in their selection process (Leatherbee and Gonzalez-Uribe, 2018; Clarysse et al., 2016). Intense interaction and exchange between investors and accelerators in the selection process and inviting investors to the selection process increase the probability of uniform understandings of the appropriate or acceptable new ventures. In the selection process, accelerators reproduce common understandings about an appropriate and eligible startup (Meyer and Rowan 1977). Signals of legitimate organizations are created and reproduced in every instance by accelerators, investors, mentors, and startups. Some signals

become more observable and easily recognized and interpreted by receivers, while others are ignored. In sum, our study shows that accelerators act as a substitute for investors while selecting the startups to nurture.

Inexperienced entrepreneurial teams are not aware of the right signals to vibrate to access funding. During the acceleration process, as one of our interviewees briefly explains, *"the proposed entrepreneurial project is shaken, deconstructed and reconstructed by entrepreneurs in collaboration with program experts, mentors, and trainers"* (Interviewee G). The entrepreneurial narrative is rewritten in this process in collaboration. Accelerators help entrepreneurs to reconstruct their entrepreneurial opportunities and narratives. Startups learn how to vibrate the right signals and vibrate them in the right form (Kirsch, Goldfarb, and Gera 2009; Higgins and Gulati 2006; Busenitz, Fiet, and Moesel 2005). Accelerators coach startups to vibrate positive signals in an appropriate form. Therefore, accelerators tend to select the most coachable, open to collaboration, passionate, and willing to be committed startups. As the number of successful startups increases, the reputation of accelerators and their capabilities to mobilize external resources increase too. This reputation works as a positive signal to possible investors.

5. Conclusions and implications

Accelerators are one of the actors of entrepreneurship ecosystems and influence the institutional context and the definition of ideal startups. Their role in making startups access private funds is apparent in many studies (e.g., GALI 2018; Drori and Wright 2018). Our research focuses on screening and selection procedures and criteria in accelerators. The startup selection process is one of the most important value creation mechanisms in accelerators. However, how this mechanism works is not well-scrutinized in the literature until recently (Zarei, Rasti-Barzoki, and

Moon 2020; Yin and Luo 2018). Relying on the qualitative analysis of the face-to-face interviews with the managers of accelerators in Turkey, this research sheds light on selection and screening mechanisms in accelerators and their possible implications.

5.1. Implications for theory

This paper offers two contributions to the literature on accelerators. First, the findings help us understand the selection in accelerators as a complex process involving multiple actors. Accelerators overcome the uncertainty in their context by involving various actors in the selection process. The collaborations within the selection committees facilitate a futile ground for communication among accelerators, startups, and investors. This research also exhibits the criteria applied by accelerators in Turkey to select startups to nurture. Our findings show that accelerators focus on opportunity and team, with specific emphasis on team members' characteristics, including coachable, open to collaboration, passionate, and willing to be committed entrepreneurs. These findings resemble how VCs and angel investors select their own invested entrepreneurs (Huang and Pearce 2015; MacMillan, Siegel, and Narasimha 1985). Second, our findings support previous research that suggests that accelerators are more connected to investors in the selection process (Leatherbee and Gonzalez-Uribe, 2018; Clarysse et al., 2016). But they also exhibit how these connections help the quick scalability of startups in accelerators. By including investors in selection committees and applying selection criteria resembling those of investors, accelerators substitute investors and trim down the startups which cannot attract investment and hence cannot quickly scale. Furthermore, by preferring coachable, passionate, and willing to be committed entrepreneurs, accelerators spend their resources on those that they can train to reach milestones faster and therefore vibrate positive signals to prospective investors.

5.2. Implications for practice

There are some practical implications of accelerators behaving as receivers and signalers in the selection and screening process. On the investors/resource holders' side, investors' engagement in the selection process in accelerators may lead to a well-functioning and more effective selection. Moreover, new venture teams who are less suffered from information asymmetry can manage their impressions over resource holders, increase their chance to access private funds (Maxwell, Jeffrey, and Levesque 2011), and help their accelerator gain a reputation in the ecosystem. In a developing country context, this would increase the number of business angels and the total amount of seed funding provided to startups, attracting more foreign VCs and increasing the number of seed-funded startups as observed in the Turkish case (Investment Office 2020). The interaction among different actors of the entrepreneurship ecosystem would increase and become more institutionalized.

However, some unintended practical implications may also be observed. Bringing investor selection and selection criteria backward to earlier stages of the startup life cycle may confront the entrepreneurial teams' market selection biases very early. For example, they might eliminate some disadvantaged groups, e.g., female lead entrepreneurial teams (Yang, Kher, and Newbert 2020; Lall, Chen, and Roberts 2020). Also, the early involvement of investors might be biased to entrepreneurial teams with radical product/service innovations or deep-tech innovations in which the problem/need is latent, and the market is not foreseen. Since the entrepreneurs with radical ideas may not be easily coachable (Ciuchta et al. 2018), they can be dropped out of the system where the resources are scarce. The risk for accelerators might be selecting startups with low impact identical or resembling products/services in motivation to increase the number of startups funded by private investors. In the long run, this problem may

lead to a decrease in the efficiency of the acceleration system and may create a reverse impact on their reputation. It would be beneficial for accelerators to be self-reflective about their selection procedure and revise it to ensure variety in each cohort.

In sum, accelerators bring many advantages to stakeholders of the entrepreneurial ecosystem. Startups get early access to finance, while investors identify worthy startups. Accelerators become critical mediating agents in the ecosystem thanks to their efforts to reduce uncertainty and increase seed funding efficiency.

5.3. Limitations and Future Research

This explorative study has four main limitations that might become opportunities for further studies. First, this study exploits a limited number of in-depth interviews with accelerator managers in Turkey. Hence, our findings' generalizability may increase if similar studies covering accelerators in other countries are conducted to compare findings across different contexts. Second, the study focuses on the selection process in accelerators, while other activities such as networking and mechanisms to improve startups' market presence and survival might also influence the performance of startups. Third, our research does not consider the negative impact of the selection processes in accelerators. Bringing investor selection to the early stages may lead to the institutionalization of "a certain type of startup." As observed in our interviews, the selection mechanism emphasizes picking the winners. Such a selection mechanism might create biases against some startups that develop radical or disruptive technologies with high market uncertainties and longer time-to-market, eventually reducing heterogeneity in the entrepreneurship ecosystem. Finally, this study interviews accelerator managers, while future studies should interview other stakeholders involved in the selection process and entrepreneurs who are selected into accelerators. An additional research avenue might be conducting

quantitative studies to understand the impact of different selection processes on the final performances of the accelerators.

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