

## **Analysis of Accelerator Companies: An Exploratory Case Study of Their Programs, Processes, and Early Results**

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The current study utilizes an exploratory case study approach to examine leading accelerator companies in the United States. Specifically, five of the top seed capital companies or accelerators in America were selected and analyzed for purposes of this study. Due to the brief existence of accelerator companies, the limited number of graduates from accelerator programs, and limited quantitative data available, three extensive within-case and three between-case analyses were conducted. The accelerators were examined through case studies, interviews, website analysis, and observation. The results led to propositions that accelerator companies use unique selection criteria and have higher success rates for their graduates. Success rates were based on new ventures that continued to receive subsequent funding or continued to pursue business endeavors versus those who failed. Findings indicate that mentorship driven programs increase the overall success rates of start-ups by providing entrepreneurs with access to angel investors and venture capitalists which tend to increase success rates.

Small businesses play an important role in the U.S. economy in growth periods (State of Small Business, 2007) and recessions (State of Small Business, 2010). In the economic growth period leading up to 2007, small businesses generated approximately 50 percent of the GDP, 60 percent to 80 percent of new jobs and a large portion of American innovation (State of Small Business, 2007). Conversely, small businesses constituted 60 percent of the nation's net job losses from their inability to secure funding during the 2008 recession (State of Small Business, 2010). Currently, they provide 50.2 percent of all nonfarm payrolls (State of Small Business, 2010). In addition, the Small Business Administration anticipates small business will lead the U.S. economy out of the recession with jobs and innovation (State of Small Business, 2010). Therefore, the economy relies on a steady stream of nascent firms for today's and tomorrow's progress. In 2007, about 5 million businesses were in existence in the United States, of which nearly half a million were nascent firms or start-up companies (Strangler, 2010). Unfortunately, today's economy makes it extremely difficult for new ventures to obtain the necessary funding to develop their ideas, expand, and grow. There is a predominant gap in early funding, which forces start-ups to turn to accelerator companies to help fill the funding void.

The intent of this paper is to examine accelerator companies' roles in assisting nascent firms. Specifically, the paper will address the following questions: 1) Do accelerator companies play a vital role in the support, education, and aid the success of fast-growing start-ups or nascent firms? 2) What support do accelerator companies provide to participants? 3) What is the screening process that accelerators use? 4) According to accelerator companies, what are the challenges and obstacles new ventures face?

For the purpose of this article, the authors define start-up or nascent firms as organizations established in an uncertain and volatile environment with the intent to bring a new opportunity to the marketplace. The paper will follow the lead of other researchers that used the terms start-up and nascent firms interchangeably (Davidson & Honig, 2003; Delmar & Davidson, 1999; Reynolds, Carter, Garthner, & Greene, 2004; Sebastiao & Golicic, 2008).

## THEORETICAL AND CONCEPTUAL BASIS

### FUNDING

Prior to the 2008 economic crisis, Robb and Robinson (2008) found that most high growth firms (their term was gazelles) used banks for funding. However, their study relied on 2004 data which was prior to the Great Recession of 2008. After banks, most nascent firms relied on traditional methods of funding (Dorf & Byers, 2005; Falbe, Kumar & Welsh, 2011). Unfortunately, the recent recession limited both banks and traditional sources of funding (State of Small Business, 2010), thus forcing start-ups to look elsewhere for capital. The conceptual basis for this paper is that seed-capital or accelerator companies have emerged to fill the funding gap for entrepreneurs. The paper examines how accelerators aid start-ups, their requirements for selection, and accelerator participant success rates.

### THE RESOURCE BASED VIEW OF THE FIRM THEORY

The value of exploratory case studies is to gain insights that are not accessible by traditional quantitative methods, or as in this case, lack large sample sizes for statistical analysis. Case studies provide insight into enhancement of current theory (Nutall, Shankar, Beverland & Hooper, 2011; Tracy, 2010).

Penrose (1959), in her book *The Theory of the Growth of the Firm*, advocated the resource based view (RBV) which describes firms as bundles of resources, capabilities, and competencies. If these competencies are unique, they can become difficult to emulate which leads to distinctive competitive advantages (Penrose, 2003). The resource based view furthered the strategic planning literature by positing that firm resources should be considered along with the firm's focus on products or resources (Wernerfelt, 1984). Subsequently, other researchers added that resources with value, not easily imitated or not easily substituted, can further competitiveness (Barney, 1991; Eisenhardt & Martin, 2000; Ravenswood, 2011).

The resource based view led to two distinct approaches: the structural approach and the process approach. The former includes unique resources (Barney, 1991; Wernerfelt, 1984). The latter focuses on internal processes creating efficiencies including intangible human capital or organization capital (Fiol, 1991; Hart, 1995; Miller & Ross, 2003).

The resource based view was criticized by De Toni & Tonchia (2003) and Hart (1995) for its under-emphasis of the role that external environmental factors play specific to a firm and its industry. Despite this, we believe that the resource based view is an appropriate theory to apply in order to understand if and when accelerators are successful. If accelerators enhance start-up success because of the added resources they provide, then the results of the study would add support to the resource based view. These results would support the proposition that accelerator resources are relevant and in fact create additional value for new ventures. If the resources are found to be helpful, then the study could examine whether the structural or process components of the resource based view were utilized and whether De Toni and Tonchia's (2003) criticism applies to these results. In contrast, if accelerators do not enhance start-up success, then the resources provided by accelerators are not relevant to start-ups.

## LITERATURE REVIEW

### EARLY STAGE FUNDING

Historically, nascent firms relied on traditional sources of funding such as bootstrapping, family and friends, angel investors, and venture capitalists (Falbe et al., 2011). Entrepreneurs bootstrap by minimizing start-up costs, utilizing low cost or free techniques, minimizing personal expenses, turning

fixed costs into variable costs, selling personal assets, and leasing instead of purchasing, and selling personal items (Dorf & Byers, 2005; Falbe et al., 2011). Bootstrapping allows entrepreneurs to start a venture with smaller amounts of total capital and little debt, thus enabling founders to tweak their ideas through trial and error, while keeping costs down and building the venture slowly.

Following bootstrapping, the most utilized traditional source of funding is borrowing from friends and family (Ballou et al., 2008; Lesonsky, 2007). Unfortunately, this form of funding usually involves borrowing from individuals that the entrepreneur knows. This tactic can be beneficial or harmful to personal relationships (Dorf & Byers, 2005). In fact, current articles warn entrepreneurs against borrowing from friends and family because it can damage personal relationship even if the financial agreement is in writing (O'Donnel, 2010). Finally, the Great Recession of 2008 has decreased available funding from family and friends, thus forcing entrepreneurs to look elsewhere for money.

A third source of traditional funding for nascent firms comes from angel investors. Angels are wealthy, sophisticated investors who invest in companies in exchange for ownership or equity (Hatten, 2009; Osnabrugge & Robinson, 2000; Scarborough, Wilson, & Zimmer, 2009). Historically, angels invest in start-ups because they have experience or personal interest in the industry and they tend to invest in earlier rounds of funding compared to venture capitalists (Barringer & Ireland, 2010; Lesonsky, 2007; Osnabrugge & Robinson, 2000). On average, angels invest between \$10,000 and \$2 million in a single start-up company (Freear, Sohl & Wetzel, 1994). Recent data shows that angels invested approximately \$25.6 billion a year in over 51,000 small start-ups (Center for Venture Research, 2007). Traditionally, angel investors are more reluctant to invest in new technology firms. However, a new trend among angel investors is to band together becoming "super angel groups" that act like syndicates or venture capitalists (Baer, 2010; Mitchell, 2010). These super angels provide funding to startups in the post seed stage and invest in high-tech firms and in other emerging, exploding growth opportunities.

A final traditional source of funding for new technology firms is venture capital. In 2007, 1,300 venture capitalist (VC) firms invested about \$5 billion in approximately 1,000 firms (Strangler, 2010). Venture capitalists pool their experience from several partners, some of whom are full time investors who monitor and mentor the progress of the new venture (Dorf & Byers, 2005; Mariotti & Glackin, 2007). Historically, VC investments range from \$50,000 to \$5 million and focused on high-tech and exploding growth ideas (Center for Venture Research, 2007).

The 2008 recession affected both angels and VCs, resulting in their reluctance to invest in many nascent firms (Mitchell, 2010). Recent research confirms that angels and VC's invest predominantly in later-stage investment opportunities which leave critical gaps for seed capital funding for start-ups (Center for Venture Research, 2007; Mitchell, 2010). Venture capitalists, in particular, are more selective and invest in more established firms that have proven track records and market acceptance, such as sales (Baer, 2010).

## **ACCELERATORS**

### **THE BIRTH OF ACCELERATORS**

The reluctance of venture capitalists to invest after the Internet bust of 2000 left angel investors to carry the burden and risk. However angels are individuals who tend to invest much smaller dollar amounts compared to venture capital firms. As a result of the reduced investment and capital potential, many new ventures were left without sufficient money to launch their businesses (Mitchell, 2010). This gap stimulated a new breed of investment firms to emerge, known as accelerators.

In the late 1980's and 1990's incubators and accelerators were commonly known as research laboratories instead of seed funding firms for entrepreneurs (O'Connell, 2011). However, in early 2000 a new type of accelerator was established and led by experienced, successful entrepreneurs who mentored and guided nascent ventures with the intention of reducing high failure rates (O'Connell, 2011).

Accelerators are groups of experienced business people who provide services, office space, guidance, mentorship, networking, management services, knowledge, and expertise to nascent firms on an as-needed basis to help them succeed in the early stages of venture life (Fishback, Gulbranson, Litan, Mitchell, & Porzig, 2007). Accelerators assist with building the venture team, fine-tuning the idea, and mentoring the business from idea, prototype, through product development. Accelerators provide intensive, boot-camp training comparable to entrepreneurship classes at the collegiate level (Fishback et al., 2007). Boot camp and accelerator contestants are selected from a pool of qualified candidates led by start-up teams with stellar ideas. Like venture capitalists, accelerators fund along themes and in specific industries with which they are familiar or knowledgeable. Some of the most well-known and successful accelerators nationally and internationally are the Foundry, Inc., Techstars, Y-Combinator, YEurope, and the Accelerator Corporation (Fishback et al., 2007).

More startups are applying to accelerator programs to help them launch and grow their ventures (Mitchell, 2010). Paradoxically, accelerators view today's uncertain economic environment as an excellent time to invest in innovation, especially technology, because costs are decreasing and open development platforms are more robust (Launch Box Digital, 2010).

The founders of TechStars stated that they started their company to help provide the assistance that they could not find when they were starting ventures as entrepreneurs (TechStars, 2010). They explained that their motivation was to "give back" to the entrepreneurial community. Interestingly, TechStars viewed accelerators as much more than incubators (Cohen, 2010). There is no evidence in the literature that accelerators examined incubators for guidance. However, incubators are the historical antecedents of nascent firm assistance.

Incubators were started in the U.S. at the Batavia Industrial Center in Batavia N.Y. in 1959 (National Business Incubation Association, 2011). Currently, the National Business Incubation Association (NBIA) has 1,900 members in 60 countries that include for profit, nonprofit, economic development, and government incubators (NBIA, 2011). They provide office space, financial, technical, managerial support, and access to investors (Katz & Green, 2009). Qian, Haynes, and Riggle (2011) report that in the year 2005, 2,007 incubators assisted 27,000 start-up companies, created more than 100,000 jobs, and generated revenue of \$17 billion. The University of Michigan (1997) claims an 87 percent success rate after five years. In contrast, the Small Business Administration reports a 50 percent success rate for small businesses after five years of operations (SBA, 2007).

## **HOW ACCELERATORS WORK**

The five prominent accelerators selected for this study include (in alphabetical order): Capital Factory, Launch Box Digital, Start@Spark, Tech Stars, and Y Combinator (Davidson, 2011; MacManus, 2010). They all provide a combination of assistance: an intense in-house program of mentorship, mentoring, office space, access to legal advice, internet access, access to a network of entrepreneurs who help entrepreneurs tweak and improve their business concepts, and opportunities to pitch their ideas to VCs and angels. Specifically, the intensive "boot camp" is intended to provide office space, access to successful entrepreneurs, mentors, and other technology experts, a place to socialize with other new venture founders, and a safe environment to share ideas or methods. The boot camps vary from 10 to 12 weeks in length and provide the time and support for the start-up founders to build or tweak their

prototype (Arrington, 2007; Avery, 2007; TechStars, 2010). The selected founders/participants take time away from jobs and families to interact with others and receive encouragement, additional knowledge, and greatly needed assistance.

All the accelerators provide encouragement, assistance, and help with technical issues. In addition, they all provide seed money ranging from \$18,000 (TechStars, 2010) to \$20,000 (Capital Factory, 2010). However, Start@Spark provides funding above \$20,000, with a combination of conventional loans up to \$250,000. This loan converts to equity during a subsequent round of funding at a 20 percent discount. Start@Spark also retains the right to provide 50 percent of the next round of financing if needed (Start@Spark, 2010).

## **EQUITY VERSUS CONTROL**

In exchange for funding, accelerator companies take a 5 percent to 6 percent equity stake of their participating boot-camp venture. Most of the accelerator companies state that they have no interest in controlling the nascent firm. Virtually all of the accelerators require a small portion of equity with an increased equity requirement for additional angel or VC rounds of funding.

## **VALUE ADDED-WHAT ACCELERATORS PROVIDE: EARLY STAGE FUNDING AND ASSISTANCE**

Accelerators provide value to their participants with early stage funding and, equally important, intensive mentorship. While the average start-up needs early stage funding, it is not a massive amount of capital (Bluestein & Barrett, 2010). The financial assistance mentioned in the previous section provides enough support for the start-up to survive while attending a Techstars boot camp or similar type of accelerator program. TechStars (2010) limits the amount of funding they provide to \$6,000 per company founder, with a maximum of \$18,000 funded per venture.

In addition to the above, accelerators provide value with their assistance to startups. Once a startup is selected for seed capital, the founders are immersed in a boot-camp style environment with intensive training/workshops, networking, education and high-level mentorship. This environment is established to provide nascent entrepreneurs with an opportunity to learn from key experts or mentors in their field. Mentors work with startup founders throughout the duration of the program, dispense advice, and provide valuable feedback based on personal experience as business owners and entrepreneurs. The accelerator companies select mentors based on their level of expertise, experience, profitability, and desire to help new entrepreneurs succeed.

This type of assistance is invaluable for new entrepreneurs. According to the founders of accelerators, the key ingredient for a successful start-up is early, high quality mentorship (Bluestein & Barrett, 2010; TechStars, 2010). Similarly, SBDCs report that for their small business clients, success rates are highest where mentorship was involved (Katz & Green, 2009).

It is important to note that most accelerator companies studied operate in a similar manner. All provide boot camps with extensive mentoring. As a result of their hands-on approach, accelerator companies are extremely selective in choosing their boot camp participants. Each company's idea merits careful consideration, along with whether mentorship is available to help the firm itself. While capital investment is kept to a minimum, the overarching goal of accelerators is to foster the entrepreneurial ecosystem, aid in opportunity generation, and help with sustainment (Bluestein & Barrett, 2010).

## METHODOLOGY

### EXPLORATORY CASE STUDY METHODOLOGY

The exploratory case study methodology utilizes multiple sources of evidence to examine phenomenon within their actual contexts (Yin, 1992). One of the principles of case study methodology is that an examination of the context is equally as important as an examination of the phenomena itself. In addition, the approach is not limited to qualitative or quantitative data, but can lead to propositions and theory building where none exist (Yin, 1992). The strengths of the approach are its ability to examine the following: the context in addition to the phenomena, a series of activities over time, and several different important participants. The approach is also capable of examining complex outcomes that are beyond the capabilities of single factor analyses (Yin, 1981). Case study is widely accepted and has been utilized in family business studies for many years (Barach & Gantisky, 1995; Dunn, 1999; Murray, 2003; Santiago, 2000). Specifically, this approach has been used to examine the succession transition process in family businesses (Murray, 2003), succession in Philippine family businesses (Santiago, 2000), and family business governance (Lambrecht & Lievens, 2008).

### RESEARCH DESIGN

The research design was an exploratory case study of five accelerator companies. The case study approach was selected because it allowed the researchers to closely examine a current phenomenon within a real-life setting (Yin, 2003). For the purpose of the study, the research included multiple qualitative methods as recommended by Tracy (2010). We observed boot camp participants, interviewed accelerator principals, studied the accelerator's websites, and analyzed relevant blogs and other available materials.

### DATA COLLECTION

The five most prominent accelerators were chosen based on their longevity, prominence in the investing world, substantial media coverage, and their service as role models for other accelerators. The study employed a number of exploratory case study methods. The accelerator founders were contacted via telephone or e-mail and asked to fill out a basic open-ended questionnaire. This was followed up with phone calls, website review, and numerous emails. The authors had no prior connection or involvement with any of the accelerator firms who participated in the research process. The second author has experience as an angel investor, but is not directly involved with any of the accelerator businesses studied.

Specifically, the authors contacted five prospective accelerators that met the requirements of: 1) having a boot camp, 2) having an application process, 3) being widely publicized in the media, 4) currently involved in seed-capital and taking applications, 5) willing to participate and share information, and 6) are well established leaders in the accelerator 'world.' Of the five firms contacted, three actively participated and willingly took part in the study. Two accelerators deferred the authors to open-source documents from which to gather information. The authors collected data and conducted an in-depth analysis of each accelerator company, one at a time. The primary data collection methods employed were as follows: 1) qualitative, open-ended questions concerning the role and support the accelerator company provides in helping entrepreneurs grow their business and succeed, 2) supplemental observation of accelerators, participants, and the interaction among them, and 3) review of company information such as websites, blogs, personal interviews, open-source materials, and other relevant documents.

The authors purposely selected well-known accelerator companies. The three accelerator companies that fully and willingly participated in the case study were TechStars, Capital Factory, and Launch Box Digital. Additional data was collected on the two non-respondent accelerator companies Y-Combinator and Start-Spark through published open-source information. The results of this study include an analysis of the types of assistance, mentorship obligation, amount of seed money, percentage of equity, the application process, and percentage of participants who received subsequent funding. According to past case study research, three to five cases of in-depth analysis fall within acceptable range for the case study approach (Creswell, 1998; Eisenhart, 1989).

## **INTERVIEW DATA**

All accelerators were asked open-ended question about their accelerator selection process, purpose of their company, key benefits of the business, success and failure rates, equity requirements, funding provided to boot-camp participants, and challenges for the future. This research design allowed accelerators to elaborate when needed or select from pre-existing sets of multiple choice questions when applicable. Participants were encouraged to expand on their answers, thoughts, and opinions when necessary.

## **AUTHORS' ROLES**

Various scholars of qualitative research (Nutall et al., 2011; Tracy, 2010) require transparency and a description of an authors' involvement in order for readers to understand their roles and assess whether the roles add or detract from the richness of data collection and assessment (Tracy, 2010). For the purpose of this study, both authors are small business owners, consultants, and faculty members. In addition, one of the authors has a deep understanding of accelerator companies because her angel investment group actively funds numerous start-up companies, many of which came from accelerator programs. This unique role provided access to principals, access to blogs, discussions with principals, interaction with participants, observation of participant pitches to angels, and angel investment.

## **RESULTS**

The following results present both with-in case and between-case results (Yin, 1981, 1992). First, each case had certain components common to the other accelerators such as: a boot camp, extensive mentorship, and access to further funding. Fortunately, these similarities also allow for between-case comparisons.

### **PERCENTAGE OF EQUITY REQUIRED AND AMOUNTS OF SEED MONEY**

Table 1 supports the literature review which discovered that the founders of accelerators desire to fill the early stage funding gap in exchange for equity and to provide services to help start-ups succeed. However, their motivations are totally unique to them. The majority of accelerator companies require equity in exchange for funding. The most common equity percentage was 5 percent or 6 percent, with the average seed capital amount ranging from \$17,000 to \$20,000. Virtually all accelerator companies explained that they provide office space, mentorship, and access to venture capitalists or angel investors who aid in subsequent stages of funding. For greater details, please see Table 1 below.

Table 1. *Accelerator Company Information*

Accelerator	Equity Percentage	Amount of Seed Money	Other Funding	Access to VCs & Angels
Capital Factory	5%	\$20,000 & free stuff		Yes
LaunchBox Digital	Up to 65%	\$20,000		Yes
Start@Spark		Loan up to \$250,000	Retain right to fund next round	Yes
TechStars	5-6%	\$6,000 (per founder) max \$18,000	Office space	Yes
Y Combinators	2-10% usually 6-7%	\$17,000 (2 founder) \$20,000 (3 founder)	Office space	Yes

### REASONS THE ACCELERATOR COMPANY WAS CREATED

Table 2 supports the literature review which found that the primary motivation for the creation of an accelerator company was to help entrepreneurs succeed, grow, and provide capital to launch. Virtually all the accelerator founders explained that they created their accelerator company to help support entrepreneurs and to help fill a gap or lack of capital during the early years of operating a new tech venture.

Table 2. *Reasoning behind Accelerator Companies*

Accelerator	Reason Accelerator was Founded
LaunchBox Digital	Support entrepreneurship and fill the early-stage capital gap
TechStars	Ecosystem development
Capital Factory	Personal initiative - both rewarding and fun

### EXPLANATION OF RESULTS

The motivations of the founders of accelerators are completely different from founders of other early stage assistance programs. For example, incubators are typically started by local, regional, or state government entities including economic development offices or universities to promote entrepreneurship (Katz & Green, 2009; Qian et al., 2011; University of Michigan, 1997). In most cases the ultimate goal of an incubator is to create jobs and economic activity inside a specific geographical area (Katz & Green, 2009; Qian, et al., 2011; University of Michigan, 1997).

In contrast, accelerators are motivated to provide assistance to start-ups because they believe that the business concept is viable, the accelerator is personally interested in the idea, or likes the entrepreneur team. For example, Techstars stated that they fund ideas that they have an interest in, have excellent potential to scale, or have promising market niches such as medical devices or mobile applications.

The accelerator programs offer an opportunity for accelerator founders and their angel partners to obtain equity at the seed and early stage funding phases for promising business concepts and promising new ventures. As Tables 1 and 2 suggest, most accelerators take equity positions in only the best prospects. While somewhat altruistic, their motivations include some return on their investments. The founders of incubators usually do not take equity positions with their clients. While an exception is the current trend for private and public cooperation, the primary role of the public entity is some form of development in their area.



**PERCENTAGE OF GRADUATES, SUCCESS, FAILURES, ACQUISITIONS**

Most accelerator founders explained that they anticipate nearly 20 percent of participating ventures to fail at some point, while nearly half of accelerator graduates will become self-sustaining by year five (Table 3). In addition, three-quarters of accelerator founders anticipate that more than three-quarters of the boot-camp participants who graduate from their accelerator programs will receive subsequent funding at some point, and several will be acquired (see Table 3). In fact, several of their graduates have already been acquired. Techstars boasts that five of their graduating businesses have been acquired by top-tier and well established companies in the space. As of May 2011, three (3) of the 39 Boulder TechStars participants failed (Davidson, 2011). In addition, according to TechStars, nine of the Boulder 2009 boot camp graduates raised \$12,896,000 and eleven from the Boulder 2011 class raised \$8,903,042 in subsequent funding (Davidson, 2011).

**SELECTION PROCESS: TYPES OF COMPANIES AND IDEAS FUNDED**

Most of the accelerator companies in the study emphasize that they invest predominantly in technology based start-ups, especially mobile, I-pod, web applications, cloud computing, social networking software, and other evolving technology. Launch Box Digital (2010) funds new venture technology focused on gaming, social media, social communications, digital media, or software-as-a-service. Capital Factory (2010) seeks out nascent ventures that have new technology but only those that have established expertise and can to which they can add “value” to a concept. Virtually all the accelerators companies studied state that they prefer technology based business concepts; however they will occasionally accept non-technology ideas. TechStars (2010) firmly states that they will not accept the following: local service companies, restaurants, consulting agencies, medical device companies, and biotechnology companies. Most accelerators want concepts that have large upside potential that can be scaled to meet national or global demand.

Table 3. *Graduates, Success, Failures, Acquisitions*

Accelerator	Participants Per Year	Number of Applicants	Graduate From Program	Receive Further Funding	Failure Rate	Number Acquired	% Self Sustaining <sup>2</sup>	Comment
Launch Box 2008	10	250	17	70%	10-15%	3	41-60%	3 series A 3 angel funding \$6 mill add'l
TechStar	10 per city (4 cities)	600+	70	75%	10%	6	41-60%	70% finish and receive other funding
Capital Factory	5	300	10	60%	10-20%	0	41-60%	
Y-Combinator <sup>1</sup>	NA	NA	Approx. 145 in program	24 IPO's	15-20%	14	57%	

<sup>1</sup>Y-Combinator data came from (MacManus, 2010) <sup>2</sup>Over the next five years

**CRITERIA FOR SELECTING CANDIDATES INTO ACCELERATOR COMPANIES**

According to accelerator founders, the single most important criteria used for selecting candidates for their boot-camp programs is the accelerator company’s ability to make a difference to the start-up (see Table 4). In addition, half of the participants in the study reported that start-ups must have strong lead founders, a willingness to adapt their business concepts if necessary, and a business concept that solves a real-world problem in a creative way. A working prototype and stellar technical expertise were viewed as important, but not vital when selecting candidates for the boot-camps.

**SCREENING PROCESS**

According to the results, all accelerator companies interview and review applications prior to selecting their candidates (see Table 5). In addition, half of the accelerator companies look at the business concept itself and the team’s ability to be on-site for three months.

Table 4. *Criteria for Selection*

Accelerator	Most Important Criteria for Selecting Candidates
LaunchBox Digital Capital Factory	Strong Lead Founder
TechStars	Tech Expertise
LaunchBox Digital Capital Factory TechStars	Accelerator’s Ability to Add Value to Incoming Start-Up
TechStars	Working Prototype
Capital Factory	Incoming Team’s Willingness to Listen & Adapt
LaunchBox Digital TechStars	Idea Solves a Real Problem

Table 5. *Accelerator Screening Process*

Accelerator	Screening Process
TechStars Capital Factory LaunchBox Digital	Interview Start-up Founders
TechStars Capital Factory LaunchBox Digital	Review Application
Capital Factory	Video/Demo
LaunchBox Digital	Ability to Be On-site for 3 Months

Tables 4 and 5 illustrate that each accelerator company has its own unique screening process and selection criteria. Accelerators emphasize that they will only accept concepts for which they can add value. As a consequence, they may reject good ideas because they do not believe that they can assist the venture. Lastly, accelerators look to invest along certain themes or within certain key industries. If an idea does not fit into an accelerator’s theme, the venture will not be funded even though it has potential. As a general rule, accelerators will not invest in restaurants, basic service businesses, highly niched or highly localized ventures. Instead, they invest in radically changing, exploding growth, internationally or nationally scalable venture ideas.

**CHALLENGES/OBSTACLES THAT START-UPS FACE**

Nearly three-quarters of the accelerator companies believe that next to funding, the greatest obstacles that new ventures face are not understanding their target market, not having a strong marketing expert working for the business, difficulty reaching their customers, and lacking overall experience in their proposed business (see Table 6). The accelerator owners each explained that marketing expertise is crucial for the success of a new venture and that an inexperienced entrepreneurial team could break the business. Another commonly viewed obstacle was that the founding entrepreneurial teams either did not understand the target market or were having trouble reaching their target consumers.

Table 6. *Greatest Challenges/Obstacles that Participating Entrepreneurs Face*

Accelerator	Obstacles
LaunchBox Digital Capital Factory	Misunderstanding target market
LaunchBox Digital Capital Factory	Lack of marketing expertise
TechStars Capital Factory	Inexperience of entrepreneur/ team
LaunchBox Digital	Team unwilling to adapt/mold idea to market needs

**CHALLENGES FOR THE ACCELERATOR COMPANY**

Two-thirds of the accelerator companies surveyed indicated that the greatest challenge accelerator companies’ face is finding great companies with great ideas (see Table 7). One-third of accelerator participants indicated that funding the next level or early stage after seed level is challenging.

Table 7. *Future Accelerator Company Challenges*

Accelerator	Obstacles
LaunchBox Digital	Gaps in the funding supply chain (we do a great job but there is nobody there to fund to the next level)
TechStars	Finding great companies to fund
Capital Factory	Finding great companies with great ideas to fund

## BENEFIT OF ACCELERATORS

The most commonly cited benefit of accelerators is networking. Virtually all the accelerators believe their greatest value is the opportunity for mentorship and networking opportunities provided to the nascent firms (see Table 8). Networking provides accelerator participants with the ability to receive subsequent rounds of funding, and increases their likelihood to receive further help from mentors after the boot camp program concludes.

Table 8. *Greatest Benefit that Accelerator Company Provides*

Accelerator	Benefits
LaunchBox Digital	Mentorship/Network Opportunities
TechStars	Networking Opportunities
Capital Factory	Mentorship

## DISCUSSION

### GENERAL COMMENTS

The published results from accelerator programs looks very promising compared to the usual statistics on successes and failures for small business. The SBA reports that 50 percent of small businesses fail in the first four years (SBA, 2007). Launch Box, TechStars and Capital Factory data shows that 60 percent to 70 percent of all accelerator participants received additional funding and several were acquired (see Table 3).

Currently, almost 75 percent of TechStars participants received follow up funding or are profitable immediately after graduation from the TechStars accelerator program (TechStars, 2010) (Table 3). Four out of ten TechStars team companies were acquired from the TechStars' Class of 2007 (Kincaid, 2008, TechStars, 2010). As noted above, the TechStars Boulder classes of 2009 and 2010 raised \$12,896,000 and \$8,903,042 respectively (Davidson, 2011).

Based on a recent study, approximately 60 percent of companies from every TechStars Program receive subsequent funding (MacManus, 2010). In addition, almost 70 percent of TechStars graduates raised or bootstrapped their companies to positive cash flow (MacManus, 2010). Finally, approximately 75 percent of TechStars startups are operating and active; four were bought for over \$2 million, one was bought below \$1 million, and only 10 percent failed (MacManus, 2010). Similar studies were conducted on competing accelerator programs and results were similar. It is important to note that although the results are preliminary and more studies should be conducted, these results are encouraging with high potential for helping entrepreneurs who apply to accelerator programs.

Recent research on accelerators used a combination of graduates, subsequent funding, and quality of mentorship to rank the top 15 accelerators in the U.S. Their ranking placed TechStars Boulder first, TechStars Boston fifth, TechStars Seattle seventh, Launch Box fourth, Y Combinator second, and Capital Factory eleventh out of the top 15 accelerators in the U.S. (Gruber, 2011).

### APPLICATION OF RESOURCE BASED VIEW TO RESULTS

Research into accelerators provides a unique opportunity to apply and perhaps enhance the resource based view. This theory posits that firms are a bundle of resources, talents, and capabilities that create

unique competencies or competitive advantages (Penrose, 1959; Wernerfelt, 1984; Penrose, 2003; Ravenswood, 2011). The structural part of the theory focuses on unique resources (Wernerfelt, 1984; Barney, 1991) while the process part of the theory emphasizes all the internal processes that create efficiencies (Fiol, 1991; Hart, 1995; Miller & Ross, 2003). Accelerators provide a “structure” of assistance starting with boot camps then mentorship and angel input followed by subsequent funding.

This is also a RBV process approach because accelerators follow a process of assistance over time. The results may also meet De Toni and Tochian’s (2003) criticism of RBV that it does not examine the role of external environmental factors. This analysis of external factors is provided by mentors guiding start-ups into relevant market niches.

Accelerators match the nascent founder with mentors contributing real world experience in that market, idea, technology, or industry. The mentors provide additional human capital resources in addition to another form of external market validation – the mentor would discontinue if the idea was not feasible. Therefore mentors provide external validation that the idea should be further developed. If confirmed with longitudinal research, such results could be used to enhance RBV. The nascent firm founder brings resources to which the mentors and angel investors add additional resources. Such findings would support other research that assistance to nascent firms from SBDCs or incubators (Todorovic & Suntornpithug, 2008; Katz & Green, 2009) enhances their success rates.

### **LIMITATION OF THE STUDY**

Although the comparisons with Small Business Administration data look promising at this time, these comparisons come with several caveats. First, this data is collected over longitudinal periods of five and ten years. Data on accelerator graduates is only two years old. The term success can also be somewhat misleading as the data does not accurately track small companies that are purchased or merged. Some of the purchased accelerator graduates are “successes” because the founders’ intent was to grow valuable enough to be purchased by a larger company. Not enough data exists on the graduates that are not purchased but still exist; it is unknown how many companies will survive to the five and ten year marks. A final caveat is that because only a few major accelerators exist, statistical analyses are unavailable or limited, thus leaving only the descriptive analyses provided in this paper.

Finally, very few nascent firms are accepted into accelerator programs compared to the large number of new start-ups created each year. Therefore, other start-ups such as restaurants, service oriented companies, local businesses, niche businesses and retail stores are not assisted. However, these results may encourage establishment of accelerators by different groups to promote economic activity in their location.

## **CONCLUSION AND FUTURE RESEARCH**

### **PROPOSITIONS**

When possible, exploratory case research should lead to propositions for further scholarly discussions or generate propositions (Eisehnardt, 1989). Based on these results, the authors believe that subsequent research could determine the validity of the following propositions.

**Proposition 1.** The overall motivations of accelerator companies are different from the founders of other early stage assistance programs. Accelerator companies were established to help support, educate, and fill the funding gap for entrepreneurs in exchange for equity. This proposition is the direct result of comments made by one of the TechStars founders, David Cohen (2010). Cohen (2010) stated that his primary motivation was to provide a source of funding for ventures not available to him when

he started earlier ventures. In addition, accelerators receive a percentage of the equity and have access to cutting edge ventures that interest them. This can be verified in the future with follow up surveys of accelerator founders.

**Proposition 2.** Accelerator graduates have higher success rates compared to non-accelerator graduates as measured by longevity in business and receipt of further funding. The data in Table 3 is promising because it shows that between 60 percent and 70 percent of boot camp graduates received further funding and more are self-sustaining. If these results are substantiated when the data becomes available, such conclusions would validate accelerators' worth.

**Proposition 3.** Accelerator companies utilize completely different criteria than other early stage assistance programs in selecting ventures and screening ideas. Tables 4 and 5 show that accelerators use different criteria which should be verified in the future when more data is available.

**Proposition 4.** Both accelerator founders and accelerator graduates face unique obstacles and challenges. Accelerators view insufficient experience and misunderstanding the target market as major obstacles for nascent firms. This result could be compared with the experience of other start up assistance programs (such as incubators –University of Michigan data and others). At this time, accelerators perceive their main challenges to be an insufficient supply of ventures in their areas of interest to invest in. However, this may change with the current or future economic changes at some point.

**Proposition 5.** Accelerator programs believe the added-value obtained from their programs includes networking and mentorship. The above discussions revealed that in addition to seed money, a significant value added from accelerators is the intensive mentoring and social networking available through the boot camps and subsequent funding. Each boot camp participant receives extensive help during the boot camp and beyond.

#### OTHER FUTURE RESEARCH

One area that has not been well researched is the potential benefits to the mentors and/or angels in these relationships. By participating in these accelerator companies, mentors can watch, help, assess, and invest in new technologies as they occur in real time. Another exciting area of research would be the network process and the “how” of the phenomena (Nuttall et al., 2011; Tracy 2010).

As experience with accelerators continues, the authors believe other economic development organizations will establish accelerators, especially in developing countries. If this initial success continues, it is likely that new accelerators will emerge in other countries. Other successful founders may desire to give back to their communities and provide services that were not available when they were starting their own ventures (TechStars, 2010).

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