Kindai Management Review Vol. 6, 2018 (ISSN: 2186-6961)

The Early Investment Ecosystem for Start-ups in Canada, a Preliminary Study

Kenneth A. Grant

Ted Rogers School of Management, Ryerson University, Canada

Divya Padmanaban

National Angel Capital Organisation, Canada

Amr El-Kebbi

Ted Rogers School of Management, Ryerson University, Canada

Abstract

The concept of the entrepreneurial ecosystem is relatively new and has seen quite limited research activity, particularly on the early stages of a startup's life. This empirical study examines the early investment ecosystem in Canada through the perspectives of 113 of its key players, drawing on input from 10 incubators, 17 accelerators, 24 angel investor groups, 8 venture capitalists and 54 entrepreneurs). In addition, the characteristics of some 170 Angel investment deals are examined as are the investment/approval funnels of both angel groups and VCs. The relationships between the players in the ecosystem are examined, with commonalities and significant differences identified. Using Storey's (1998) framework for entrepreneurial evaluation the study addresses his three monitoring stages—participation levels, the opinions of participants and the assessment of the usefulness of assistance provided to entrepreneurs by the other players in the ecosystem with a particular focus on potential high-growth start-ups. The findings should be of use to entrepreneurs, policymakers and other researchers interested in the interaction between ecosystem players and in gaining an understanding of a national investment ecosystem.

Keywords: *Entrepreneurial Ecosystem, Incubators, Accelerators, Angel Investors, VCs, Start-ups*

INTRODUCTION

Since Schumpeter's early view of economies being impacted by entrepreneur-driven disruption (Schumpeter, 1934) academics have used varied perspectives in examining the phenomenon, with some taking the economic/market perspective, others focusing on the entrepreneur as an individual and, perhaps more recently, those taking a process view (Landstrom, 2005). Over the last decade, increasing interest is being given to the concept of an *entrepreneurial ecosystem*. As Ketikidis et al point out, entrepreneurship "can only thrive if equipped with a well-developed ecosystem, with coordination between all relevant stakeholders" (Ketikidis et al., 2017) for entrepreneurial activity, however in direct comparison with the united states, its closest neighbour and most significant trading partner, it is seen as lacking in many areas.

In comparison to most nations, Canada is gen-

erally seen as a supportive country for entrepreneurial activity (Global Entrepreneurship Monitor, 2018). However, in direct comparison with the United States, its closest neighbour and most significant trading partner, it is seen as lacking in many areas.

BACKGROUND DISCUSSION

As Stam (2015) notes, this concept of an entrepreneurial ecosystem is relatively recent and there is no widely shared definition. He further argues that, "the entrepreneurial ecosystem approach speaks directly to practitioners, but its causal depth and evidence base is rather limited." Isenberg is frequently cited as an early proponent, suggesting, "In an era when microfinance for small-scale entrepreneurs has become mainstream, the re-allocation of resources to support high-potential entrepreneurs may seem elitist and inequitable. But especially if resources are limited, programs should try to focus first on ambitious, growth- oriented entrepreneurs who address large potential markets" (Isenberg, 2010). Additionally, attention in both research and policy development is focused on the VC element, which funds less than 1% of all startups.

The Concept

Mason and Brown (2014) define the entrepreneurial ecosystem as "interconnected entrepreneurial actors (both potential and existing), entrepreneurial organisations (e.g. firms, venture, business angels, banks), institutions (e.g. universities, public sector agencies, financial bodies) and entrepreneurial processes (e.g. the business birthrate, numbers of high-growth firms, levels of 'blockbuster entrepreneurship ', number of serial entrepreneurs, degree of sell-out mentality within firms and levels of entrepreneurial ambition) which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment" and that, "The availability of finance is a further critical feature of entrepreneurial ecosystems. Particularly important is a critical mass of seed and start-up investors to provide finance and hands on support."

Mack and Meyer (2016) suggest that, "Entrepreneurial ecosystems (EE) consist of interacting components, which foster new firm formation and associated regional entrepreneurial activities. However they express concerns that much of the work on these entrepreneurial ecosystems focuses on documenting the presence of system components, and that there has ben very limited examination of the interdependencies between these entrepreneurial ecosystems' components and their evolutionary dynamics.

Stangler and Bell-Masterson (2015) discuss methods of measuring the entrepreneurial ecosystem, identifying a wide range of approaches to such measurement. They propose a high level set of measures addressing density, fluidity, connectivity and diversity and suggest that this is best done, not as a snapshot but over time. Hechavarria and Ingram (2014) also suggest that measures of entrepreneurial activity are very important in evaluating an entrepreneurial ecosystem.

Table 1 summarises these different authors views of the key characteristics/components of the Etrepreneurial Ecosystem.

The Investment Ecosystem

While, as discussed above, the entrepreneurial ecosystem includes several elements, funding chal-

Table 1: Suggested Characteristics/Components of the Entrepreneurial Ecosystem

Author	Characteristics/Components
Isenberg (2011)	Policy, Finance, Culture, Support, Human capital and Markets
Spigel (2017)	Cultural (supportive culture, histories of entrepreneurship), Social (worker talent, investment capital, networks, mentors), Material (policy and governance, universities, support services, physical infrastructure, open markets)
Stam (2015)	Networks, Leadership, Finance, Talent, Knowledge, Support services and intermediaries, Formal institutions, Culture, Physical infrastructure, Demand
World Economic Forum (2013)	Accessible markets, Human capital/workforce , Funding & finance, Support systems/mentors, Government & regulatory framework Education & training Major universities as catalysts Cultural support

lenges are seen as a major impediment for entrepreneurs. Obviously, early stage financing can come from a variety of sources, typically: The founders; family and friends; government loans and grants; financial institutions, crowdfunding platforms; incubators and accelerators, angel investors; and venture capitalists

Certainly, entrepreneurs and their potential investors have different needs, but the needs of these different stakeholders must be satisfied in a win-win relationship. This relationship is often influenced by other players, including government, universities and incubators/accelerators, who are sometimes investors themselves but, more often, are involved in other roles. For example, Lerner (2010) recognises the importance of the government supporting the complete entrepreneurial ecosystem beyond simply providing investment capital, suggesting that, "in many cases government officials hand out money without thinking about barriers other than money that entrepreneurs face".

In a recent paper, Spigel (2017), while recognising that, "Entrepreneurial ecosystems have become a popular tool in the study of the geography of high-growth entrepreneurship" suggests that "research on ecosystems is underdeveloped and under- theorized." Spigel further identifies 1) A need for "theoretical frameworks to understand the processes through which ecosystems emerge, change, and influence the activities of entrepreneurial actors," suggesting that 2) "identifying the attributes of entrepreneurial ecosystems and their relationships is the first part of a much broader research agenda" and that 3) "researchers must develop metrics that can be used to identify the presence of the ecosystem attributes."

This paper is a preliminary effort to address the second and third of Spigel's challenges in a Canadian context, with a particular focus on potentially high-growth start-ups.

THE CANADIAN ENTREPRENEURIAL ECOSYSTEM

Similar to other developed economies, the Canadian entrepreneurial ecosystem has several participants such as start-ups, industry clusters, Canadian federal and regional governments, investors and supporting environments, and educational institutions. Industry clusters provide the ecosystem with suppliers and customers for the new ventures. Government, with its various levels (federal, provincial, and municipal), influences the ecosystem through its ability to regulate and fund (Pitelis, 2012). Investors financing the new start-ups include banks, angel investors, venture capitalists, crowdfunding, and loving individuals, i.e. friends and family (Harris et al., 2014). Supporting environments can include: incubators, accelerators, and other entrepreneurship programs that support entrepreneurs create and develop their start-ups throughout the entrepreneurial process to become a sustainable business (Tang, 2008) as well as educational institutions, such as universities, which have various roles in supporting the creation of new start-ups. Canada has a well developed system, with participation rates superior to most jeep thing 30 countries, but is often seen as significantly lagging with respect to US rates of participation, investment and returns.

Key Players in the Investment Ecosystem

Incubators & Accelerators

Incubators and accelerators act as temporary protective environments for new start-ups, helping them overcome early challenges throughout the opportunity development process (Aernoudt, 2004, Patton and Marlow, 2011, Peters et al., 2004). While incubators and accelerators can be defined, based on their functionality, this paper allows them to self-classify. The main objective of incubators/accelerators is to prepare new start-ups to successfully stand alone as quickly as possible by offering three categories of services: infrastructure, mentoring, and networking (Peters et al., 2004). Their contributions to the entrepreneurial ecosystem are supporting business start-ups, creating job opportunities, and producing innovative technology (Tamasy, 2007). The Canadian Centre for Digital Entrepreneurship and Economic Performance has identified some 140 incubators and accelerators in Canada (The Centre for Digital Entrepreneurship and Economic Performance, 2018).

Angel Investors

The largest source of equity capital for start-ups is

the informal market (Berger and Udell, 1998), which can be separated into friends and family members of entrepreneurs, typically one-off investors, and business angels.

Angel investors are typically high net-worth individuals who invest their own money in small firms (Wong et al., 2009). Angel investors are typically cashed out entrepreneurs, or wealthy businesspeople, and their motivations for investment vary among several considerations, such as generating profit, regional development, self-actualization, and affection toward the entrepreneurial process. However, since angels invest their own money, they tend to invest in start-ups that they consider to have high growth potential and that belong to industries relevant to the investors' previous experiences. In order to minimize their risks, angel investors tend to coordinate among each other when approaching new investments and form angel groups (Wong et al., 2009). Estimating the total level of angel investment is very difficult, with Riding (2008) claiming that "Collectively, it is understood that business angels invest more funds in more firms than does the formal venture capital industry, particularly with respect to early-stage enterprises. However, it is difficult to obtain precise estimates of business angel activity," citing the challenges of identifying individual angels and tracking their activities. NACO is the only organization that tracks angel investment in Canada, with its data being restricted to that provided by its member angel groups. It found that its members invested $134 million in 2015 (Silcoff, 2016), however some observers suggest the total annual Angel investment might exceed $1 billion per year. By comparison, the UNH Centre for Venture Research suggests that US angel investment in 2015 was, $24.5 billion indicating a much higher level of investment when compared to national GDP (UNH Center for Venture Research, 2016).

Venture Capitalists (VCs)

Venture Capitalists VCs are quite distinct from Angel Investors. While both provide private equity investment for (relatively) early stage start-ups, likely to have high growth potential, VCs are investment firms who run funds for others to invest in, in turn using these funds to take equity positions in high potential start-ups. Writng in Forbes Magazine, John Greathouse defined a VC as, "a professional investor who deploys third-party funds into relatively early-stage companies" (Greathouse, 2012). As Amita et al (1998) further suggest, "Venture capitalists operate in environments where their relative efficiency in selecting and monitoring investments gives them a comparative advantage over other investors" focussing on industries with high potential returns and start-ups that will likely have low costs related to selection and monitoring. Estimates for the level of VC investment in Canada vary, ranging from $1.7 billion to about $3 billion(BDC Capital, 2017, PwC Canada, 2016). This compares to estimates of about 60 billion for the United States (PwC, 2018). Thus, as with angel investment, this is about half the level of investment found in the United States, when adjusted for GDP.

The Entrepreneurs

At the centre of the ecosystem is the entrepreneur. For Howard Stevenson of Harvard Business School "entrepreneurship is the pursuit of opportunity beyond resources controlled" (Eisenmann, 2013), with most popular definitions of entrepreneur being variants of "a person who organizes and manages any enterprise, especially a business, usually with considerable initiative and risk" . Filion points out that "the range of entrepreneurial roles is increasing steadily, and now includes venture creators, technopreneurs, intrapreneurs, extrapreneurs, social entrepreneurs, the self-employed and many others" (Filion, 2011). In the context of this study, our target is seen as the individual responsible for an active Canadian start-up, who has experience of interactions with the other ecosystem key players –incubators, aceratios, angels and VCs.

The Purpose of this Study

Commissioned by the Canadian National Angel Capital Organisation (NACO) with the support of the Canadian Government's Mitacs[1)] funding program, this study examines the Canadian early investment ecosystem through the eyes of its key players – incubators, accelerators, Angel investors, VCs and, of course, the start-ups themselves. This is intended to be the first of several studies, setting

the baseline for future work and to be of use to academics, policy makers, investors, entrepreneurs and others interested in the Canadian ecosystem.

The study conforms to Storey's (1998) framework for entrepreneurial program evaluation addressing his three Monitoring Stages, addressing participation levels, the opinions of participants and the assessment of the usefulness of assistance provided. It dos not address his higher levels of formal Evaluation.

METHODOLOGY

This research project is the first in a series of project drawing on secondary data available from the National Angel Capital Organisation and primary data collected in a series of surveys.

The Research Questions

The overall objective of this project is to prepare an initial assessment of the Canadian Early Investment Ecosystem and the views and interactions of key players in that ecosystem. At the centre of the ecosystem is the start-up, with a focus on those with a potential for significant growth. Thus the other ecosystem participants considered are those with the most significant interactions with start-ups with high growth potential – incubators, accelerators, angel investors and venture capitalists. It is largely a descriptive study, intended to be the precursor to other more focused projects to follow.

The study investigates five research questions, which were developed in discussion with an advisory group of industry representatives and academics, assembled by NACO:

1. What services are provided to start-ups by incubators and accelerators, and which are (rated by respondents as) most important?
2. What services are provided to start-ups by Angel investor groups, and which are most important?
3. What services are provided to start-ups by venture capitalist firms, and which are most important?
4. Are these services/value-adds congruent with the requirements of the Canadian start-ups, as identified by the start-up participants in the study
5. What are the strengths and weaknesses of the current early investment ecosystem in Canada, based on the findings?

The Survey Instruments and Subject Groups

The research team had access to data collected by NACO from its Angel group members providing data on some 125 deals done by the Angel groups during 2015. In addition, the research team developed and administered four surveys, one for each subject group that, taken together, represent the early investment ecosystem:

- Incubators and accelerators
- Angel investor groups
- Venture capital firms
- Entrepreneurs with start-ups

Each survey includes specific) valuions relevant to each of the four subject categories. Given the limited differences between accelerators and incubators, one survey instrument was used to target both of these groups.

- Accelerator/incubator survey questions examine: (1) general characteristics of the accelerator/incubator; (2) operational characteristics of the accelerator/incubator; and (3) extent and value of interactions between the accelerator/incubator and start-ups. NACO invited 28 accelerators and 12 incubators to complete the survey, with 17 accelerators and 10 incubators completing the survey (a response rate of 60% and 83% respectively).
- Angel group survey questions examine: (1) Angel group characteristics; and (2) data on Angel investments, including pre-investment, post-investment and exit information. NACO invited 40 Angel groups to complete the survey, with 24 completing Part One of the survey (response rate of 60%) and 15 completing both parts of the survey (37.5% response rate). The research also team had access to data collected by NACO from its Angel group members providing data on the deals done by the Angel groups during

2015.

- Venture capitalist (VC) survey questions examine: (1) VC firm characteristics; (2) extent and value of interactions between the VC firms and start-ups; (3) investee start-ups' exit information; and (4) extent and value of interactions between VC firms and incubators, accelerators and Angel groups. NACO invited 65 VC firms to complete the survey, with 8 completing the survey (a response rate of 13%).
- Start-up/entrepreneur survey questions examine: (1) start-up characteristics; (2) extent and value of interactions between start-ups and incubators and accelerators; and (3) start-up financing information. Start-ups were invited to participate in the study through a variety of sources that included emails from industry associations and advisors, with 54 completing the survey.
- Finally, all four surveys include questions that address the following themes: (1) the extent and basis of interactions between respondents and other players in the entrepreneurial ecosystem; (2) the selection criteria for choosing start-ups to support or fund; and (3) the perceived value and impact of support that start-ups receive from other players in the ecosystem.

The majority of questions asked for factors to be scored on a Likert scale or to be ranked on their relative level of importance. In developing the results for this paper, these were frequently converted to rankings or relative importance, using weighted analysis, grouping according to relative importance.

FINDINGS

The Perspectives of Incubators and Accelerators

For the purposes of this study, we had assumed that incubators aim to nurture the development of early-stage entrepreneurial companies, helping them survive and grow during the start-up period, when they are most vulnerable; whereas the accelerators aim to grow the size and value of a company as fast as possible, possibly in preparation for an initial round of funding. Respondent organizations were asked to self-identify as one or the other. Responses were received from 10 incubators and 17 accelerators.

In general, incubators had a slightly more local focus, with accelerators more likely to have a national scope. About half chose their business location based on personal location or links with supporting bodies.

Formal Relationships

Almost all the incubators (9 of 10) and accelerators (16 of 17) had formal relationships with other types of organization. Table 2 shows the relative frequency of relationships with different types of organization for both incubators and accelerators.

The majority of both incubators and accelerators had relationships with universities, syndicate partners, Angel groups and VCs, with a slightly different ranking between each. For incubators, universities and Angel groups were most frequent; whereas for accelerators, the most frequent were corporate partners and then universities.

Respondents were also asked to comment on

Table 2: Relationships between Incubators/Accelerators and Other Ecosystem Members

Type of Organization	# Incubators with Relation	% Accelerators with Relation	# Accelerators with Relation	% Accelerators with Relation
Angel Groups	8	89%	11	69%
Venture Capital Firms	6	67%	12	75%
Universities	8	89%	14	88%
Corporate Partners	6	67%	15	94%
Other	1	11%	7	44%
None	0	0%	0	0%

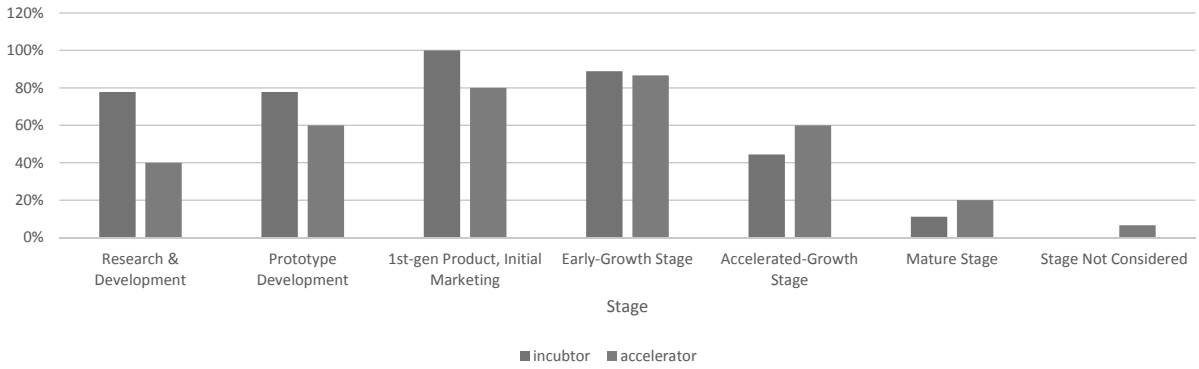


Figure 1: Incubators/Accelerators Interest in Start-ups By Stage

the value of the relationship with each of these partners. For incubators, universities were seen as the most important partners for sourcing and education, with Angels seen as most useful for syndication partnerships and for financing. Corporate partners were less often seen to have high value. Accelerators saw universities and VCs as the most important sourcing resource, with both corporate partners and universities being seen as the most significant education partners. Incubators and accelerators used a variety of techniqies to promote awareness of their firm and its services. Notably, the most mentioned was word of mouth, with pitch competitions being more popular with incubators and universities and government being slightly more popular with accelerators..

Interest in Specific Stages of Firm Evolution

Respondents were presented with a six-stage model of start-up evolution and were asked to select the stages of most interest to them. Their responses are shown in Figure 1.

Respondents did not have equal interest in all the stages, with only one respondent stating that stage was not a consideration for interest. For both accelerators and incubators, the highest levels of interest were in Stage 3 (first-generation product) and Stage 4 (early-growth). As might be expected, more incubators than accelerators had an interest in Stage 1 (R&D) and Stage 2 (prototype-development); however, both exhibited a lower interest in Stage 5 (accelerated- growth), and few were interested in mature businesses. However, these differences are still less than might be expected given the different expectations of incubators and accelerators.

Sources of Funding

Most participants received funding from multiple sources, typically two or three for incubators and three or four for accelerators. The most frequently received support was from federal and provincial governments, while universities were more likely to fund incubators than accelerators. Table 3 shows the relative importance of different funding sources.

Identification and Selection of Incubator/Accelerator Participants

All survey respondents used multiple sources of participant selection, an average of about four sources each. The most widely used method was online application, closely followed by hosted events. Alumni referrals were slightly more frequent than board referrals.

As shown in Table 4, the relative importance of selection criteria for participants was quite similar, with both incubators and accelerators ranking

Table 3: Sources of Funding for Incubators/ Accelerators

	Incubator	Accelerator
Provincial Government	89%	53%
Federal Government	67%	53%
Universities	56%	12%
VC/PE Firms	44%	35%
Other Larger Entity	22%	24%
Returns made from Investments	44%	24%
Non-Government Party	44%	59%

Table 4: Selection Criteria Used by Incubators/Accelerators

	Incubator
1	Innovation of product/service
2	Management team qualification
3	Customer traction
4	Business model
5	Product traction
6	Other
7	Revenue/Employee growth
8	Crowdfunding history
9	Management team size

	Accelerator
1	Innovation of product/service
2	Management team qualification
3	Business model
4	Product traction
5	Revenue/Employee growth
6	Management team size
7	Other
8	Crowdfunding history
9	Customer traction

the innovation of the product or service and the quality of the management team most highly, generally followed by the business model and product traction, with the most significant differences being the unimportance of customer traction for accelerators and of the management team size for incubators. Notably, crowdfunding history was unimportant for both. To the degree that management team size was considered, a single management team member was sufficient for most incubators, while two to three members were preferable for accelerators.

Application and Acceptance Rates

In total, the incubators received 1,340 applications in 2014, of which they accepted 299, an acceptance rate of 22%. Accelerators received 2,510 applications and selected 410, an acceptance rate of 18%.

Program Structure

The programs varied significantly in program length, with only about one-third of either incubators or accelerators having a standard period of participation for all participants. Length of participation ranged from about six to 24 months, with 24 months being the period most often reported.

The number of mentors/instructors/consultants available to start-ups varied widely, from two to more than 30. There were significant differences in the number of hours provided by incubators, with most providing between 10 and 75 hours and three reporting more than 300 hours provided. Accelerators provided between 35 and 75 hours, with two providing about 200 hours.

Graduation and Funding Success

There was little consistency across participants on how they identified and evaluated successful graduation from their programs. Accelerators most often defined success as one or more of: receiving funding, acquiring a contract, or significant revenue/market share growth. For incubators, receiving funding and significant revenue/market share growth were the most common, with committee review and completing a set period in the program also being broadly used.

In terms of start-ups that did not graduate, about 25% of incubators would allow them to continue, with 31% of accelerators requiring re-application. (In four programs, all start-ups are viewed as graduates.) While not all participants provided data, collectively, incubators reported 156 graduates in 2014 and accelerators reported 167. Most incubators/accelerators reported that virtually all of their participants received some form of funding during their participation, with angels, VCs and governments being the most common.

In terms of typical first-round external funding, incubator participants fell into two groups: those seeking less than $100,000 and those seeking about $300,000. For accelerator participants, most were looking for around $300,000, with many reporting an ask above $500,000.

Overall, most incubators/accelerators expected 30 to 60% of companies to receive Angel/VC/Private Enterprise investment, with an average of around 45%.

Services Provided

Table 5 shows the proportion of incubators/ accel-

Table 5: Service Provided to Start-ups by Incubators/Accelerators

	Incubator	Accelerator
Basic Facilities Support	89%	59%
Common External Service Providers	89%	82%
Access to Bank Loans, Loan Funds	44%	41%
Network/Community of Entrepreneurs	100%	100%
Business Mentoring/Training	100%	100%
Investor Introductions	89%	100%
Patent Support	67%	41%
Strategic Alliances	89%	76%
Assistance in Formulating Business Plans	89%	88%
Help in Improving Company's Sales Growth	78%	82%
Aid in Internationalizing Company's Operations	56%	65%
Financial Support	67%	53%
Pitch Competitions	78%	65%
Demo Days	44%	65%
Firm Specific Programs	67%	59%
Industry Sector Specific Programs	56%	53%
Alumni Network Post Graduation	67%	71%
Provide Feedback to Companies If They Are Not Selected Into the Program	56%	47%

erators that provide each type of service. There was little difference between incubators and accelerators, except that accelerators were somewhat less likely to provide basic facilities or patent support. All provided access to networking and communities and to business mentoring. In terms of the relative importance of the services provided, there were some similarities but also significant differences

Figure 2 shows a comparison of the incubators and accelerators ranking of the services they provide, highlighting the areas of similarity and difference. Notably, each ranked business mentoring/training first, with access to a network/community of entrepreneurs and investor introductions also in the top four. The biggest difference was the importance of providing basic facilities, which incubators ranked highly and accelerators very low. They held inverse views on the relative importance of industry-specific and firm-specific programming.

Post-Program Interaction

Virtually all incubators and accelerators tracked the development of their start-ups post-graduation, with about half reporting ongoing mentorship activities, and about two-thirds providing alumni events. Typically such events took place at intervals of between three months and a year. In terms of the perception of the importance of alumni services provided, both incubators and accelerators ranked investor introductions as the most important, followed by help in securing funding. Providing introductions to other alumni entrepreneurs was seen as substantially less important.

The Perspectives of Angel Groups

Twenty-four Angel groups provided details on how they are structured, how they approach investment activities, and with which organizations they most frequently work. They were also asked to describe their recent deals. The 24 Angel groups described some 125 deals that took place within the previous year. (Note: There were actually 109 unique deals because, in a few cases, more than one Angel group participated in the deal, with each participant reporting separately.)

The Angel groups had been in operation from one to sixteen years, with an average of around five years. Collectively they have funded 466 investments, 169 of these within the previous year. The study team were also able to access and integrate

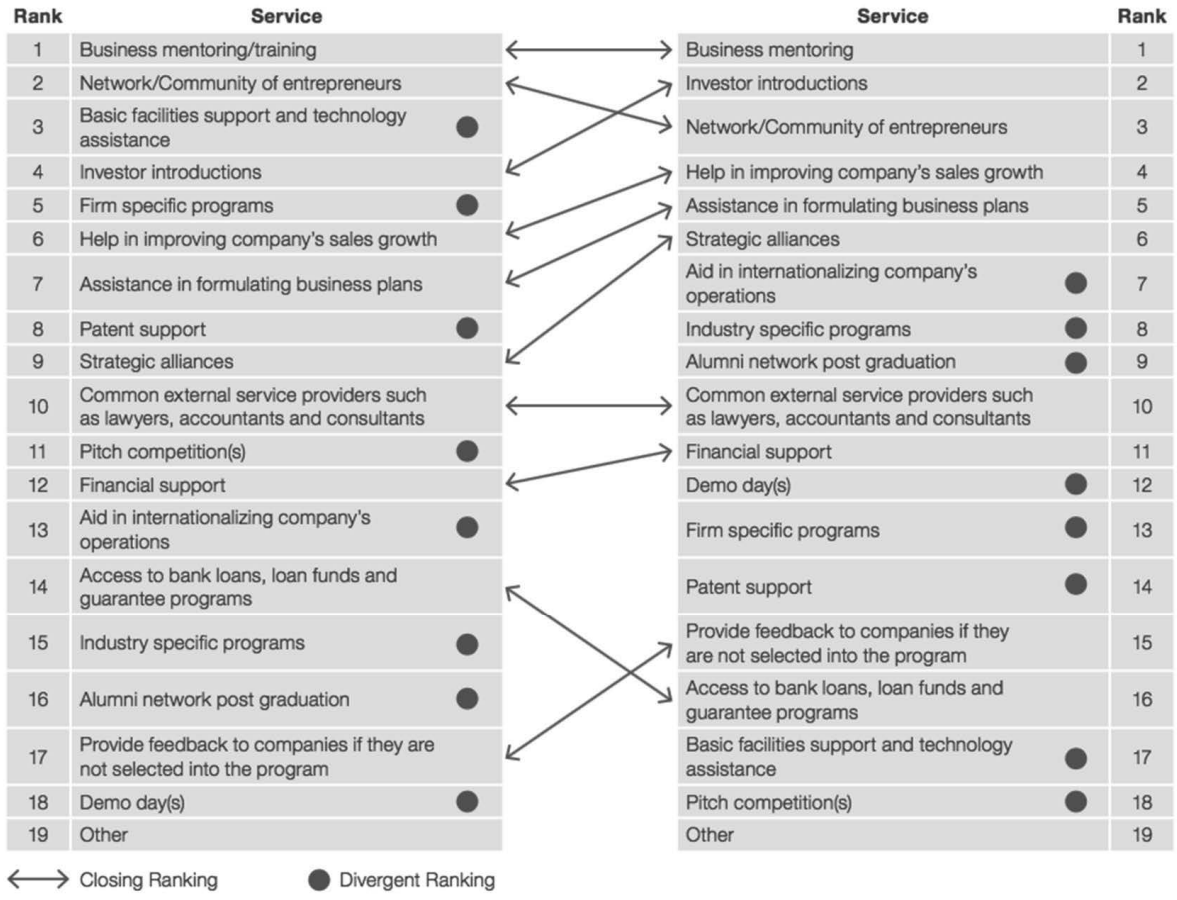


Figure 2: Relative Importance of Services Provided by Incubators/Accelerators

some data from NACO's 2014 Report on Angel Investing Activity in Canada and have integrated this material with the survey results.

The Motivations of the Member Investors Within the Angel Group

When asked about the motivational factors for the individual members of the angel group. Monetary motivation and passion rate very highly, with other factors being ranked substantially lower (strategic fit being the highest of these).

Formal Relationships With Other Ecosystem Participants

All but four respondents reported that they had formal relationships with other organizations. More than half had relationships with incubators and accelerators and about one-third had relationships with other angels and VCs and with universities The primary value for angel group relationships with both incubators and accelerators was their use as a sourcing partner. This was confirmed by an analysis of the third-party contacts involved in investments actually made, where incubators and accelerators were, by far, the most likely source when third parties were involved. Only six had relationships with universities, primarily as a sourcing partner, with four mentioning education value.

Important Factors Used in the Evaluation of Investee Firms

Angel groups were asked to rank the importance of a number of characteristics of potential investee start-ups. As shown in Table 6, the most important factors related to prior entrepreneurial experience, with participation in incubator accelerators being of some importance, followed by industry awards and tax advantages. Interestingly, being environ-

Table 6: The Factors Used by Angel Investors to Select Investee Start-ups

Rank	Characteristics of Potential Investees
MOST IMPORTANT	
1	Past entrepreneurial experience
2	Serial entrepreneur
IMPORTANT	
3	Joined an incubator or accelerator program in the past
4	Obtained competitive research funding
5	Have tax advantage
6	Received industry award
LESS IMPORTANT	
7	Environmentally friendly
8	Have had crowdfunding history

Table 7: Angel Investors Ranking of the Services They Provide

Rank	Characteristics of Potential Investees
MOST IMPORTANT	
1	Advice/Consultation
IMPORTANT	
2	Regular mentorship
3	Bring in new deals, business relations and contracts
4	Introduction to follow-on investors
5	Sit on the board of directors
6	Help in secure additional funding/co-investors
LESS IMPORTANT	
7	Join the company as a formal staff member
8	Other

mentally friendly or having a history of crowdfunding were not seen as important. In the vast majority of cases, the due diligence was done by a member of the Angel group (about 90%), or a member of another Angel group (about 9%). Very little use was made of professional services firms such as consultants or accountants.

To a lesser degree, many incubators and accelerators are seen as providing value as a syndication partner, a co-investor and a source of education. A smaller number (nine) with relationships with venture capitalists did identify their usefulness as investment partners in some form (syndicate, co-investor, help in arranging financing). Similarly, when asked to rank the importance of specific screening criteria, the most important factor was the quality and track record of the management team; with product and market criteria, along with more specific investment criteria, clumped together as the next most important. The firm's background was seen as slightly less important.

Value Provided to the Investee Firms

The Angel groups were also asked to identify the most important value-add services they provided to the investee start-ups. The results are shown in Table 7. Perhaps not surprisingly, they ranked the majority of the choices quite highly. In particular, providing advice was ranked most highly, followed by mentorship (the difference between the two being the relative frequency and formality), with helping secure funding (both additional funding and introduction to follow-on investors) also being seen as significant value-add. Interestingly, while providing board members was seen as an important service, providing staff members was seen as relatively unimportant.

Opportunities Reviewed and Investments Made by the Angel Firms

Sixteen of the respondent Angel groups provided information on their screening and investment activities over the last year. Collectively the groups reported having 2,112 applications in 2014, with 519 pitches being given, 185 being subjected to due diligence and 169 receiving investments. (Note: The number of Angel groups reporting in each category varied.) Figure 3 shows the relationship between opportunities considered, pitches/presentations received, due diligence carried out, and investments made.

To ensure consistency, this figure includes only those groups that provided data in all categories (nine of the original 16). Thus, about 23% of applicants were given the opportunity to make presentations, with about one-half of these proceeding to due diligence. Investments were made in almost 70% of those undergoing due diligence. Thus, about 8% of the original applicants received investment. In most cases (79%) the investment took the form of common shares. In total, the 16 Angels groups made 169 investments, with a total value of just over $60 million. The average investment was about $380,000, with the typical group making about 10

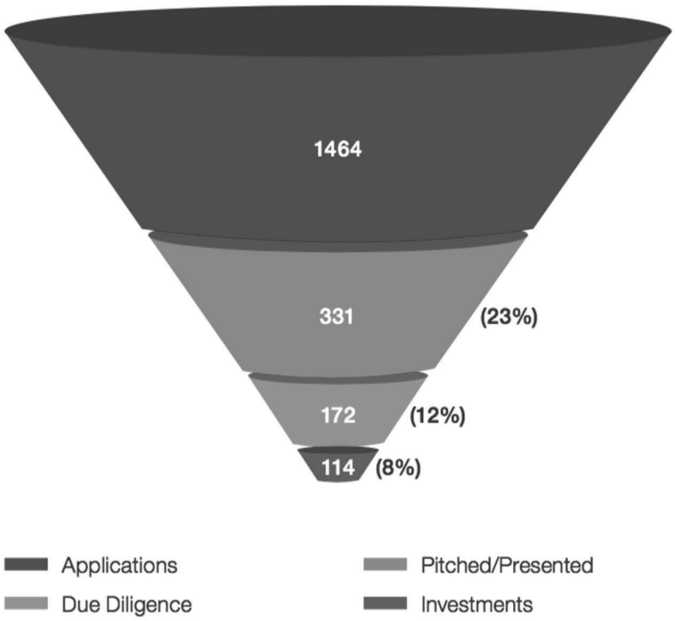


Figure 3: The Angel Investors' Investment Funnel

Table 8: Number of Deals per Group and Size of the Deals

1-5 deals	6-10 deals	11-15 deals	16-20 deals	20+ deals
3	7	2	2	2

Less than $1 million	$1-5 million	$5-10 million	Over $10 million
6	8	1	1

investments. Table 8 shows the distribution of investments by Angel group and the range of the total investments.

An Examination of Specific Deals

Eighteen of the Angel groups provided details of the deals they carried out during 2014, and 125 deals were described. In some deals, more than one of the Angel groups were involved. In total these 125 deals involved some $83 million of investment. The level of detail provided in different sections of the survey varied widely. Where relevant, the number responding in a specific area is provided as part of the discussion. 76% of the deals were new deals, with 24% being follow-up investment. Employee information was provided for 33 of the companies, with employment ranging from three to 37, with an average of seven.

In making the first contact with the Angel group, about half of the firms (n=112) used email or other online approach, with another third using a third-party introduction. Incubators, accelerators and other Angel investors were the most common sources, with a much smaller portion coming from venture capitalists, industries, industry associations and government bodies. None were reported as coming from professional firms (consultants or accountants) or from social media sources.

In carrying out due diligence, the vast majority (87%) of groups used their own members to carry out the work, followed by the use of other Angel investors (9%). In only one case was a consulting or accounting firm involved. About 50% of the deals were with startups located in the province of Ontario, with British Columbia and Alberta being the next most likely.

The levels of investment varied considerably, as shown in Figure 4, from $15,000–2 million, with the average investment being some $271,000. However, the median investment was much lower, at

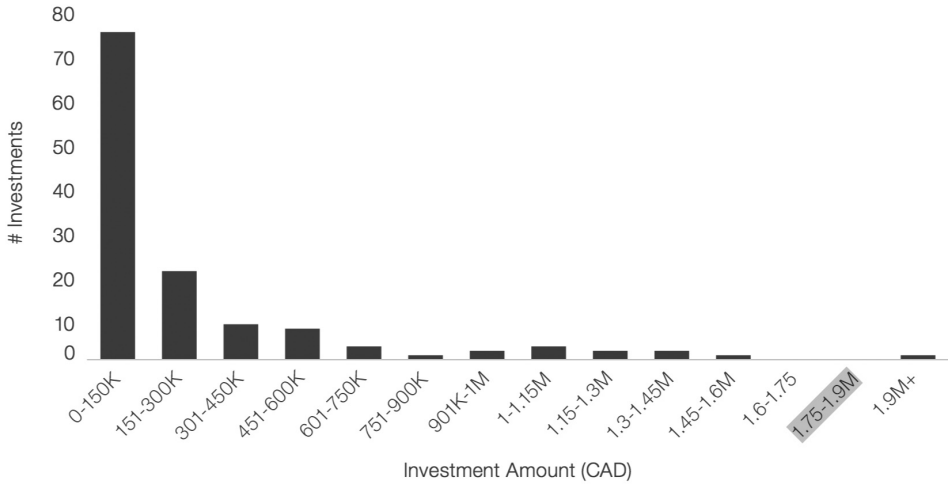


Figure 4: Levels of Investment by the Angel Investors

$122,500, as the skewed nature of the Figure 4 plot indicates. About one-third (52) of the deals had co-investors. These were split evenly between other Angel groups and individual investors, with very limited partnerships with other sources, although about 21% did have a combination of sources. Some participants provided details of their level of involvement with the investees' businesses (n=52). Most frequently this consisted of holding a board seat (35%) or acting as an advisor (27%). In a small number of cases, they provided management or industry introductions.

Participants also provided some details on their experience related to the primary industry of the investees' businesses (n=61), with the major experience spread across entrepreneurship in the industry, operating and management experience. In most cases, this was general experience in the same sector, with only six claiming core experience for the business. Only 12 of the Angel groups had a preplanned exit strategy at the time of the deal, with most of them ex, and a generally productive relationshippecting a trade sale. Two expected a company buyback or an IPO. However, a higher number, 18, claim to have advised the entrepreneur about their exit expectations.

Finally, Angel groups were asked to indicate whether they supported some statements on the future of crowdfunding. Their responses suggest that, while Angels are somewhat conservative about the growth of crowdsourcing, they do see crowdfunding becoming a more important source of funds with a need for better and more flexible regulation, but not as a significant challenge to their own investment activities.

The Perspectives of Venture Capitalists

Of the eight venture capitalist firms providing responses, four had been in operation for between one and five years and three had over 15 years of existence. All but one had a national or international focus. Primarily, they chose their own business location for reasons of access to talent and local government policies. Only one mentioned that this was due to the residence location of the members. Each had a degree of industry focus, ranging from two to five industries; the frequency of each of these is shown in Table 9.

Investment Activities

The fund size of each venture capitalist firm is

Table 9: The Industries of Most Interest to Canadian VCs

Sector	n
Information and Communication Technologies	6
Life Sciences	5
Clean Technologies	4
Manufacturing	4
Energy	2
Other	4

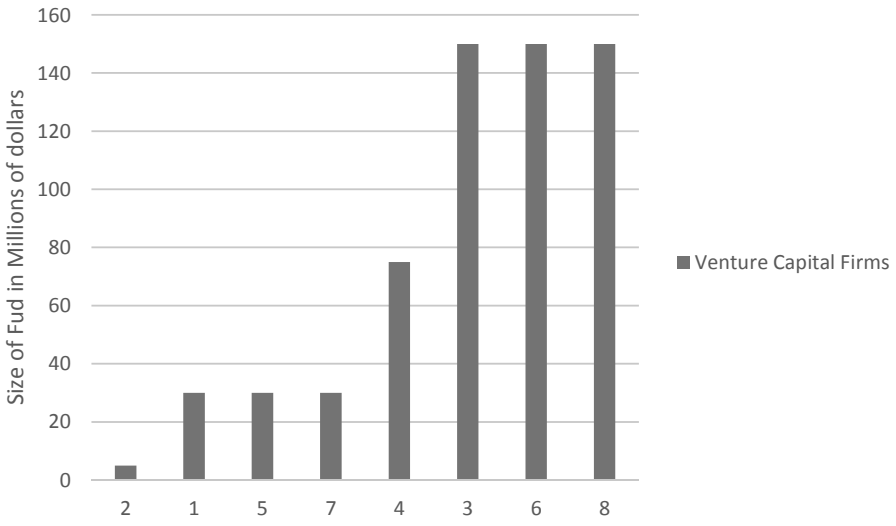


Figure 5: VC Fund Size

Table 10: Canadian VCs Investment Interest By Stage

Stage and Rank	# VCs	% VCs
Research & Development - 1	2	25%
Prototype - 2	2	25%
1st generation - 3	3	38%
Early-growth - 4	6	75%
Accelerated-growth - 5	4	50%
Mature - 6	1	13%
No - 7	1	13%

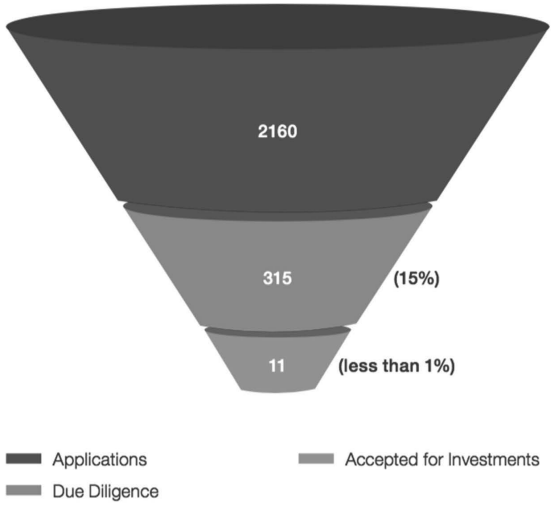


Figure 6: VC Firms' Investment Funnel

shown in Figure 5. The level of interest in each stage of business development is shown in Table 10, with the highest levels being in the early-growth and accelerated- growth stages.

All but one of the firms had some formal relationships with other organizations, the most mentioned being accelerators. Regardless of whether or not they had a formal relationship, all but one contacted incubators and accelerators in their regions to get exposure to the participating companies.

Six firms provided details of their application and acceptance rates. As shown in Figure 6, of 2,160 applications, 315 (15%) were chosen for due diligence and 11 accepted for investments, an acceptance rate of less than 1%. Of these, seven were first-time investments. In terms of investment levels per start-up, Table 11 shows the range of investments across the eight firms.

Six firms reported on the value of their investment activities during 2014, with total investments ranging from $2.5 million to $26 million (Table 12), with an average investment of $1.7 million per deal. All of the firms reported that they discussed exit expectations with the entrepreneurs of their firm's investee start-ups prior to investment, and four of the firms reported that they had successful exits in 2014 (a total of 6 exits – four M&A/ Trade Sales, one IPO and one Secondary purchase). Three of the venture capitalist firms indicated that, if the start-up's exit was not in their firm's best favour,

Table 11: Typical Investment by VCs in a Start-up

Investment Range	# Reporting
Up to $200,000	1
$200,000 - 500,000	3
$500,000 - 1 million	0
Over $1 million	4

Table 12: Total Investment by the VC Firms in a Year (2014)

# of Investments	Total Value ($)	Average Value ($)
2	2,500,000	1,250,000
12	5,500,000	458,333
8	12,000,000	1,500,000
12	15,000,000	1,250,000
6	24,000,000	4,000,000
10	26,000,000	2,600,000

Table 13: VC Firms Start-up Investment Selection Criteria

Rank	Criterion
HIGH	
1	Startup industry outlook
2	Management team qualifications
3	Product traction
4	Exit expectation (for both the VC fund and the investee firm
MEDIUM	
5	Business plan feasibility
6	Startup's existing competition
7	The fund's ability to guide the investee firm
8	Size of the deal
LOW	
9	Startup having received Angel investment(s)
10	Startup's participation in an accelerator program
11	Startup's participation in an incubator program
12	"Startup having received funding through a crowdfunding platform"
13	Other

they required compensation from the investee start-up.

Five of the firms had co-invested or syndicated with Angel groups, and when they did, it sometimes had an impact on some aspects of the deal, with the most common Angel contribution being to increase the investment amount.

Table 14: VC Firms Start-up Management Team Evaluation Criteria

Rank	Criterion
HIGH	
1	Integrity and trustworthiness
2	Track record of the team
3	Good judgement
FAIRLY HIGH	
4	Efficient cooperation in the team
5	Social skills (presentation, negotiating, leadership)
5	High level of energy and strong passion
7	Complementary of each member's background and experience
LOW	
8	Management team size

Table 15: VC Firms Views of the Value of the Services They Provide

Rank	Criterion
HIGH	
1	Help in securing additional funding/co-investors
2	Advice/Consultation
2	Introduction to follow-on investors
4	Regular mentorship
5	Bring in new deals, business relationships and contracts
6	Sit on the board of directors
LOW	
7	Provide feedback to companies if they are not selected for investment or into our program
8	Join the company as a formal staff member

Selection Criteria

Table 13 shows the relative importance of the various selection criteria for investment. Four areas stand out as of high importance – industry outlook, management team qualifications, product traction, and exit expectations. Factors such as the business plan or the size of the deal were seen as of medium importance, while those related to the prior history of the firm had low importance.

When further questioned about the management team qualifications, they ranked integrity, track record and judgement most highly; but,

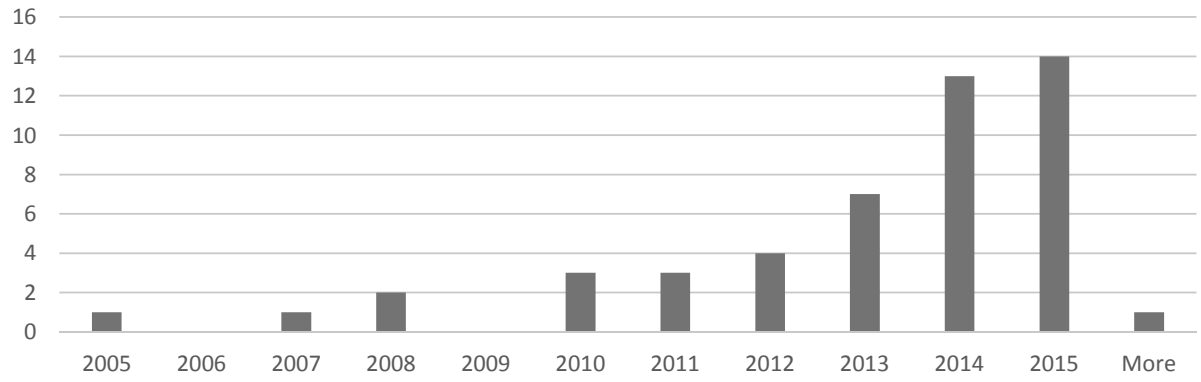


Figure 7: Year Start-Ups Were Established

Table 16: Industry Sectors of the Start-ups Studied

Sector	# Companies	%
Information and Communication Technologies	25	50%
Life Sciences	6	12%
Services	4	8%
Clean Tech	3	6%
Energy	1	2%
Manufacturing	0	0%
Other	11	22%

except for the size of the management team, all of the criteria were seen as important as shown in Table 14.

When asked about the relative value of services provided to investees, most were seen as having high value. As Table 15 shows, only providing feedback to rejected companies and providing staff were seem as providing little value. On average, VCs met about 12 times with each investee start-up.

The Perspectives of Entrepreneurs

Organizations were recruited through a variety of means, primarily electronic. Requests for participation were done through a number of intermediaries who had access to early-stage entrepreneurs, including participants in a number of incubators and accelerators. Thus, the responses and industry sectors represented an opportunistic rather than a structured sample, likely with a bias towards start-ups with potentially high growth. In all, 54 responses from start-ups were received. Table 16 shows the industries represented, with ICT companies representing almost half of the participants. As Figure 7 demonstrates, most were established between 2013 and 2015.

Most start-ups reported having between zero to four full-time employees at the end of 2014, and a similar range of members of the management team. When asked for reasons for their choice of business location, the most important reasons given were:

- Ease of funding
- Access to talent
- Living nearby

Relationships With Incubators

Thirty-three start-ups, 61% of the total, had joined an incubator, typically taking from one to 12 months from application to acceptance. They spent significant time in the incubator, with 12 reporting being there for two years or more. Six reported that they had been turned down in their application to join an incubator and eight indicated a future intent to apply. The start-ups found the incubator through a variety of sources, with word of mouth and university affiliation being the most significant.

Most start-ups (about 84%) found a medium to high overall level of value from their interactions with incubators, with only five (16%) reporting little or no value. Table 17 shows the services judged to be of most value.

In terms of possible improvements to the incubators, 23 looked for more company-specific training, with some limited interest in a different program duration and larger programs.

Table 17: Start-ups Assessment of the Areas of Most Value in Incubator Participation

Rank	Criterion
HIGH VALUE	
1	Basic facilities support and technology assistance
2	Network/Community of entrepreneurs
3	Common external service providers such as lawyers, accountants and consultants
4	Industry-specific programs
SIGNIFICANT VALUE	
5	Firm-specific programs
6	Strategic alliances
7	Alumni network post-graduation
8	Business mentoring/training
9	Assistance in formulating business plans
10	Access to bank loans, loan funds and guarantee programs
11	Help in improving company's sales growth
12	Provide feedback to companies if they are not selected into the program
13	Aid in internationalizing company's operations
14	Investor introductions
LESS VALUE	
14	Demo day(s)
16	Pitch competition(s)
17	Patent support
18	Financial support
19	Other

Relationships With Accelerators

Eleven businesses, 20% of the total, had relationships with accelerators. The time taken to join the accelerator was significantly faster than that reported for joining incubators, with most taking less than four months to join. Seven reported that they had been turned down in their application to join an accelerator and 21 indicated a future intent to apply. Time spent in incubators varied widely.

Most frequently, the accelerator was identified through word of mouth or Internet search and at meetings/events organised by the accelerator. Most (nine) found the accelerator to provide reasonable overall value, with two seeing little or no value. In terms of possible improvements to the accelerators, seven looked for more company-specific training, with one each suggesting a larger program, a longer program duration, access to funding and more

Table 18: Reasons Start-ups Used Accelerators

Rank	Criterion
HIGH VALUE	
1	Basic facilities support and technology assistance
2	Network/Community of entrepreneurs
3	Common external service providers such as lawyers, accountants and consultants
4	Industry-specific programs
SIGNIFICANT VALUE	
5	Firm-specific programs
6	Strategic alliances
7	Alumni network post-graduation
8	Business mentoring/training
9	Assistance in formulating business plans
10	Access to bank loans, loan funds and guarantee programs
11	Help in improving company's sales growth
12	Provide feedback to companies if they are not selected into the program
13	Aid in internationalizing company's operations
14	Investor introductions
LESS VALUE	
14	Demo day(s)
16	Pitch competition(s)
17	Patent support
18	Financial support
19	Other

Table 19: Start-ups Criteria Used to Select Accelerators

Rank	Criterion
HIGH	
1	Industry relevance
2	Trusted referral
3	Location
MEDIUM	
4	Program length
5	Links to Angel
6	Reputation
LOWER	
7	Rolling acceptance
8	Financial aid
9	Other

Table 20: How Start-ups First Heard About their Angel Investor or VC

Angel Investor		
	#	%
Word of mouth	10	71%
Meetings organized by angel groups	7	50%
Pitch competition	6	43%
Other	4	29%
Government	3	21%
Internet search	2	14%
Online portals	1	7%
Universities	0	0%

VC		
	#	%
Word of mouth	2	40%
Other	2	40%
Internet search	1	20%
Government	1	20%
Meetings organized by VCs	1	20%
Pitch competition	0	0%
University	0	0%
Online portals	0	0%

Table 21: The Value of the Investor Relationship to the Start-up

Rank	Criterion
HIGH	
1	Advice/Consultation
2	Board of directors
3	Regular mentorship
4	Feedback to non-selected firms
MEDIUM	
5	New deals/relations
6	Secure additional funding
7	Intros to investors
8	Staff member in company
LOWER	
9	Other

Table 22: Start-ups Sources of Funding

	#	%
Family friends/self	34	65%
Angel group	12	23%
Government grant	9	17%
Personal relationships	8	15%
Crowdfunding	6	12%
Venture capital firms	4	8%
Banker	2	4%

follow-up post-program.

In choosing an incubator or accelerator, the most significant criteria were relevance to the business's industry, a trusted referral and location. Table 18 shows the complete ranking. Table 19 shows the relevant importance of the different services provided by the incubator or accelerator, with provision of basic facilities, networks, access to external services, and industry-specific programs being seen as most important.

Table 23: Start-ups Criteria for choosing Financial Channels

Rank	Criterion
VERY IMPORTANT	
1	Long-term cost of capital
1	Time required to obtain funding
3	Strategic assistance
3	Services offered in addition to financial support
5	Amount of financing available
6	Influence on daily operations
SOMEWHAT LESS IMPORTANT	
7	Entry barrier/accessibility
8	Existing channel of the capital
9	Control rights over the firm

Working with Angel Groups and VCs

Thirteen start-ups provided feedback on their relationships with Angel groups, with five start-ups provided feedback on their relationships with venture capital firms. The most frequently mentioned method of finding the Angel group that invested in them was by word of mouth, followed by meetings organized by the Angel groups. Word of mouth was also the most frequently mentioned methods of finding the investing VC group (see Table 20). Pitch competitions were important for Angel involvement but not for VCs. One mentioned they met at an incubator Christmas party! The majority met with Angels either monthly or quarterly. Most were happy with the frequency of meetings, with three

MOST IMPORTANT	ENTREPRENEURS	INCUBATORS	ACCELERATORS
Basic facilities support and technology assistance	1	3	17
Network/Community of entrepreneurs	2	2	3
Common external service providers such as lawyers, accountants and consultants	3	10	10
Industry specific programs	4	15	8
QUITE IMPORTANT			
Firm specific programs	5	5	13
Strategic alliance	6	9	6
Alumni network post graduation	7	16	9
Business mentoring/training	8	1	1
Assistance in formulating business plans	9	7	3
Access to bank loans, loan funds and guarantee programs	10	14	16
Help in improving company's sales growth	11	6	4
Provide feedback to companies if they are not selected into the program	12	17	15
Aid in internationalizing company's operations	13	12	7
Investor introductions	14	4	2
LESS IMPORTANT			
Demo day(s)	15	18	12
Pitch competition(s)	16	11	18
Patent support	17	8	14
Financial support	18	12	11
Other	19	19	19

Accelerator/Incubator ranked 6 or more places lower

Accelerator/Incubator ranked 6 or more places higher

Figure 8: Comparative Ranking of Services Provided by Incubators/Accelerators for Start-ups

who met quarterly wishing to have had more meetings. Interestingly, the three who met semi-annually or annually were satisfied with that frequency.

Table 21 shows the value attributed to various aspects of the Angel group/VC relationship, with advice and mentorship, board membership and receiving feedback when not selected being seen as the most important.

Access to Funding

As Table 22 shows, the most frequent source of funding was from self and family, followed by Angels and government grants. VCs and banks were the least reported sources.

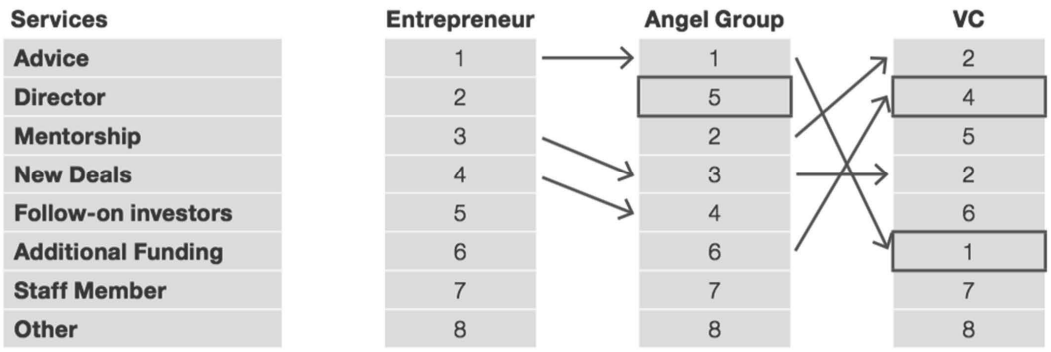
When asked about the relevant importance of the selection criteria they consider while choosing between financing channels, participants gave all the criteria suggested a significant level of importance. Table 23 shows the split between the most important and the fairly important criteria.

Ecosystem Interconnection Analysis

Services Provided by Incubator/Accelerator

Incubators and accelerators were asked to rate the importance of the services each provided and entrepreneurs were asked to rank the importance of the services offered by the incubators and accelerators. (Note: they provided only one ranking for incubator/ accelerator and did not differentiate between the two in their responses). Figure 8 shows the responses from each, using the entrepreneur ranking as the base.

Significant differences can be observed. Differences of six or more places in ranking were chosen to identify the key areas of difference and these are identified in the Figure. Notably, in the entrepreneurs' top four, access to a network/community of entrepreneurs was the only common response in comparison to the views of incubators and accelerators.. Accelerators ranked providing physical space much lower (and only 60% provided such services), with incubators giving much less importance to



Services	Entrepreneur	Angel Group	VC
Advice	1	1	2
Director	2	5	4
Mentorship	3	2	5
New Deals	4	3	2
Follow-on investors	5	4	6
Additional Funding	6	6	1
Staff Member	7	7	7
Other	8	8	8

Figure 9: Comparative Ranking of Services Provided by Angel Groups & VCs for Start-ups

providing industry-specific programs (and only about half of either incubators or accelerators provided them). Neither incubators nor accelerators gave access to professional service as having as much importance as entrepreneurs.

Also of interest is that both incubators and accelerators ranked business mentoring/training as their most important service, whereas entrepreneurs ranked it only eighth. Similarly, entrepreneurs ranked investor introductions much lower than incubators and accelerators.

Services Provided by Angel Groups and Venture Capitalists

Angel groups and VCs were asked to rate the importance of the services each provided and entrepreneurs were asked to rank the importance of those services offered. Figure 9 shows the responses from each, using the entrepreneur ranking as the base. With a couple of exceptions, all three were in fairly close agreement as to the most important services, with providing advice, mentorship and access to new deals ranking high. The major differences were that entrepreneurs ranked the provision of a board director higher than the Angels and VCs and that, while VCs saw their top service as providing additional funding, the entrepreneurs did not agree.

SUMMARY OF FINDINGS

Responses were received from 10 incubators and 17 accelerators. Most respondents had multiple formal relationships with other players in the ecosystem, with relationships with universities and Angel groups being most common with incubators, and with corporate partners and universities being the most popular with accelerators. Universities were identified as the most significant sourcing partner for incubators and accelerators, as well as being a major source of education support. Both received financial support from federal and provincial governments; however, universities were more likely to fund incubators than accelerators.

For both incubators and accelerators, the highest level of interest in the stages of evolution of a startup were in the first-generation product and early-growth stages, with incubators more likely to have an interest in companies in the R&D and prototype-development stages. Mature businesses generally were not of interest. In selecting participants, both considered the innovation of the product/service and the quality of the management team to be the most important selection criteria.

Incubators accepted about 22% of applicants (299) in 2014 and accelerators about 18% (410). The period of residence varied significantly in both, anywhere from six to 24 months, with only about one-third having a standard period. Incubators reported "graduating" 156 participants in 2014 and accelerators 167. After graduation, most incubators/accelerators tracked the development of the companies, providing mentorship and alumni events. Overall, incubators and accelerators expected about 45% of the participants to receive equity funding. Typically, the first-round funding ask from an incubator participant was below $300,000, with most asks from accelerators being over $300,000, and several over $500,000.

Responses were received from 24 Angel groups

that had been in operation for an average of five years. By far, the most significant influences in their decision to be investors were financial motivation and strong passion. All had formal relationships with a number of different members of the ecosystem, with incubators and accelerators being the most common and being seen as the primary sourcing partners, followed by universities.

They reported having funded 466 investments in their groups' lives, 169 of these in 2014. They provided deal details for 125 of the deals made during 2014. In choosing investee start-ups, past entrepreneurial experience and being a serial entrepreneur were seen as the most important, followed by participation in incubator and accelerator. The quality of management was seen as a key screening element. Collectively they received 2,112 applications in 2014, of which some 25% of applicants had the opportunity to make pitches, with a nal acceptance rate of about 8%. Most groups reported making between six and 10 deals during 2014, with total investments being in the $500,000 to $5 million range. Individual investments ranged from $15,000 to $2 million, with the median investment being $122,500. About one-third of the deals had co-investors, normally either other Angel groups or individual investors. Very few deals had a pre-planned exit strategy. The total value of the investments was just over $80 million.

Responses were received from eight venture capital (VC) firms; three had been in business for more than 15 years, and four had existed for less than five years. They tended to focus on a relatively small number of industries (two to five), with the most frequent being Life Sciences and Information and Communication Technologies (ICT). Most had formal relationships with other organisations, most commonly with accelerators.

They were most interested in companies in the early-growth and accelerated-growth stages. Of 2,160 applications in 2014, 11 were accepted for investment, less than 1%. Overall, they reported total investments in the range of $2.5–26 million, with an average investment of $1.7 million per deal. All discussed exit expectations with their investee rms, and four had reported successful exits in 2014. In selecting investments, the most important criteria were the startups industry outlook, management team qualifications, product traction and exit expectations

Fifty-four entrepreneurs responded to the survey. A very high proportion (50%) were from the Information and Communication Technologies (ICT) industry, followed by Life Sciences and Services. Most had been in operation for less than four years, and reported three or fewer employees and members of the management team.

Over 60% had joined an incubator, taking anywhere from one month to a year for acceptance. Residence period ranged from a few months to over 24 months. 84% of the startups reported getting significant value from their interactions with the incubator. The most important areas of value were reported to be provision of basic facilities, the network and community, access to external professionals, and industry-specific programs. 20% had relationships with accelerators, typically taking less than four months from application to joining.

The most frequent source of funding was self, family and friends (65%), followed by Angel groups and government grants. Thirteen had relationships with Angel groups and five had relationships with VCs.

CONCLUSIONS

One of the key objectives for this study was to gain an initial perspective on the early investment ecosystem that provides a baseline for future work. A good level of response was received from each of the ecosystem players, although it would have been useful to have a broader sample of VCs and entrepreneurs. In particular, the sample of entrepreneurs was opportunistic, using a variety of contact methods to solicit input. While the respondents may not be typical of entrepreneurs as a whole, they do seem to represent the higher-growth target start-ups that were the prime interest of the study. A significant proportion participated in incubators and accelerators and were looking for external funding from either Angel investors or VCs. It is also interesting to note that the relative proportions of industries represented (with Information and Communication Technologies being the largest, followed by Life-Sciences) are consistent with other research on the industries most funded by Angel investors and

VCs .

While incubators and accelerators are often seen as quite distinct entities, the responses to this study were more similar than might be expected. For example, both are interested across a similar set of growth stages and offer programs of quite similar elapsed time, with accelerators showing just a slight interest bias toward later stages. This is surprising, as accelerators are often thought to provide fast assistance over a relatively short period of time. Accelerators were, however, significantly faster in accepting new entrants than incubators. Some of these responses may be due to the use of an identical survey for both incubators and accelerators, and the next study will consider using a separate instrument for each

Overall, entrepreneurs, angel groups and VCs held quite similar views as to the importance of the services provided by angel groups and VCs with relatively few differences. the responses confirmed that Angel groups and VCs were highly selective in choosing investments, but the likelihood of success of a given application being very low. The screening process and evaluation criteria used by all groups were very similar.

The study findings demonstrate that the key players within the Canadian early investment ecosystem do work well together in a productive manner and have interactions both between themselves and with the other contributing organizations within the ecosystem, including government, banks and universities. However, it did not provide any significant insight into the reasons for the differences in investment levels and exit barriers between Canada and the United States and this should be a topic of further research, of great importance to Canada.

LIMITATIONS AND FUTURE WORK

The survey samples, while broad-based, are still quite small, particularly with respect to the VCs and the entrepreneurs. Thus, caution should be taken in generalization of the results. In addition, all respondents did not provide responses to all questions, further reducing the sample size. Where possible, the sample size for particular questions is shown in the study findings. In addition, as is common in the first iterations of surveys, there were a few areas where responses indicated a lack of clarity in some questions. This will be corrected in future surveys.

Future work could focus on the interaction between the various participants through the stages of startup launch and growth, with a particular emphasis on the challenges and barriers that may exist that reduce the opportunities for successful high-value exits.

ACKNOWLEDGMENTS

This study was supported by the Canadian National Angel Capital Organisation (NACO) and the Canadian Mitacs Accelerate Research Program, with the findings being shared with the NACO Angel Group Members.

NOTES

1) Mitacs is a Canadian, not-for-profit organization that designs and delivers research and training programs, working with universities, companies, and the Canadian federal and provincial governments.

REFERENCES

AERNOUDT, R. (2004). Incubators: tool for entrepreneurship? *Small Business Economics*, 23, 127–135.

AMITA, R., BRANDERA, J. & ZOTTA, C. (1998). Why do venture capital firms exist? theory and canadian evidence. *Journal of Business Venturing*, 13, 441-466.

BDC CAPITAL (2017). Canada's Venture Capital Landscape: Challenges and Oportunities. Business Development Bank of Canada.

BERGER, A. & UDELL, G. (1998). The economics of small business finance: The role of private equity and debt markets in the financial growth cycle. *Journal of Banking and Finance*, 22, 613-673.

EISENMANN, T. R. (2013). Entrepreneurship: A Working Definition. *Harvard Business Review*.

FILION, L. J. (2011). Defining the Entrepreneur. In: L.P., D. (ed.) *World Encyclopedia of Entrepreneurship*. Cheltenham, UK: Edward Elgar.

GLOBAL ENTREPRENEURSHIP MONITOR (2018). Global Report 2017/18.

GREATHOUSE, J. (2012). Pssst...Here's How To Become A Venture Capitalist. *Forbes*.

HARRIS, R. S., JENKINSON, T. & KAPLAN, S. N. 2014. Private equity performance: What do we know? *The Journal of Finance*, 69, 1851–1882.

HECHAVARRIA, D. M. & INGRAM, A. (2014). A review of the entrepreneurial ecosystem and the entrepreneurial society in the United States: an exploration with the global entrepreneurship Monitor dataset. *Journal of Business and Entrepreneurship*, 26, 1-35.

ISENBERG, D. J. (2010). How to Start an Entrepreneurial Revolution. *Harvard Business Review*, 1-12.

ISENBERG, D. J. (2011). The Entrepreneurship Ecosystem Strategy as a New Paradigm for Economic Policy: Principles for Cultivating Entrepreneurship—A presentation for the Institute of International and European Affairs, Dublin, May 12, 2011. Dublin: Babson Entrepreneurship Ecosystem Project.

KETIKIDIS, P. H., CHIKHLADZE, K. & BARESEL- BOFINGER, A. (2017). Working Paper No. 03, Early Stage Investment in Southeast Europe: Issues and Challenges. World Business Angels Investment Forum 2016. Istanbul: South-East European Research Centre.

LANDSTROM, HANS (2005). *Pioneers in Entrepreneurship and Small Business Research*, New York, Springer Science.

LERNER, J. (2010). The future of public efforts to boost entrepreneurship and venture capital. *Small Business Economics*, 35, 255-264.

MACK, E. & MAYAR, H. (2016). The evolutionary dynamics of entrepreneurial ecosystems. *Urban Studies*, 53, 2118-2133.

MASON, C. & BROWN, R. (2014). Entrepreneurial ecosystems and growth oriented entrepreneurship. background paper for the International Workshop on Entrepreneurial Ecosystems and Growth Oriented Entrepreneurship.

PATTON, D. & MARLOW, S. (2011). University technology business incubators: helping new entrepreneurial firms to learn to grow. *Environment and Planning C: Government and Policy*, 29, 911–926.

PETERS, L., RICE, M. & SUNDARARAJAN, M. (2004). The role of incubators in the entrepreneurial process. *The Journal of Technology Transfer*, 29, 83–91.

PITELIS, C. (2012). Clusters, entrepreneurial ecosystem co-creation, and appropriability: a conceptual framework. *Industrial and Corporate Change*.

PWC (2018). US Moneytree Report. PwC MoneyTree.

PWC CANADA (2016). MoneyTree Canada Report: Q4 and Full-year 2016.

RIDING, A., L. (2008). Business angels and love money investors: segments of the informal market for risk capital. *Venture Capital*, 10, 355-369.

SCHUMPETER, J. (1934). *The Theory of Economic Development*, Cambridge, Harvard University Press.

SILCOFF, S.(2016). Angel investments on the rise in Canada *Globe & Mail*.

SPIGEL, B. (2017). The Relational Organization of Entrepreneurial Ecosystems. *Entrepreneurship Theory and Practice*, 41, 49-72.

STAM, E. (2015). Entrepreneurial Ecosystems and Regional Policy: A Sympathetic Critique. *European Planning Studies*, 23, 1769-1769.

STANGLER, D. & BELL-MASTERSON, J. (2015). Measuring an Entrepreneurial Ecosystem. Ewing Marion Kauffman Foundation.

STOREY, D. J. (1998). *Six steps to heaven: evaluating the impact of public policies to support small businesses in developed economies*, Centre for Small & Medium Sized Enterprises, Warwick Business School.

TAMASY, C. (2007). Rethinking Technology-Oriented Business Incubators: Developing a Robust Policy Instrument for Entrepreneurship, Innovation, and Regional Development? *Growth and Change*, 38, 460–473.

TANG, J. (2008). Environmental munificence for entrepreneurs: entrepreneurial alertness and commitment. *International Journal of Entrepreneurial Behavior & Research*, 14, 128–151.

THE CENTRE FOR DIGITAL ENTREPRENEURSHIP AND ECONOMIC PERFORMANCE. (2018). *Mapping Canada's Accelerator and Incubator Ecosystem* [Online]. Available: http://

deepcentre.com/billiondollarfirms/do-accelerators-and-incubators-make-a-difference/mapping-canadas-accelerator-and-incubator-ecosystem-2 [Accessed Janury 3rd 2018].

UNH CENTER FOR VENTURE RESEARCH (2016). Angel Investor Market in 2015 a Buyers Market. In: CENTER FOR VENTURE RESEARCH, U. O. N. H. (ed.).

WONG, A., BHATIA, M. & FREEMAN, Z. (2009). Angel Finance: The Other Venture Capital. *Strategic Change*, 18, 221–230.

WORLD ECONOMIC FORUM (2013). Entrepreneurial Ecosystems around the Globe and Company Growth Dynamics. Davos.

Dr. Kenneth A. Crant is a Professor of Entrepreneurship & Strategy in the Ted Rogers School of Management, Ryerson University, Canada. Email:kagrant@ryerson.ca
Divya Padmanaban is a Researcher with the National Angel Capital Organization, Canada.
Amr EI-Kebbi is a Researcher with the Ted Rogers School of Management, Ryerson University, Canada.