



The Entrepreneurship Database Program at Emory University

2015 Year-End Data Summary
(Released May 2016)

This project is generously supported by the Argidius Foundation, Kauffman Foundation, Lemelson Foundation, Omidyar Networks and USAID.



Executive Summary

Since 2013, the *Entrepreneurship Database Program* at Emory University has been partnering with accelerators and entrepreneur support programs to collect detailed data from entrepreneurs during their application processes. These entrepreneurs are then resurveyed every six months to gather valuable follow-up data. This report summarizes application data collected from entrepreneurs who applied to participating programs during 2013, 2014 and 2015. After setting aside duplicate application surveys, surveys with too much missing information, and surveys from entrepreneurs who declined to share their application information with the *Entrepreneurship Database Program*, the observations in this 2015 Year-End Data Summary are based on 4,125 early-stage ventures.

Key observations from this 2015 Year-End Data Summary include:

- Less than one-fifth of the ventures report receiving prior outside equity investment. A slightly lower percentage report taking on debt to help start their ventures, while a higher percentage is supported by prior philanthropic contributions.
- Almost half of the ventures report positive revenues in the prior year, while almost two-thirds report having at least one full-time or part-time employee at the end of that year.
- The median venture in the sample is looking to raise \$25,000 in debt and/or equity over the ensuing twelve months.
- Ventures with women on their founding teams are significantly less likely to attract equity investors. However, they are significantly more likely to report positive prior-year revenues.
- Ventures operating in lower and lower-middle income countries are less likely than ventures from high-income countries to attract equity investments, but have a greater likelihood of reporting positive revenues in the prior year, and are more likely to report prior-year employees;
- Ventures established by experienced entrepreneurs (i.e., those who founded companies before) are significantly more likely to attract equity investments, and significantly more likely to report positive revenues and employees in the prior year.
- Ventures whose founders hold patents, copyrights or trademarks are significantly more successful attracting equity investments, and significantly more likely to report positive revenues and employees in the prior year.
- A small minority of the sampled ventures measure impacts using the IRIS or B Lab approaches, and the dominant reason for not implementing either these approaches relates to a lack of awareness.
- There is an (understandable) bias among program selectors toward ventures with more established track records. Applicants that end up participating in programs are significantly more likely to report revenues and employees in the prior year.
- Several rounds of follow-up surveys indicate that ventures participating in accelerators programs grow revenues significantly faster during their year of acceleration than those not accepted into programs. Moreover, their average increase in total investment (equity, debt and philanthropy) was \$34,528, which was significantly greater than the average increase of \$11,255 for ventures that applied but were not accepted.

Introduction

Despite the growth of the impact investing sector, there is limited systematic research about entrepreneurs and their new ventures, largely due to a lack of reliable data. Existing datasets (when they exist at all) are typically focused at the fund level, and therefore biased towards ventures that are receiving investment. There are also some datasets describing ventures that work with established measurement systems or certification programs. However, these data are similarly biased toward more established ventures.

A reason for this paucity of early-stage venture data is that it is challenging to identify large and diverse samples of entrepreneurs. When entrepreneurs are identified, there are few incentives for them to respond to the kinds of surveys that generate high-quality data. The *Entrepreneurship Database Program* at Emory University leverages relationships with a growing number of accelerator programs to collect systematic data from entrepreneurs who apply to and, if selected, participate in these programs. By establishing mutually-beneficial procedures and protocols, this program is becoming a de facto standard for programs interested in collecting and analyzing data that meet their application, selection and program evaluation needs.

This broad, prospective data-collection program is part of the Global Accelerator Learning Initiative (GALI). GALI is made possible by its co-creators and founding sponsors, including the U.S. Global Development Lab at the U.S. Agency for International Development, Omidyar Network, The Lemelson Foundation and the Argidius Foundation. Additional support for GALI has been provided by the Kauffman Foundation and Stichting DOEN. The aggregated longitudinal data that are collected will support rigorous academic research over the medium to long term, while delivering shorter-term insights that will guide decisions made by accelerator program managers, funders and investors, and other sector stakeholders.

This 2015 Year-End Data Summary covers entrepreneurs who applied to accelerators programs that began accepting applications in 2013, 2014 and 2015. After setting aside duplicate surveys, surveys with too much missing data, and surveys from entrepreneurs who declined to share their application information with the program, the observations in this 2015 Year-End Data Summary are based on data describing 4,125 ventures whose founders applied through more than 55 different programs and channels (see **Table 1**).

Table 1: Current sample

Accelerator Partner (# programs)	N
Accelerating Appalachia	45
Agora Partnerships (3)	312
Echoing Green	71
Impact 8 (2)	46
New Ventures Group Momentum Project	22
NMotion	37
POL CivicX (5)	351
ProEmpleo	26
Propeller	81
SheEO	70
Technoserve (2)	198
Telluride Excel	56
UnLtd USA	48
Unreasonable Institute (4)	552
US-ADF (6)	285
University of South Florida	62
Village Capital (23)	1,587
Other Programs and Channels (10)	276
Total (55 plus other)	4,125

Table 2 summarizes how the sample breaks out by venture age and legal form. Not surprising given the orientation of our accelerator partners, a majority of the ventures (roughly three quarters) are for-profit companies. These ventures are younger on average than the nonprofit ventures when applying to accelerator programs.

Table 2: Venture age and legal form

	For-profit	Nonprofit	Undecided	Other
N	3,112	499	139	291
Average Age	2.6 years	3.9 years	1.5 years	3.2 years
Median Age	1 year	2 years	1 year	2 years

Question asked: In which year was your venture founded?

Venture Performance Indicators

Stakeholders in the social enterprise sector are interested in various aspects of the performance of early-stage ventures. **Table 3** summarizes venture performance using five different indicators. Roughly one-fifth (18.1%) of all ventures in the sample report receiving some outside equity investment prior to completing their application surveys. A slightly lower percentage (14.8%) take on debt to help start their ventures, while a higher percentage (28.0%) are supported by philanthropic contributions. These percentages change to 21.5% (equity), 16.8% (debt) and 21.8% (philanthropy) when the nonprofit ventures in the sample are set aside.

Among the 747 ventures that report receiving equity investment, the median amount of equity received since founding is \$50,000. The corresponding medians for debt and philanthropic investments are \$30,000 and \$20,000 respectively.

Almost half (46.2%) of the ventures report earning revenues in the prior year. Among the ventures that report positive prior-year revenues, the median value is \$15,000. Almost two-thirds (62.9%) report having at least one full-time or part-time employee, and the corresponding median for prior-year employees is five.

Finally, there are some interesting differences between ventures that applied to participating accelerators in 2013 and 2014 compared to 2015; with significantly lower incidences of equity investments and debt, but higher incidences of revenues and employees reported by ventures applying to programs in 2015.

Table 3: Early-stage venture performance

	Some Equity Reported	Some Debt Reported	Some Philanthropy Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported
Percent Yes - All	18.1%	14.8%	28.0%	46.2%	62.9%
Percent Yes – All For-Profits	21.5%	16.8%	21.8%	46.8%	63.7%
Percent Yes – 2013 & 2014	20.8%	17.9%	27.5%	43.4%	61.7%
Percent Yes – 2015	14.5%*	10.8%*	28.5%	49.9%*	64.5%

* difference is significant at $p < 0.05$

Questions asked: “Overall, how much equity has your venture raised from all outside sources since founding?” “Overall, how much has your venture borrowed since founding?” “How much philanthropic support has your venture received since founding?” “What was your venture’s total earned revenue in calendar year 2012 (2013) (2014) (2015)?” “Not counting founders, on December 31, 2012 (2013) (2014) (2015), how many people worked for your venture?”

Country of Operations

Although the ventures in this sample operate in 128 different countries, the majority comes from the United States (N=1,344), India (422), Kenya (402), Mexico (363), Nicaragua (185), Uganda (153), Canada (124) and South Africa (102). The World Bank classifies countries into four categories: high-income, upper-middle-income, lower-middle-income

and low-income.¹ Based on this breakdown, 1,750 of the ventures are working in low and lower-middle income countries. **Table 4** shows that these ventures have a lower likelihood of reporting prior equity investments than those working in high-income countries. However, they have a greater likelihood of reporting positive revenues (62.3% and 52.1% compared to 36.7%); and are more likely to have reported hiring employees (77.3% and 72.9% compared to 50.3%). It is also surprising that ventures in the lower-middle income countries are less likely to report support from philanthropic sources (25.1% compared to 30.5%).

Table 5 groups ventures into the regions classified by the World Bank. The majority of the developing-world ventures in this sample operate in Sub-Saharan Africa, Latin America & the Caribbean, and South Asia. Ventures in each of these regions have higher rates of reported revenue generation than those working in North America (35.4%). However, all three regions also have lower reported incidences of equity investment; the lowest rates found among ventures working in Sub-Saharan Africa (13.7%).

Table 4: Developed and developing-world ventures

Operates in:	N	Some Equity Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported	Some Philanthropy Reported
High-income economies (OECD)	1,465	23.0%	36.7%	50.3%	30.5%
Upper-middle-income economies	585	13.7%	54.7%	70.3%	24.6%
Lower-middle-income economies	1,349	16.6%	52.1%	72.9%	25.1%
Low-income economies	401	13.0%	62.3%	77.3%	38.7%

Table 5: Ventures by region

Operates in:	N	Some Equity Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported	Some Philanthropy Reported
North America	1,335	22.9%	35.4%	48.8%	30.2%
Sub-Saharan Africa	1,071	13.7%	56.0%	72.3%	33.3%
Latin America & the Caribbean	795	15.3%	57.5%	72.3%	22.8%
South Asia	440	18.9%	43.0%	75.0%	20.2%

Sectors and Impact Objectives

Table 6 summarizes performance indicators across the seven most prolific sectors represented in the sample. Equity investments are most common in the financial services sector (reported by 30.3% of the ventures), but least common in the education and environment sectors (16.0% and 14.5%, respectively). Financial services ventures are also the least likely to report earning revenues (34.0%). The sector with the greatest incidence of reported revenue generators is the environment sector (58.4%). Along with energy (71.8%), its ventures are also the most likely to report hiring employees (71.5%), while education sector ventures are the least likely in this regard (60.5%).

Table 6: Sector participation

Primary Sector	N	Some Equity Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported
Education	645	16.0%	46.7%	60.5%
Health	552	21.0%	37.3%	62.1%
Agriculture	526	17.1%	50.2%	63.7%
Financial Services	373	30.3%	34.0%	63.5%
Info. & Comm. Technology	263	19.4%	46.4%	63.5%
Energy	262	23.7%	48.1%	71.8%
Environment	221	14.5%	58.4%	71.5%

¹ See data.worldbank.org/about/country-and-lending-groups.

The most commonly-identified impact objectives in the sample are employment generation and community development. **Table 7** summarizes venture performance outcomes across the impact objectives that were identified most often by entrepreneurs. The likelihood of attracting outside equity investment is fairly consistent across impact areas, with two impact areas – community development and employment generation – reporting lower rates (16.1% and 16.3%). There is somewhat more variance in the likelihood of reporting positive revenues. Here, ventures dedicated to health improvement are the least likely to have reported positive revenue in the prior year (41.5%). There is also some variance in the probability of reporting employees. Not surprisingly, ventures dedicated to employment generation are the most likely to report prior year employees (67.8%).

Table 7: Impact objectives

(IRIS) Impact Objective	N	Some Equity Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported
Employment Generation	1,390	16.3%	50.9%	67.8%
Community Development	1,133	16.1%	47.8%	62.7%
Income/Productivity Growth	1,095	17.8%	46.3%	62.8%
Access to Education	906	17.7%	47.0%	63.0%
Health Improvement	894	19.6%	41.5%	64.1%
Equality and Empowerment	820	19.1%	46.7%	64.3%

Question asked: Which of the following impact objectives does your venture currently seek to address? (check up to three)

Profit Margin Aspirations

Table 8 presents a similar summary across the different profit margin aspirations expressed by entrepreneurs. Focusing on the for-profit ventures, the largest groups are comprised of ventures that seek profit margins in excess of 20 percent (N=1,203) and those that have no specific profit-margin targets (N=703). The small number of ventures with modest (0-5%) margin objectives are on average most likely to attract equity investors (24.4%). However, earned revenues and employees are more likely to be reported by ventures with more ambitious – but not excessive – margin expectations.

Table 8: Profit margin aspirations

Profit Margin Aspiration	N	Some Equity Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported
No specific target	703	18.2%	33.1%	48.4%
Margins of 0-5%	41	24.4%	43.9%	61.0%
Margins of 6-10%	153	19.0%	51.6%	69.3%
Margins of 11-15%	290	23.4%	54.1%	69.0%
Margins of 16-20%	477	21.4%	59.5%	71.9%
Margins of >20%	1,203	23.7%	48.9%	67.7%

(This table includes only for-profit ventures.)

Question asked: What are the financial goals for your venture?

Gender and Entrepreneurial Experience

Roughly half of the ventures report having at least one woman among the top three founders. **Table 9a** compares ventures established with and without women on their teams. The former group reports a significantly lower likelihood of attracting equity investment (15.1%, compared to 21.7% of the ventures with all-male teams). They are also significantly more likely to report revenues in the prior year (51.4% compared to 41.4%) and significantly more likely to have hired employees (64.8% compared to 61.5%). When teams with women founders are broken down into those that list a woman as the first founder versus those where a woman is listed second or third, this equity disadvantage is only evident among what might be called “women-led” ventures.

Table 9a: Founders' gender

Teams with:	N	Some Equity Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported
Men Only	1,937	21.7%	41.4%	61.5%
With Women	2,007	15.1%*	51.4%*	64.8%*
Woman Listed 1 st (Women-led)	1165	11.9%	50.1%	59.6%
Woman Listed 2 nd or 3 rd	839	19.7%*	53.2%	72.0%*

* difference is significant at $p < 0.05$

Roughly 70 percent of the ventures have at least one founder with prior entrepreneurial experience; someone previously involved in the launch of another for-profit or nonprofit venture (see **Table 9b**). These experienced founding teams are significantly better at attracting equity; 21.4% of them attracted outside equity investment, compared to 11.6% of the corresponding inexperienced teams. Prior entrepreneurial experience also yields significant improvements in the likelihood that a venture reports positive prior-year revenues or hiring any employees in that year.

Table 9b: Founders' prior entrepreneurial experience

Teams with:	N	Some Equity Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported
Inexperienced Founders	1,372	11.6%	42.7%	57.7%
Some Entrepreneurial Experience	2,753	21.4%*	47.9%*	65.5%*

* difference is significant at $p < 0.05$

Because founding teams that contain women are significantly less likely to report prior entrepreneurial experience (71.3% for all-male teams versus 64.0% for teams with at least one woman), we expand the contents of **Table 9a** to focus on inexperienced and then experienced teams (see **Table 9c**). This shows that the gender-based equity disadvantage is significant among the inexperienced and experienced founding teams.

Table 9c: Gender effects for inexperienced and experienced teams

Teams:	N	Some Equity Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported
<u>Without Entrepreneurial Experience:</u>				
• Men Only	555	14.2%	35.0%	55.5%
• With Women	722	9.8%*	50.1%*	60.9%*
<u>With Entrepreneurial Experience:</u>				
• Men Only	1,382	24.7%	44.0%	63.9%
• With Women	1,285	18.1%*	52.1%*	67.0%

* difference is significant at $p < 0.05$

Intellectual Property

Table 10 shows that 1,760 of the ventures report owning some intellectual property; i.e., patents, copyrights or trademarks. These ventures are significantly more successful attracting outside equity investment (26.3% versus 12.1%), and significantly more likely to have hired at least one employee in the prior year (71.5% compared to 56.4%), and to report positive revenues in that year (51.6% versus 42.2%).

Table 10: Proprietary intellectual property

Own Patents, Copyrights or Trademarks	N	Some Equity Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported
No	2,365	12.1%	42.2%	56.4%
Yes	1,760	26.3%*	51.6%*	71.5%*

* difference is significant at $p < 0.05$

Question asked: Whether assigned by an owner or obtained in some other way, does your venture have any of the following? (patents, copyrights, trademarks)

Accelerator Programs

In their application surveys, each entrepreneur is asked to rank (on a scale of 1 through 7, with 1 being the most important) the potential benefits from these programs in terms of “how important they are to your venture's development and success”. **Table 11** indicates the relatively high priority that sampled entrepreneurs place on potential networking benefits (i.e., “connections to funders”, “network development” and “mentorship”) along with indirect and direct access to venture funding. On the other hand, “gaining access to likeminded entrepreneurs” and “awareness and credibility” rank the lowest among the seven potential benefits.

Table 11: Benefits from accelerator programs

Potential Benefit from Accelerator Programs	Average Rank (lower=more important)
Access and connections to potential investors/funders	3.37
Network development (e.g., with potential partners and customers)	3.38
Securing direct venture funding (e.g., grants or investments)	3.48
Mentorship from business experts	3.50
Business skills development (e.g., finance and marketing skills)	3.95
Gaining access to a group of like-minded entrepreneurs	4.97
Awareness and credibility (e.g., association with a recognized program, press/media exposure)	4.98

Question asked: The following are some of the potential benefits that are typically associated with entrepreneurial accelerators. Please rank these benefits in terms of how important they are to your venture's development and success.

The relatively strong emphasis that entrepreneurs place on gaining access and connections to funders is not surprising. Entrepreneurs were asked how much additional investment (in equity and/or debt) they are planning to secure in the next 12 months. The median venture is seeking to raise \$25,000 over the next twelve months.

The surveys also provide some information about the performance implications of prior accelerator participation. 1,097 of the ventures in the sample report having had at least one founder participate in another accelerator program. **Table 12** shows that this group with prior accelerator experience are significantly better in terms of attracting outside equity (26.3% versus 15.2%). They are also significantly better when it comes to revenue generation (50.3% versus 44.7%) and hiring employees (68.8% versus 60.7%). Finally, the ventures with prior accelerator experience are significantly more likely to report prior philanthropic support (38.9% versus 24.0%).

Table 12: Prior accelerator participation

Prior Accelerator Participation	N	Some Equity Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported	Some Philanthropy Reported
No	3,028	15.2%	44.7%	60.7%	24.0%
Yes	1,097	26.3%*	50.3%*	68.8%*	38.9%*

* difference is significant at $p < 0.05$

Question asked: Has anyone on your founding team participated in any of the following accelerator programs?

Impact Measurement

Two approaches to tracking the impacts of social enterprises are being developed and implemented by IRIS and B Lab. Entrepreneurs were asked to indicate whether they are using either of these measurement systems. **Table 13** indicates that only a small minority – 529 for IRIS and 270 for B Lab – are doing so.

Table 13: Tracking impacts

	Yes	No
“Does your venture regularly track itself against any of the IRIS impact measures?”	529	3,302
(Reason given for “No”: “We have never heard of IRIS”)		(70.0%)
“Has your organization ever taken a B Impact Assessment?”	270	3,578
(Reason given for “No”: “We have never heard of B Lab”)		(73.3%)
“Does your venture regularly track impacts using any other established measurement approaches?”	1,087	2,755

When queried about this low take-up rate, the dominant reason for not implementing relates to a lack of awareness. There is also some indication that more ventures are electing to go different routes with their impact measurement, as 1,087 of the entrepreneurs indicate that they are currently using “other established measurement approaches.”

Participating versus Rejected Entrepreneurs

Most of the accelerator programs in this sample have made their cohort selection decisions. Based on these decisions, the sample houses information on 3,181 rejected applicants and 944 entrepreneurs that participated in the program to which they applied. **Table 14** shows an (understandable) bias among selectors toward ventures with more established track records. Prior to application, participating ventures are significantly more likely to report revenues in the prior year (53.8% versus 43.9%), and significantly more likely to have at least one employee (66.4% versus 61.8%). Finally, there is a significantly greater tendency for participating ventures to report some prior philanthropic support (32.1% versus 26.7%).

(It is also interesting to note that ventures with women on their founding teams are significantly more likely to be accepted into accelerator programs; 25.5% compared to a 19.8% participation rate for ventures with all-male teams.)

Table 14: Participating versus rejected applicants

Participated in Program	N	Some Equity Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported	Some Philanthropy Reported
No	3,181	18.2%	43.9%	61.8%	26.7%
Yes	944	17.9%	53.8%*	66.4%*	32.1%*

* difference is significant at $p < 0.05$

Observations from Follow-Up Surveys

A better way to account for the effects of accelerator programs on the performance of early-stage ventures is to track both participating and rejected entrepreneurs over time. Since the launch of the *Entrepreneurship Database Program*, several waves of follow-up surveys have been completed. With an overall response rate of roughly 50%, these surveys give us year-over-year data describing roughly 1,200 ventures that applied to participating programs in 2013 and 2014. These data were analyzed in a recently-released report, called *What's Working in Startup Acceleration*. As **Figure 1** indicates, 335 ventures that participated in programs grew revenues by an average of \$32,965 during their year of acceleration. This increase was significantly greater than the average revenue growth of \$1,359 reported by 852 ventures that applied to, but were not accepted into programs.

Figure 1. Acceleration Effects in 28 Programs

	REJECTED ENTREPRENEURS AVERAGE	PARTICIPATING ENTREPRENEURS AVERAGE	
1-Year Revenue Growth	\$1,359	\$32,965	✓
1-Year Employee Growth	0.66	1.11	✗
1-Year Investment Growth	\$11,255	\$34,528	✓
Equity	\$4,951	\$14,792	✗
Debt	\$2,436	\$7,520	✗
Philanthropy	\$3,369	\$12,216	✓
Sample Size	852	335	—

Statistically significant difference at the p<.05 level: ✓ YES ✗ NO

Source: *What's Working in Startup Acceleration: Insights from Fifteen Village Capital Programs*

The same comparison for full-time employees shows an average increase of 1.11 for accelerated ventures versus 0.66 for rejected ventures. This difference was not statistically significant. Finally, the average year-over year increase in total investment (equity, debt and philanthropy) for the accelerated ventures was \$34,528, which was significantly greater than the average increase of \$11,255 for ventures that were not accepted into programs. While the increase was felt across all three investment categories, on the increased philanthropic investment was statistically significant.

Database Program Plans for 2016-2017

The data collected for this summary come through partnerships with accelerators that opened applications between March 2013 and December 2015. We are currently expanding these partnerships and expect to collect application data through numerous additional programs in 2016. With this expanding program reach, we anticipate having more than 6,500 entrepreneurs in the overall database by the end of 2016.

We will also continue to collect follow-up data from the entrepreneurs who enter into the database, both those who participated in programs and those who were rejected. Then, in January/February and then July/August of every year, we will solicit updated venture information in shorter follow-up surveys. These expanding longitudinal data will allow researchers to examine the various factors that systematically influence new venture growth trajectories.

We have made the (anonymized) 2013 and 2014 application data available to researchers who want to conduct and publish their own studies of impact-oriented entrepreneurs and accelerator programs. In 2016, we will add the 2015 application data to these files, and will also release the first data files with follow-up data on rejected and accelerated entrepreneurs.

Finally, we are working with various sector stakeholders to support research projects that use these (and related) data to improve our understanding of critical early-stage entrepreneurial and acceleration processes. We released the first of these reports in early 2016 and plan to support one or two similar research reports for release in early 2017.

These parallel efforts will allow the *Entrepreneurship Database Program* to support the development of novel and important data-driven insights for policy-makers and practitioners that work on issues and programs related to the global impacts of entrepreneurship.