



The Entrepreneurship Database Program at Emory University

2017 Year-End Data Summary (Released February 2018)

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Executive Summary

Since 2013, the *Entrepreneurship Database Program* at Emory University has been partnering with accelerators and other entrepreneur support programs to collect detailed data from entrepreneurs during their application processes. These entrepreneurs are then resurveyed annually to gather valuable follow-up data. This report summarizes application data collected from entrepreneurs who applied to participating programs from 2013 to 2017. After setting aside duplicate application surveys, surveys with too much missing information, and surveys from entrepreneurs who declined to have their application information included in the *Entrepreneurship Database Program*, the observations in this 2017 Year-End Data Summary are based on 13,495 early-stage ventures.

Key observations from this 2017 Year-End Data Summary include:

- Roughly one-sixth 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.
- Less than 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.
- 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, lower-middle and upper-middle income countries are less likely than ventures from high-income countries to attract equity investments, but have a greater likelihood of reporting 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 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 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 of 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 in the prior year.
- Follow-up survey data (from 3,130 ventures) indicate that ventures participating in accelerator programs grow revenues and employees, as well as equity investment and philanthropic contributions, faster than those not accepted into programs. The equity and employee effects are significant.

Introduction

The *Entrepreneurship Database Program* at Emory University leverages relationships with a range 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, the EDP sets 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, Stichting DOEN and Citibanamex. The aggregated longitudinal data that are collected support rigorous 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 2017 Year-End Data Summary covers entrepreneurs who applied to accelerator programs that began accepting applications during the 2013 through 2017 window. After setting aside duplicate surveys, surveys with too much missing data, and surveys from entrepreneurs who declined to have their application information included in the program, the observations in this 2017 Year-End Data Summary are based on data describing 13,495 ventures whose founders applied through more than 175 different programs and channels (see **Table 1**).

Table 1: Current sample

Accelerator Partners (with multiple programs)	Programs	N
Village Capital	39	2,808
USADF	10	1,058
Points of Light	9	603
Startup Cup	7	204
IMPAQTO	5	163
New Ventures Group	5	371
Proempleo	5	79
Technoserve Central America	5	301
GrowthAfrica	4	476
Impact Hub	4	122
Pomona Impact	4	79
Spark* International	4	132
Yunus Social Business	4	474
Agora Partnerships	3	348
Intellectap	3	87
MassChallenge	3	378
University of South Florida	3	113
Unreasonable East Africa	3	326
Echoing Green	2	229
ENVenture	2	23
Impact 8	2	46
NMotion	2	73
Propeller	2	148
SeedSpot	2	28
Startup Chile	2	1,966
Unreasonable Institute Mexico	2	176
Villgro	2	198
(Single Programs)	40	2,129
(Other Channels)	.	357
Total	178	13,495

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 80 percent) are for-profit companies. These for-profit ventures were younger on average than the 1,364 nonprofit ventures when they applied to accelerator programs.

Table 2: Venture age and legal form

	For-profit	Nonprofit	Undecided	Other
N	10,804	1,364	502	807
Average Age	2.3 years	4.3 years	1.4 years	3.0 years
Median Age	1 year	2 years	1 year	2 years

Questions asked: "Is your venture a: nonprofit, for-profit company, undecided, other?" 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-sixth (15.1%) of all ventures in the sample report receiving some outside equity investment prior to completing their application surveys. A slightly lower percentage (11.6%) took on debt to help start their ventures, while a higher percentage (24.4%) are supported by philanthropic contributions. These percentages change to 17.4% (equity), 12.7% (debt) and 19.6% (philanthropy) when the nonprofit ventures in the sample are set aside.

Among the 2,039 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 \$33,000 and \$16,525.

Less than half (44.7%) 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 (59.5%) 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 through 2017; with lower incidences of equity and debt investments reported by ventures applying to programs in 2015 through 2017.

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	15.1%	11.6%	24.4%	44.7%	59.5%
Percent Yes – All For-Profits	17.4%	12.7%	19.6%	44.1%	59.0%
Percent Yes – Applied in 2013	19.1%	23.3%	29.9%	47.9%	61.3%
Percent Yes – Applied in 2014	21.5%	14.5%	26.0%	40.7%	61.7%
Percent Yes – Applied in 2015	14.6%	10.9%	28.6%	49.7%	64.3%
Percent Yes – Applied in 2016	13.9%	9.7%	21.2%	40.6%	56.5%
Percent Yes – Applied in 2017	13.7%	10.5%	24.4%	47.3%	59.5%

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) (2016)?" "Not counting founders, on December 31, 2012 (2013) (2014) (2015) (2016), how many people worked for your venture?"

Country of Operations

Although the ventures in this sample operate in more than 150 different countries, the majority comes from the United States (N=2,888), Mexico (1,612), India (1,214), Kenya (1,056), Chile (1,011), Uganda (852), Colombia (407), Nigeria (387), Brazil (283), South Africa (240), and Nicaragua (239). The World Bank classifies countries into four categories: high-income,

upper-middle-income, lower-middle-income and low-income.¹ Based on this breakdown, 8,853 of the ventures are working in low, lower-middle and upper-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 (58.2%, 49.2% and 45.3% compared to 33.6% for high-income countries); and are more likely to have reported hiring employees (71.7%, 69.1% and 58.0% compared to 47.6%). It is also surprising that ventures in the lower-middle and upper-middle income countries are less likely to report support from philanthropic sources (21.1% and 20.9% compared to 26.6%).

Table 4: Emerging market and high-income country ventures

Operates in:	N	Some Equity Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported	Some Philanthropy Reported
High-income economies (OECD)	4,608	18.2%	33.6%	47.6%	26.6%
Upper-middle-income economies	3,377	15.1%	45.3%	58.0%	20.9%
Lower-middle-income economies	2,748	14.4%	49.2%	69.1%	21.1%
Low-income economies	2,728	10.7%	58.2%	71.7%	28.4%

Table 5 groups ventures into the regions classified by the World Bank. The majority of the emerging-market ventures in this sample operate in Latin America & the Caribbean and Sub-Saharan Africa. Ventures in both of these regions have higher rates of reported revenue generation than those working in North America (35.8%). However, both regions also have lower reported incidences of equity investment; the lowest rates found among ventures working in Sub-Saharan Africa (10.0%).

Table 5: Ventures by region

Operates in:	N	Some Equity Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported	Some Philanthropy Reported
Latin America & Caribbean	4,568	13.9%	43.9%	56.8%	19.4%
Sub-Saharan Africa	3,678	10.0%	55.2%	68.6%	27.4%
North America	3,081	21.0%	35.8%	49.3%	30.4%
South Asia	1,338	18.0%	40.2%	69.1%	17.4%
Europe & Central Asia	454	18.3%	34.8%	51.5%	24.2%
East Asia & Pacific	278	17.6%	54.3%	62.2%	32.4%
Middle East & North Africa	64	25.0%	51.6%	70.3%	37.5%

Sectors and Impact Objectives

Table 6 summarizes performance indicators across the sectors represented in the sample. Equity investments are most common in the financial services sector (reported by 27.9% of the ventures), but least common in the artisanal and technical assistance sectors (10.3% and 10.1%, respectively). Financial services ventures are also the least likely to report earning revenues (34.8%). By far, the sector with the greatest incidence of reported revenue generators is the artisanal sector (64.7%). Ventures in the artisanal sector also the most likely to report hiring employees (68.3%), while culture sector ventures are the least likely in this regard (51.1%).

Table 6: Sector participation (N>150)

Primary Sector	N	Some Equity Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported
Education	2,050	14.8%	48.9%	61.8%
Agriculture	1,729	13.9%	54.9%	66.5%
Health	1,475	18.2%	38.6%	59.3%
Information and communication technologies	1,321	14.8%	35.7%	52.4%

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

Financial services	1,102	27.9%	34.8%	62.3%
Energy	695	18.6%	48.9%	66.8%
Environment	685	12.0%	52.0%	61.8%
Tourism	382	12.0%	44.8%	54.2%
Artisanal	300	10.3%	64.7%	68.3%
Supply chain services	246	13.4%	49.6%	58.5%
Water	230	13.9%	50.4%	68.3%
Culture	229	10.9%	42.4%	51.1%
Housing development	183	10.9%	49.2%	65.0%
Infrastructure/facilities development	165	13.3%	46.1%	58.2%

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 – employment generation and community development – reporting lower rates (13.7% and 13.4%). 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 (42.2%). 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 (65.4%).

Table 7: Impact objectives

(IRIS) Impact Objective	N	Some Equity Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported
Employment Generation	3,749	13.7%	51.1%	65.4%
Community Development	2,760	13.4%	48.7%	61.3%
Income/Productivity Growth	2,994	15.7%	48.4%	62.4%
Access to Education	2,418	15.9%	49.5%	63.7%
Health Improvement	2,170	16.8%	42.2%	62.2%
Equality and Empowerment	2,032	16.0%	46.8%	61.6%

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=3,969). The ventures with the highest – and ironically lowest – margin objectives are, on average, most likely to attract equity investors (20.1% and 22.2%). Earned revenues and employees are more likely to be reported by ventures with ambitious – but not extreme – 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%	135	22.2%	42.2%	61.5%
Margins of 6-10%	528	17.0%	51.3%	62.9%
Margins of 11-15%	913	17.5%	48.6%	64.4%
Margins of 16-20%	1,513	17.6%	53.7%	66.0%
Margins of >20%	3,969	20.1%	49.3%	63.7%

Question asked: What are the financial goals for your venture? Table includes only for-profit ventures.

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 (12.0%, compared to 18.5% of the ventures with all-male teams). However, they are significantly more likely to report revenues in the prior year (48.7% compared to 40.9%). 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 especially acute 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	6,565	18.5%*	40.9%	58.6%
With Women	6,616	12.0%	48.7%*	60.5%*
Woman Listed 1 st (Women-led)	3,760	9.5%	46.6%	56.0%
Woman Listed 2 nd or 3 rd	2,856	15.2%*	51.4%*	66.5%*

* difference is significant at $p < 0.05$

More than half 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; 17.8% of them attracted outside equity investment, compared to 11.5% of the corresponding inexperienced teams. Prior entrepreneurial experience also yields significant improvements in the likelihood that a venture reports earning revenues or hiring any employees.

Table 9b: Founders’ prior entrepreneurial experience

Teams with:	N	Some Equity Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported
Inexperienced Founders	5,758	11.5%	39.6%	51.5%
Some Entrepreneurial Experience	7,737	17.8%*	48.4%*	65.3%*

* difference is significant at $p < 0.05$

Because founding teams that contain women are less likely to report prior entrepreneurial experience (59.6% for all-male teams versus 56.2% 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 both 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	2,655	14.4%*	34.8%	49.6%
• With Women	2,896	9.1%	44.2%*	53.6%*
<u>With Entrepreneurial Experience:</u>				
• Men Only	3,910	21.2%*	45.1%	64.8%
• With Women	3,720	14.2%	52.1%*	65.9%

* difference is significant at $p < 0.05$

Intellectual Property

Table 10 shows that 5,508 of the ventures report owning some intellectual property; i.e., patents, copyrights or trademarks. These ventures are significantly more successful attracting outside equity investment (22.5% versus 10.0%), and significantly more likely to have hired at least one employee in the prior year (71.1% compared to 51.4%), and to report positive revenues in that year (53.8% versus 38.4%).

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	7,987	10.0%	38.4%	51.4%
Yes	5,508	22.5%*	53.8%*	71.1%*

* 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., “network development”, “connections to funders” and “mentorship”). 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)
Network development (e.g., with potential partners and customers)	3.33
Access and connections to potential investors/funders	3.48
Mentorship from business experts	3.50
Securing direct venture funding (e.g., grants or investments)	3.58
Business skills development (e.g., finance and marketing skills)	3.91
Gaining access to a group of like-minded entrepreneurs	5.03
Awareness and credibility (e.g., association with a recognized program, press/media exposure)	5.04

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 \$10,000 over the next twelve months.

The surveys also provide some information about the performance implications of prior accelerator participation. 3,978 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 (22.6% versus 12.0%). They are also significantly better when it comes to revenue generation (51.8% versus 41.7%) and hiring employees (67.5% versus 56.1%). Finally, the ventures with prior accelerator experience are significantly more likely to report prior philanthropic support (36.1% versus 19.5%).

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	9,517	12.0%	41.7%	56.1%	19.5%
Yes	3,978	22.6%*	51.8%*	67.5%*	36.1%*

* 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 – 1,698 for IRIS and 880 for B Lab – are doing so. 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 3,226 of the entrepreneurs indicate that they are currently using “other established measurement approaches.”

Table 13: Tracking impacts

	Yes	No
“Does your venture regularly track itself against any of the IRIS impact measures?”	1,698	10,090
(Reason given for “No”: “We have never heard of IRIS”)		(74.8%)
“Has your organization ever taken a B Impact Assessment?”	880	10,934
(Reason given for “No”: “We have never heard of B Lab”)		(81.0%)
“Does your venture regularly track impacts using any other established measurement approaches?”	3,226	8,589

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 8,669 rejected applicants and 1,985 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 (51.8% versus 44.0%), and to have at least one employee (62.2% versus 60.4%). Finally, there is a significantly greater tendency for participating ventures to report some prior equity investment (19.0% versus 14.9%) and some philanthropic support (30.7% versus 23.0%).

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	8,669	14.9%	44.0%	60.4%	23.0%
Yes	1,985	19.0%*	51.8%*	62.2%*	30.7%*

* difference is significant at $p < 0.05$

Observations from Follow-Up Surveys

A better way to account for the effects of acceleration 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 3,130 ventures that provided application data in the 2013 through 2016 window.² **Table 15** indicates that the average year-over-year changes on four key variables – equity, revenues, full-time employees and philanthropy – were all higher for the 704 participating ventures. The differences are significant ($p < 0.10$) for the equity and employment variables. Participating ventures grew equity investment by an average of \$6,199 more than rejected ventures while adding 0.75 more full-time employees.

Table 15: One-year changes for participating versus rejected applicants

Participated in Program	N	Average Equity Change	Average Revenue Change	Average Employees Change	Average Philanthropy Change
No	2,426	\$6,297	\$16,730	+0.58	\$2,708
Yes	704	\$12,496*	\$22,321	+1.33*	\$6,151

* difference is significant at $p < 0.10$

Database Program Plans for 2018

The data collected for this Year-End Summary come through partnerships with accelerators that opened and closed applications between 2013 and 2017. We are currently expanding these partnerships and expect to collect application data through additional programs in the next few years. With this expanding program reach, we anticipate having data from more than 225 programs in the database by the end of 2018. Recruiting efforts will focus on currently under-represented regions.

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. 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 through 2017 application data available to researchers who want to conduct and publish their own studies of impact-oriented entrepreneurs and accelerator programs. To further support data access, we also launched an on-line data portal (see www.galidata.org). Later in 2018, we will also release the first (anonymized) 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 second of these reports in early 2017 and plan to release a third major report in early 2018.

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 who work on issues and programs related to the global impacts of entrepreneurship.

² **Table 15** focuses on 80 programs that provide data from a sufficient number of participating and rejected ventures. We set aside roughly 50 ‘nonsense’ observations, whose extremely high reported levels of equity, revenues, employees or philanthropy (on application or follow-up surveys) would distort the reported averages.