



# The Entrepreneurship Database program at Emory University

# 2015 Mid-Year Data Summary (Released September, 2015)

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



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# **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 early 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 Mid-Year Data Summary* are based on 3,113 early-stage ventures.

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

- Roughly 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 \$23,530 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 highincome 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. Ventures that end up *participating in programs* are significantly more likely to report outside equity investments prior to filling out their application surveys. They are also significantly more likely to report revenues and employees in the prior year;
- Three rounds of *follow-up surveys* indicate that ventures participating in accelerators programs do not grow revenues and hiring levels faster during their year of acceleration than those not accepted into programs. However, their average increase in total investment (equity, debt and philanthropy) ventures is \$33,915 during the year of acceleration, which is \$14,076 greater than the average increase for ventures that 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 and collects 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 now part of the new *Global Accelerator Learning Initiative (GALI)* initiative, and is supported by *the Argidius Foundation, Kauffman Foundation, Lemelson Foundation, Omidyar Networks, and USAID*. 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 Mid-Year Data Summary covers entrepreneurs who applied to accelerators programs that began accepting applications in 2013, 2014 and early 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 Mid-Year Data Summary are based on data describing 3,113 ventures whose founders applied to 44 different programs and channels (see **Table 1**).

Accelerator Partner (# programs)	N
Accelerating Appalachia	45
Agora Partnerships (2)	234
Echoing Green	71
Impact 8 (2)	46
Momentum Project	22
POL CivicX (5)	351
SheEO	70
Technoserve, Nicaragua	151
UnLtd USA	49
Unreasonable (3)	495
US-ADF (2)	86
Village Capital (18)	1,246
Other Programs and Channels (6)	247
Total (44)	3,113

#### Table 1: Current sample

**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 75%) are for-profit companies. These ventures are younger on average than the 422 nonprofit ventures when applying to accelerator programs.

	For-Profit	Nonprofit	Undecided	Other
Ν	2,338	422	113	232
Average Age	2.7 years	3.8 years	1.6 years	2.8 years
Median Age	1 years	2 years	1 year	1 year

#### Table 2: Venture age and legal form

*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 (19.1%) of all ventures in the sample report receiving some outside equity investment prior to completing their application surveys. A slightly lower percentage (16.0%) take on debt to help start their ventures, while a higher percentage (28.6%) are supported by philanthropic contributions. These percentages change to 23.0% (equity), 18.2% (debt) and 21.4% (philanthropy) when the 422 nonprofit ventures in the sample are set aside.

Among the 594 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 \$25,000 and \$22,116 respectively.

Almost half (47.2%) 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 (64.1%) 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 differences between ventures that applied to participating accelerators in 2013, 2014 and 2015; with dramatically lower incidences of equity investment and debt, but higher incidences of philanthropy, revenues and employees reported by ventures applying to programs in 2015.

	Some Equity Reported	Some Debt Reported	Some Philanthropy Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported
Percent Yes - All	19.1%	16.0%	28.6%	47.2%	64.1%
Percent Yes – All For-Profits	23.0%	18.2%	21.4%	47.9%	64.8%
Percent Yes – 2013	19.0%	23.4%	29.9%	47.8%	61.3%
Percent Yes – 2014	21.7%	14.7%	26.1%	40.8%	62.0%
Percent Yes – 2015	13.8%	9.9%	32.1%	59.3%	71.4%

Table 3: Early-stage venture performance

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

# **Country of Operations**

Although the ventures in this sample operate in more than 100 countries, the majority comes from the United States (N=1,033), India (348), Kenya (314), Mexico (255), Nicaragua (179), Canada (121) and Uganda (108). The World Bank classifies countries into four categories: high-income, upper-middle-income, lower-middle-income and low-income.<sup>1</sup> Based on this breakdown, 1,318 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 (63.1% and 51.5% compared to 38.4%); and are more likely to have reported hiring employees (78.7% and 72.7% compared to 51.8%). 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 31.8%).

**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 (37.3%). However, all three regions also have lower reported incidences of equity investment; the lowest rates found among ventures working in Sub-Saharan Africa (15.9%). These, along with ventures in South Asia, are also the ones with the highest rates of hiring (73.2% and 76.3%).

<sup>&</sup>lt;sup>1</sup> See data.worldbank.org/about/country-and-lending-groups.

Tuble 1. Developed and developing world ventures									
		Some	Any Prior-Year	Any Prior-Year	Some				
		Equity	Revenues	Employees	Philanthropy				
Operates in:	Ν	Reported	Reported	Reported	Reported				
High-income economies (OECD)	1,262	22.8%	38.4%	51.8%	31.8%				
Upper-middle-income economies	496	13.9%	53.6%	69.6%	23.6%				
Lower-middle-income economies	1,055	17.8%	51.5%	72.7%	25.1%				
Low-income economies	263	16.7%	63.1%	78.7%	38.0%				

#### Table 4: Developed and developing-world ventures

#### 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	1,154	22.6%	37.3%	50.4%	31.8%
Sub-Saharan Africa	736	15.9%	57.1%	73.2%	32.5%
Latin America & the Caribbean	670	16.1%	53.4%	69.4%	21.5%
South Asia	372	18.5%	44.1%	76.3%	22.6%

## Sectors and Impact Objectives

**Table 6** summarizes performance indicators across the five most prolific sectors represented in the sample. Equity investments are most common in the financial services sector (reported by 32.8% of the ventures), but least common in the education and environment sectors (16.8% each). This pattern is reversed for philanthropic investments, with the lowest incidence observed among financial services ventures (15.2%) and the highest in the education, energy and environment sectors (32.2% to 34.6%). Financial services ventures are also the least likely to report earning revenues (32.0%). The sector with the greatest incidence of reported revenue generators is the environment sector (59.8%). Its ventures are also the most likely to report hiring employees (73.7%), while education sector ventures are the least likely (61.4%).

		Some Equity	Any Prior-Year Revenues	Any Prior-Year Emplovees	Some Philanthropy
Primary Sector	Ν	Reported	Reported	Reported	Reported
Education	547	16.8%	46.3%	61.4%	32.2%
Health	411	19.7%	36.5%	63.7%	31.4%
Agriculture	372	17.7%	53.2%	66.1%	24.7%
Financial Services	250	32.8%	32.0%	62.0%	15.2%
Energy	202	26.7%	47.0%	70.3%	33.7%
Environment	179	16.8%	59.8%	73.7%	34.6%
Info. & Comm. Technology	176	23.9%	51.7%	67.0%	29.5%

#### Table 6: Sector participation

The most commonly-identified impact objectives in the sample are employment generation (N=1,096) and community development (N=916). **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 one impact area – community development – reporting lower rates (17.4%). However, this latter impact area is second to equality and empowerment when it comes to attracting philanthropic contributions (34.0% and 34.4%, respectively). At the other end of the spectrum, ventures focused on income/productivity growth (25.4%) and employment generation (26.0%) are less likely to attract philanthropy. 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 (41.9%). There is also some variance in the probability of reporting employees. Ventures dedicated to community development are the least likely to report prior year employees (62.3%).

## Table 7: Impact objectives

(IRIS) Impact Objective	N	Some Equity Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported	Some Philanthropy Reported
Employment Generation	1,096	18.4%	50.9%	67.5%	26.9%
Community Development	916	17.4%	48.3%	62.3%	34.0%
Income/Productivity Growth	850	18.7%	47.8%	64.5%	25.4%
Access to Education	738	19.0%	46.2%	64.1%	31.2%
Health Improvement	692	19.9%	41.9%	66.3%	31.5%
Equality and Empowerment	669	19.4%	47.4%	65.0%	34.4%

*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=895) and those that have no specific profit-margin targets (N=488). The small number of ventures with modest (0-5%) margin objectives are on average most likely to attract equity investors (28.6%). 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

		Some	Any Prior-Year	Any Prior-Year
Profit Margin		Equity	Revenues	Employees
Aspiration	Ν	Reported	Reported	Reported
No specific target	488	19.1%	35.5%	50.6%
Margins of 0-5%	28	28.6%	46.4%	64.2%
Margins of 6-10%	120	23.3%	54.2%	73.3%
Margins of 11-15%	221	24.9%	56.1%	69.7%
Margins of 16-20%	375	23.7%	60.0%	72.3%
Margins of >20%	895	24.9%	48.8%	68.8%

(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 (16.3%, compared to 22.8% of the ventures with all-male teams). They are also significantly more likely to report revenues in the prior year (52.0% compared to 42.6%). 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 "womenled" ventures.

## Table 9a: Founders' gender

Teams with:	N	Some Equity Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported
Men-Only	1,442	22.8%	42.6%	63.0%
With Women	1,518	16.3%*	52.0%*	65.9%
Woman Listed 1 <sup>st</sup>	893	12.7%	50.8%	61.5%
Woman Listed 2 <sup>nd</sup> or 3 <sup>rd</sup>	622	21.7%*	53.5%	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; 21.7% of them attracted outside equity investment, compared to 12.9% 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.

Teams with:	N	Some Equity Reported	Any Prior-Year Revenues Reported	Any Prior-Year Employees Reported
Inexperienced Founders	916	12.9%	43.0%	59.2%
Some Entrepreneurial Experience	2,197	21.7%*	48.9%*	66.1%*

### Table 9b: Founders' prior entrepreneurial experience

\* difference is significant at p<0.05

Because founding teams that contain women are less likely to report prior entrepreneurial experience (73.3% for all-male teams versus 67.8% 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 7.5 percentage point equity disadvantage is significant among the experienced founding teams.

		Some Equity	Any Prior-Year Revenues	Any Prior-Year Employees
Teams:	Ν	Reported	Reported	Reported
Without Entrepreneurial Experience:				
• Men-Only	385	14.5%	34.0%	55.8%
With Women	489	12.3%	50.3%*	63.2%*
<u>With Entrepreneurial Experience:</u>				
• Men-Only	1,057	25.8%	45.7%	65.6%
With Women	1,029	18.3%*	52.8%*	67.2%

### Table 9c: Gender effects for inexperienced and experienced teams

\* difference is significant at p<0.05

# **Intellectual Property**

**Table 10** shows that 1,778 of the ventures report owning some intellectual property; i.e., patents, copyrights or trademarks. These ventures are significantly more successful attracting outside equity investment (27.3% versus 12.9%), and significantly more likely to have hired at least one employee in the prior year (72.1% compared to 58.0%), and to report positive revenues in that year (52.7% versus 43.0%).

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	1,778	12.9%	43.0%	58.0%
Yes	1,335	27.3%*	52.7%*	72.1%*

\* 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") along with indirect and direct access to venture funding. On the other hand, "gaining access to likeminded entrepreneurs" ranks 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)	3.40
Access and connections to potential investors/funders	3.38
Securing direct venture funding (e.g., grants or investments)	3.43
Mentorship from business experts	3.50
Business skills development (e.g., finance and marketing skills)	4.00
Awareness and credibility (e.g., association with a recognized program, press/media exposure)	4.89
Gaining access to a group of like-minded entrepreneurs	4.92

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 to 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 \$23,530 over the next twelve months.

The surveys also provide some\_information about the performance implications of prior accelerator participation. 832 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 (26.7% versus 16.3%). They are also significantly better when it comes to revenue generation (50.4% versus 46.0%) and hiring employees (66.9% versus 63.0%). Finally, the ventures with prior accelerator experience are significantly more likely to report prior philanthropic support (37.8% versus 25.3%).

Table 12: Prior accelerator participation

		Some Equity	Any Prior-Year Revenues	Any Prior-Year Employees	Some Philanthropy
Prior Accelerator Participation	N	Reported	Reported	Reported	Reported
No	2,281	16.3%	46.0%	63.0%	25.3%
Yes	832	26.7%*	50.4%*	66.9%*	37.8%*

\* 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

Table 13: Trackina impacts

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 – 405 (or 13.7%) for IRIS and 212 (or 7.1%) for B Lab – are doing so.

	Yes	No
"Does your venture regularly track itself against any of the IRIS impact measures?"	405	2,548
(Reason given for "No": "We have never heard of IRIS")		(1,731)
"Has your organization ever taken a B Impact Assessment?"	212	2,756
(Reason given for "No": "We have never heard of B Lab")		(1,956)
"Does your venture regularly track impacts using any other established measurement approaches?"	863	2,096

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 863 (29.2%) of the entrepreneurs indicate that they are currently using "other established measurement approaches."

# Accepted 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 2,467 rejected applicants and 516 entrepreneurs that participated in the program that they applied to. **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 have some outside equity investment (23.3% versus 19.1%). They are also significantly more likely to report revenues in the prior year (55.6% versus 45.4%), and significantly more likely to have at least one employee (68.4% versus 63.0%). Finally, there is a significantly greater tendency for participating ventures to report some prior philanthropic support (34.1% versus 27.9%).

Participated		Some Equity	Any Prior-Year Revenues	Any Prior-Year Employees	Some Philanthropy
in Program	N	Reported	Reported	Reported	Reported
No	2,467	19.1%	45.4%	63.0%	27.9%
Yes	516	23.3%*	55.6%*	68.4%*	34.1%*

### Table 14: Participating versus rejected applicants

\* difference is significant at p<0.05

## **Results 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 participating and rejected entrepreneurs over time. Since the launch of the Entrepreneurship Database program, three waves of follow-up surveys have been completed – one in January/February, 2014, another in July/August, 2014 and a third in January/February, 2015. With an overall response rate of roughly 50%, these surveys give us year-over-year data describing 816 ventures. As **Figure 1a** indicates, the 210 ventures that were accelerated in programs that ran in 2013 and early 2014 grew revenues by an average of \$27,665 during their year of acceleration.





This increase was less than the average revenue growth of \$37,171 reported by the 606 ventures that applied to, but were not accepted into programs. The same comparison for full-time employees shows an average increase of 1.22 for accelerated ventures versus 1.03 for rejected ventures (**see Figure 1b**). Finally, **Figure 1c** shows that the average year-over year increase in total investment (equity, debt and philanthropy) for the accelerated ventures was \$33.915, which was \$14,076 greater than the average for ventures that were not accepted into programs.



## Database Program Plans for 2015-2017

The data collected for this summary come through partnerships with accelerators that opened applications between March, 2013 and June, 2015. We are currently expanding these partnerships and expect to collect application data through numerous additional programs in 2015. With this expanding program reach, we anticipate having close to 4,500 entrepreneurs in the overall database by the end of the calendar year.

We will also continue to collect follow-up data from the entrepreneurs who enter into the database; those that participate in programs and those that are rejected. In January/February and then July/August of every year,

we 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 are making 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. Beginning in the first quarter of 2016, we will release additional data files – including 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 expect the first of these reports to be written and released in early 2016.

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.