ENTREPRENEURSHIP & ACCELERATION

Questions from the Field

Photo courtesy of The Points of Light Civic Accelerator.

Return on Investment for Accelerators | April 2018

At the Argidius Foundation, we assess the return on total investment (ROTI) of the capacity development programs that we support. What can your data tell us about the return on investment for accelerator programs?

—Harry Devonshire
Evaluation Officer, Argidius Foundation

As the number and type of accelerator programs expand, funders are becoming more interested in calibrating the return on investment for investments in these programs. While there are a number of ways to think about the value for money that accelerators provide, most aspire to accelerate the funds available to grow early-stage ventures through increases in revenue and investment.

This brief provides an initial look at venture outcomes during the year of acceleration in comparison to the cost of programs, expanding the ROTI methodology developed by the Argidius Foundation.[1] The analysis suggests that the incremental flow of new funds into cohort ventures exceeds the amount that programs spend on operations and direct investments into cohort ventures. However, it also reveals considerable variability, suggesting that funders need to pay attention to where their accelerator funding dollars are going.

[1] The methodology developed by the Argidius Foundation focuses on incremental revenues, while the following analyses broaden the focus to include investment.

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About the Data

Since 2013, the Entrepreneurship Database Program (EDP) at Emory University has been collecting data from entrepreneurs who apply to accelerator programs around the world. The EDP partners with a range of programs to collect consistent data from entrepreneurs during their various application cycles, and then records whether each applicant participated in the program. Roughly one year later, participating and non-participating ventures complete follow-up surveys that capture year-over-year changes in variables like revenues, employees, and investment.

Accelerator program managers are also asked to provide information about their programs, including the total financial cost of the program, as well as any direct investments made into participating ventures. After setting aside data from programs that did not disclose program cost information and programs with insufficient survey responses from participating and non-participating ventures, and then focusing on the ventures that provided application and follow-up data, the sample used for this analysis come from 2,869 ventures that applied to 52 programs.[2] Roughly 22% of these ventures participated in the program to which they applied.

Financial Return on Total Investment

One indicator of the value of an accelerator program is its financial return on total investment (ROTI), which tracks the flows of new funds - revenues plus equity and debt investments plus philanthropic contributions – into participating ventures and then compares those flows to the financial costs of running the program. If one dollar spent running a program and/or investing directly in a participating venture results in more than one dollar of incremental funding for participating ventures, then one might infer a positive multiplier effect for accelerator program investments.

The gross ROTI for each program compares revenue, equity, debt and philanthropy levels reported for the year of acceleration to those reported in the previous year. After summing these (reported and inferred) inflows across all participants in each program, we compare the sums to the amount spent on that program, including program costs and direct investments into participating ventures. The specific components of the gross ROTI calculation are:

- **Cohort Size (N)** = Total number of participants in an accelerator program.
- **Average Incremental Revenues (IR)** = For participants, the average of the difference between revenues reported in the year prior to acceleration and those reported one year later.
- **Average Incremental Equity (IE)** = For participants, the average of the difference between outside equity reported for the year prior to application and that reported one year later.
- **Average Incremental Debt (ID)** = For participants, the average of the difference between new debt reported for the year prior to application and that reported one year later.

[2] A small number of responses were also set aside from the calculations presented here due to venture financing information that was irreconcilable with the rest of the sample.

- **Average Incremental Philanthropy (IP)** = For participants, the average of the difference between philanthropic support reported for the year prior to application and that reported one year later.
- **Program Investment (PI)** = Total reported program costs plus venture investments made by the program itself.
- ***Gross ROTI*** = *N * (IR + IE + ID + IP) / PI*

In the current sample of 52 accelerator programs, the average gross ROTI is $2.93. On average, the total incremental funds flowing into participating ventures for every one dollar spent on operating costs and direct investments is $2.93. However, this average masks considerable program-to-program variability; the minimum and maximum gross ROTI in this sample are $-42.53 and $25.24.

GROSS ROTI

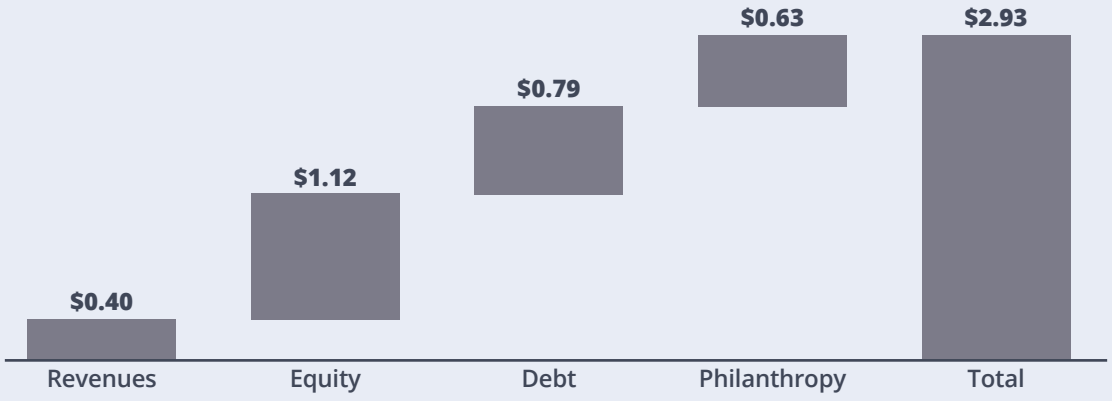
◀ *table 01* ▶

	PROGRAMS	AVERAGE	STANDARD DEVIATION	MINIMUM	MAXIMUM
Gross ROTI	52	$2.93	$8.81	-$42.53	$25.24

It is interesting to see how the various ROTI components contribute to this $2.93 average. Figure 1 shows that the biggest contributor to gross ROTI is new equity (+$1.12 on average) followed by debt (+$0.79) and philanthropy (+$0.63).

GROSS ROTI BROKEN DOWN

◀ *figure 01* ▶



Accounting for the Rejected Ventures – Net ROTI

These numbers do not account for the fact that non-participating ventures also experience year-to-year changes in revenue and investment outcomes. To account for typical changes that happen outside the context of the sampled accelerators, we use the EDP data to calculate the average changes in revenue and investment for the ventures that were rejected by each sampled program:

- **Baseline Incremental Revenues (BIR)** = Average incremental revenues for non-participants.
- **Baseline Incremental Equity (BIE)** = Average incremental outside equity for non-participants.
- **Baseline Incremental Debt (BID)** = Average incremental debt for non-participants.
- **Baseline Incremental Philanthropy (BIP)** = Average incremental philanthropy for non-participants.
- ***Net ROTI*** = *N * [(IR-BIR) + (IE-BIE) + (ID-BID) + (IP-BIP)] / PI*

After accounting for the typical performance of rejected ventures, the average net ROTI falls to $2.05. On average, the estimated *net additional* funding flowing into participating ventures for every one dollar spent on program costs and direct investments was $2.05. Again, the average masks considerable variability, with the minimum and maximum net ROTI in this sample coming in at $-43.20 and $35.10.

NET ROTI

◀ *table 02* ▶

	PROGRAMS	AVERAGE	STANDARD DEVIATION	MINIMUM	MAXIMUM
Net ROTI	52	$2.05	$9.56	-$43.20	$35.10

Breaking net ROTI into its four components reveals a fairly consistent pattern. However, while the contribution of equity flows to gross and net ROTI are similar, the net contribution of incremental revenues is actually negative.

NET ROTI BROKEN DOWN

◀ *figure 02* ▶

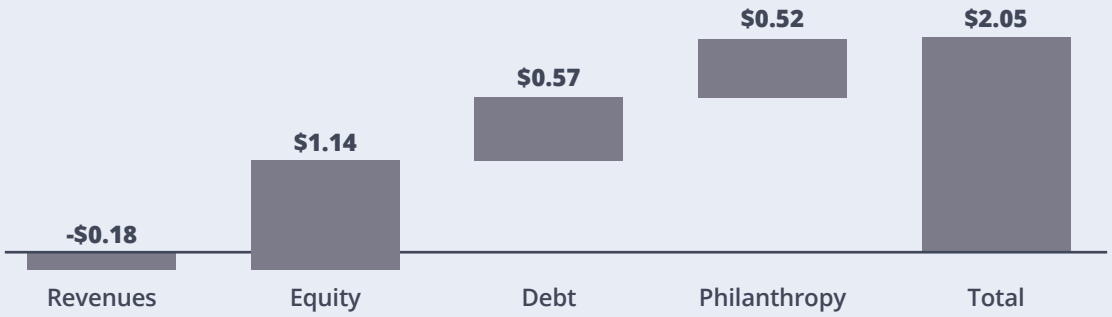
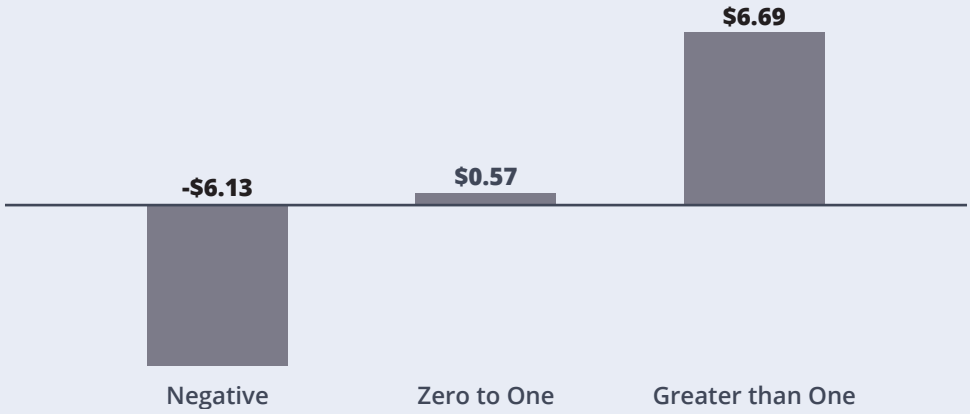


Figure 3 indicates the number of times that investments in accelerator programs led to more (short-term) incremental funding for participating ventures. For 29 of the programs in this sample, net ROTI is greater than one - a dollar spent results in more than one dollar of incremental funding for participating ventures. For 15 programs, a dollar spent corresponds with a decrease in incremental funding for participating ventures, because a typical rejected venture actually experienced higher growth in revenues and investment.

NEGATIVE AND POSITIVE NET ROTI PROGRAMS (AND CORRESPONDING AVERAGE)

◀ *figure 03* ▶



Last, we look inside each program and identify its most positive contributor to net ROTI. For 18 programs, revenue growth represents the largest positive contributor to net ROTI. In six programs, the main driver of incremental funding is debt. In between these two extremes are programs where equity (17 programs) and philanthropy (11 programs) are dominant.

ROTI THROUGH DIFFERENT CHANNELS

◀ *table 03* ▶

TOP ROTI COMPONENT:	NET ROTI (TOTAL)	NET ROTI (REVENUES)	NET ROTI (EQUITY)	NET ROTI (DEBT)	NET ROTI (PHILANTHROPY)
Revenues (N=18)	$6.55	$5.75	$0.48	-$0.50	$0.81
Equity (N=17)	$3.12	-$0.59	$3.30	$0.61	-$0.21
Debt (N=6)	-$11.65	-$16.05	-$0.67	$5.77	-$0.70
Philanthropy (N=11)	$0.51	-$0.61	-$0.16	-$0.56	$1.84
Overall (N=52)	$2.05	-$0.18	$1.14	$0.57	$0.52

Figures 1 and 2 showed that the weakest overall contributor to net ROTI is revenue growth. However, Table 3 shows that the 18 programs where revenue growth dominates have the highest average net ROTI (+$6.55) and show positive net flows of equity and philanthropic investments. Programs where equity growth dominates also deliver positive increments through debt channels, but show negative incremental revenue and philanthropy flows.

What does this mean?

This brief provides an initial look at the return on investment for accelerator programs based on short-term funding flows into cohort ventures. Accelerator program supporters will be pleased to learn that, on average, a $1 expenditure on accelerator programs corresponds with more than $2 of incremental funding for entrepreneurs and their early-stage ventures. Moreover, the success stories – where programs turn $1 of spending and investment into more than $1 of incremental funding for participating ventures – represent the majority of the programs in this sample.

The data also shed light on many program-to-program differences in performance:

1. In 15 cases, programs turn $1 of support into negative net flows of funding for cohort ventures. So, while there is room for optimism, there is also cause for careful scrutiny of the factors that distinguish positive program outcomes from the more problematic cases.
2. Overall, the largest individual contributor to net ROTI is incremental equity growth. However, the 18 programs where revenue growth dominates net ROTI show the best overall numbers. It seems that the accelerator program elements that produce the best revenue growth outcomes are also conducive to equity and philanthropy growth.
3. On the other hand, program elements that lead to superior equity growth outcomes seem to produce weaker revenue and philanthropy growth outcomes. These patterns suggest a complex interplay between various accelerator program choices and the ability to drive incremental funding into accelerated ventures.

The calculations in this brief provide preliminary guidance about how we might use the accumulating Entrepreneurship Database Program data to understand how accelerators are catalyzing growth among the ventures they support. However, the sample of programs is still small, and we have not yet looked past these very short-term effects. As the database continues to expand, we will have a larger sample of programs to learn from, and a longer time-series of funding data to explore. When combined with the detailed program-level data that are also being collected, we should be able to produce deeper insights about how accelerators are supporting the development of early-stage ventures around the world.

Global Accelerator Learning Initiative

The Global Accelerator Learning Initiative (GALI), a collaboration between ANDE and Emory University, is designed to explore – and answer – key questions about enterprise acceleration, such as: Do acceleration programs contribute to revenue growth? Do they help companies attract investment? GALI builds on the Entrepreneurship Database Program at Emory University, which works with accelerator programs around the world to collect and analyze data describing the entrepreneurs that they attract and support.

To learn more about GALI, please visit www.galidata.org.

The Global Accelerator Learning Initiative has been 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.