Lean Innovation – Funding STEM education

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## Problem / Question

Does Lean Innovation provide a new avenue for funding STEM Education?

## Hypothesis

- Traditional sources of funding have started drying up. To fill this void, Venture Capital & Private Equity have provided a new avenue for funding R&D through innovation and entrepreneurship.
- Empirical research may help verify whether STEM education may be funded through Accelerator-style funding

## Project Overview

- NSF launched Innovation-Corps program in 2010. The American Innovation and Competitiveness Act, 2016 praised the NSF I-Corps efforts with France Cordova, NSF Director announcing a 14% jump in program funding.
- Steve Blank testified to the Congressional Committee on Science, Space and Technology (2012) that an unexpected result of lean Launchpad was an impact on the professor’s own thinking about how they teach their science and engineering students.
- President Obama in State of Union Address (2011) launched $600 Venture et. al., 2014)
- The researcher collected data from Corporate Venture Capital groups have made huge investments as compared to Angel et al, 2014)

## Variables

- Business
- Higher Education
- Government
- NSF I-corps
- Private Innovation Funds
- Corporate
- Institutional
- Angel

## Methods

- The researcher extracted 117 MSTI variables from OECD website. The data was filtered by “Country” and “Year” to compare BERD against Gerd and HERD variables to prove that traditional sources of funding are drying up.
- The researcher collected data from Venture Monitor, a report published by Pitchbook Page 7, 8 and 13 provide yearly data on Angel, Early-stage VC and Corporate VC respectively. More investment in CVC leads to higher contribution in innovation (Chemmanur et al., 2014)
- The researcher ran a scope through Pivot database with the keyword “innovation” to extract 1188 sources of innovation funding. These are then filtered by country, amount, upper limit and sponsor. The ten major sources of innovation funding are highlighted.

## Conclusion

- While government expenditure on R&D has been on a decline, business expenditure on R&D has actually increased
- Corporate Venture Capital groups have made huge investments as compared to Angel or Institutional Venture Capital groups. Higher investment in CVC leads to higher contribution to growth of innovation (Chemmanur et al., 2014)
- With NSF leading the charge, innovation funding for STEM Education has seen huge interest from private sponsors such as Blackstone and KSL.

## Works Cited

- Stone, V. I., & Lane, J. P. (2012). Modelling technology innovation: How science, engineering, and industry methods can combine to generate beneficial socioeconomic impacts. Implementation Science, 7(1), 44.