

# VENTURE CAPITAL IMPACT: FROM MACRO TO MICRO

Venture Capital has made and continues to make a tremendous impact on the macro economy, shaping it in a variety of ways. The top 5 public companies (total market capitalization) in the United States are all venture backed: Apple, Alphabet (Google), Microsoft, Facebook and Amazon. Based on 2015 data, of the 1,339 companies that have gone public since 1974, 42% (556) can trace their roots back to venture capital. Those 556 companies account for an impressive 85% of all research and development spending by companies that went public after 1974. While the venture capital industry as a whole is still fairly new historically speaking, public companies with venture capital backing employ over four million people and private companies with venture backing represent millions more jobs. (*Stanford Business, 2015*).

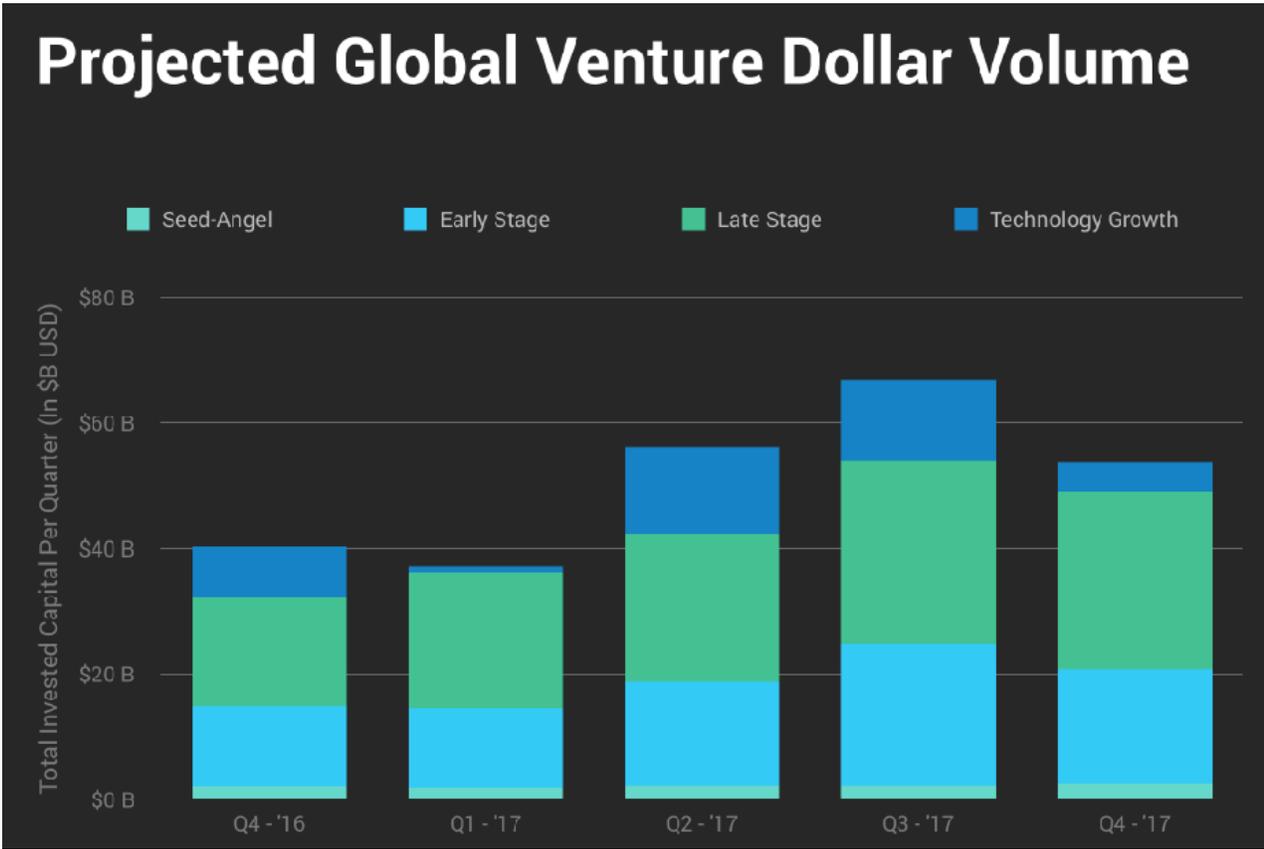


Figure 1. From Crunchbase (2017 Year in Review)

As illustrated in Figure 1, excerpted from Crunchbase's 2017 Year in Review, the amount of venture funding over the most recent five quarters has averaged in the \$50 billion range per quarter. Significant numbers of rounds have occurred for seed, early and

late stage companies, resulting in meaningful macroeconomic impact. While venture capital has a significant macroeconomic impact, lesser understood is its microeconomic impact on cities - particularly midtier cities like Champaign-Urbana, Illinois; Madison, Wisconsin; Ann Arbor, Michigan; and Columbus, Ohio. There is a variety of ways that venture impacts the local economies of these and other underserved cities. By underserved, we mean cities receiving a significantly smaller per-capita allocation of venture capital than the coastal regions of Silicon Valley, Boston, and NYC. Here are five notable ways in which venture is having a meaningful impact on these underserved markets.

### TRANSFORMATION OF TAX-FUNDED RESEARCH INTO COMMERCIAL ENTITIES

Many of the underserved markets are home to world renowned public and private research universities. University-created intellectual property is being turned into commercial enterprises with the mission-critical capital provided by venture. What is happening in essence is that federally funded research dollars are being leveraged with venture capital resulting in functional, often flourishing, society-contributing businesses. The total research expenditure at the University of Illinois at Urbana-Champaign was approximately \$600M per year over the last few years. In fact, UIUC has been awarded more NSF funding than any other university over this time period. Taking advantage of a now-tech-transfer-friendly environment, dozens of startups have been launched during this same period. Notably, from 2010-2014, over \$72M in SBIR/STTR grants were administered to UIUC Research Park start-ups. These companies are benefiting from infusions of venture funding and non-dilutive grant funding.

While UIUC is an outstanding research university, there are several others throughout the Midwest experiencing similar tech commercialization success. Over the last two decades most of these institutions have implemented an intentional process of technology commercialization in combination with tax-funded creation of intellectual property, ultimately leveraging the

expenditure of tax federal dollars to drive microeconomic development. In our hometown of Urbana-Champaign, we've witnessed better entrepreneurial education, great growth of the Research Park and a healthy and functional Office of Technology Management that facilitates technology transfer to the private sector. These elements are not sufficient in themselves, but pour in the fuel of venture capital funding and the tech commercialization engine is ready to go!



## JOB CREATION

Probably the most tangible impact on micro economies is the creation of high-paying jobs. Venture capital funding from Serra, Illinois Ventures, and a variety of co-investing venture funds has resulted in creation of several hundred high-paying jobs in our local economy. Startup companies incubated in the UIUC Research Park have raised \$910 million in outside capital. Of this total, \$244 million in venture and angel capital was raised while the startup companies were located in the UIUC Research Park, producing significant employment impact in a community of about 125,000 total. In turn, new tech jobs have a multiplier effect, increasing non-tech jobs in the service sector and other more traditional business sectors.

## CATALYZING INNOVATION

A third way in which venture is impacting the microeconomic scene is by catalyzing innovation. Large, well established companies often don't have the proper incentives to innovate. In fact, much of their success can come from perpetuating "the current way of doing things." Hence, startups are necessary to drive innovation forward. This is their mission -- to find some perplexing problem in the marketplace and develop an innovative solution to solve that problem. As venture provides the means to drive these innovating companies forward, crucial pain points in the marketplace are resolved.

## CULTURAL ENHANCEMENT OF THE CITY

This is sort of a "side effect" of job creation and increased innovation -- if we create high-paying jobs, those folks in turn fund and participate in the cultural enhancement of a city through supporting the arts, downtown redevelopment efforts, sporting events, etc. In Champaign, we've seen the complete revitalization of what was a dying downtown. Nowadays, it is a bustling combination of local restaurants, clubs, tech companies, condos and loft apartments. Likewise the arts scene features a number of festivals and events including the unique Boneyard Arts Festival and PYGMALION which features not only music and food but showcases innovation and entrepreneurs.

## PROVIDING CAPITAL RETURNS

Finally, by providing exceptional returns to local investors, they in turn re-invest those proceeds into more local opportunities, and the cycle continues. For Serra Capital, this has been especially true, with approximately 70% of our investors across all Funds from the local county or within a 150 mile radius. Satisfaction within Fund I led to increased participation in Fund II and the same for Fund III. With Fund I at \$5M in capital and 17 investors, Fund III is at \$40M with nearly 100 investors.

**To further illustrate the above points, we have taken Serra's initial market of Urbana-Champaign, Illinois and shown how Venture Capital has impacted the landscape of the twin-cities.**

## CASE STUDY: CHAMPAIGN-URBANA, ILLINOIS & THE AGTECH SCENE

Illinois' startup scene as a whole has been getting brighter and bigger, thanks to Chicago VC-backed companies like Groupon and Grubhub going IPO, and cars.com and Braintree being acquired. Despite being one of the more average sized cities in the state of Illinois, Urbana-Champaign comes in second only behind Chicago as one of the most VC-backed (*CBI Insights, 2014*) cities. With the world class University of Illinois residing in Urbana-Champaign, it is no surprise that there is an impressive



amount of venture capital being invested in local companies. Further to the point, Urbana-Champaign has developed a sub-speciality in Ag-Tech, a growing scene that is becoming world-class.

Ag Tech is becoming increasingly important, from local to global, and in every geography. The need for more food production combined with dwindling acreage has put Ag back on the map. 2016 saw new highs in venture capital invested in Ag with a staggering \$800 million.

Agriculture is a large, slow growing and slow changing industry, representing an equally large opportunity to increase efficiencies via technology. The Midwest region is well poised to gain "critical mass—in one place—of unusual competitive success. Following the rise of all the major pieces necessary to build a strong, supportive innovation ecosystem." (*Agtech in the Midwest: Creating Fertile Ground For the Next Unicorn, 2017*). The UIUC Research Park is presently home to 13 Ag Tech startups, each a vital part of the growing Ag subculture of Champaign. One notable example is Serra portfolio company Agrible, featuring "real time agronomy" which is the most efficient and profitable approach to sustainable crops on the farm. Agrible is providing real-time information and services for growers, Ag retailers, and CPGs to take meaningful, strategic action. Agrible works across the Ag spectrum with partners like ADM, John Deere, General Mills and ABInbev. Serra led the Series Seed and Series A rounds for Agrible, enabling the company to grow quickly and become an industry leader. With a team of 50 and a recently funded Series B round, Agrible is poised for its most successful year yet.

As one of the premier Ag schools in the world, the University of Illinois has distinguished itself as a major player in the Ag-Tech scene. For starters, approximately 20% of the R&D budget at the University routinely goes toward research in the field of agricultural science (for example, roughly \$131M of the 2016 R&D Expenditure of \$625M, was expended in Ag - this is the 5th highest in the country). Yet the University has gone far beyond a traditional research commitment and as noted above has taken deliberate steps to put in place a now-flourishing tech commercialization ecosystem. UIUC boasts a mature technology transfer office, an award-winning incubator, and a robust Research Park, which has attracted several Fortune 500 companies. The park features such Ag heavyweights as John Deere, Monsanto, Grainger, ADM, ABInbev and Dow-Dupont. Entrepreneurial educational programs developed by and supported through the Technology Entrepreneurship Center and initiatives like I-Start

and Entrepreneur-In-Residence are assisting entrepreneurs in the earliest stages, creating more attractive investment opportunities for venture investors. The Research Park is now home to more than 110 companies and growing, employing 2,000 people in high-technology careers.

With all the activity revolving around the hot tech ecosystem in Urbana-Champaign, it is not going unnoticed. In 2013, the Research Park incubator was named “One of Three College-Town Incubators Worth Watching” by Inc. Magazine. In 2015 the University of Illinois was recognized as one of the leading public universities for tech startup talent by Tech.Co. Forbes magazine ranked Urbana-Champaign 20th among 168 small cities in its Best Places for Business study. Serra Ventures has routinely ranked as a top 10 most active Venture Capitalist in the Great Lakes Region. Urbana-Champaign was also listed as a “High Tech Challenger to Silicon Valley” with it being in the top 10 for venture deals per capita (*High-Tech Challengers to Silicon Valley, 2013*).

Ultimately, there is great and growing synergy between the world class University of Illinois, the Fortune 500 Ag companies and Ag-Tech startups. As the three of these elements combine, the whole is greater than the sum of the individual parts, making Urbana-Champaign a truly unique place for big things to happen. Serra is proud to have catalyzed a number of start-ups in its hometown, even as our reach has extended throughout the country to cities like Chicago, St. Louis, Madison, Cincinnati, Lincoln, Kansas City and San Diego. We see bright days ahead not only in Ag-Tech but in the larger microeconomics of each of these and similar cities.

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