

# The State of Technology-Based Start-Ups in the United States

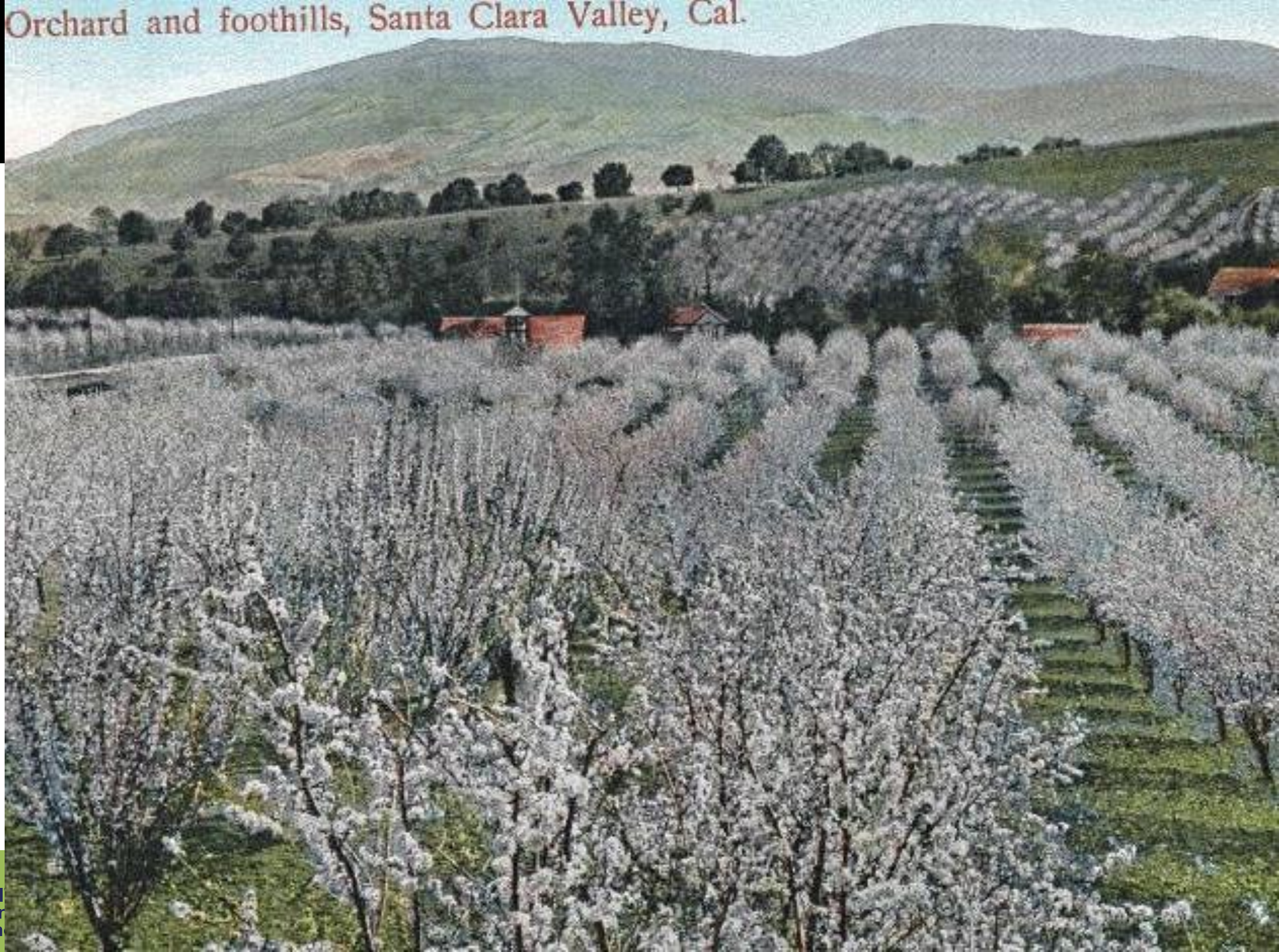
## Information Technology and Innovation Foundation

Scott Stern, MIT and NBER

November 2017



Orchard and foothills, Santa Clara Valley, Cal.

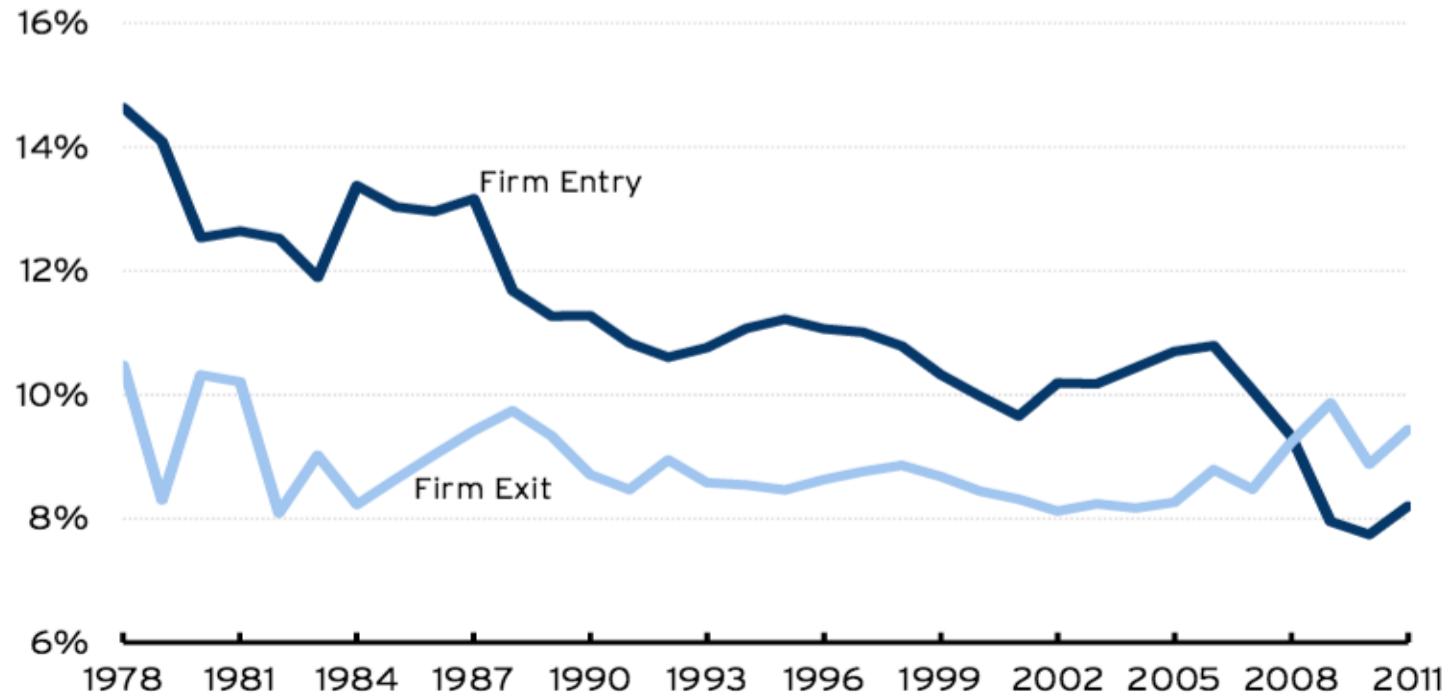




# The Decline of Business Dynamism: Quantity

---

The U.S. economy has become less entrepreneurial over time  
Firm Entry and Exit Rates in the United States, 1978-2011



- Decker, Haltiwanger, Jarmin, and Miranda (2013,2015)
- Haltiwanger, Jarmin, Kulick, and Miranda (2015)
- Hathaway and Litan (2014a, 2014b)

# The Shots on Goal Approach

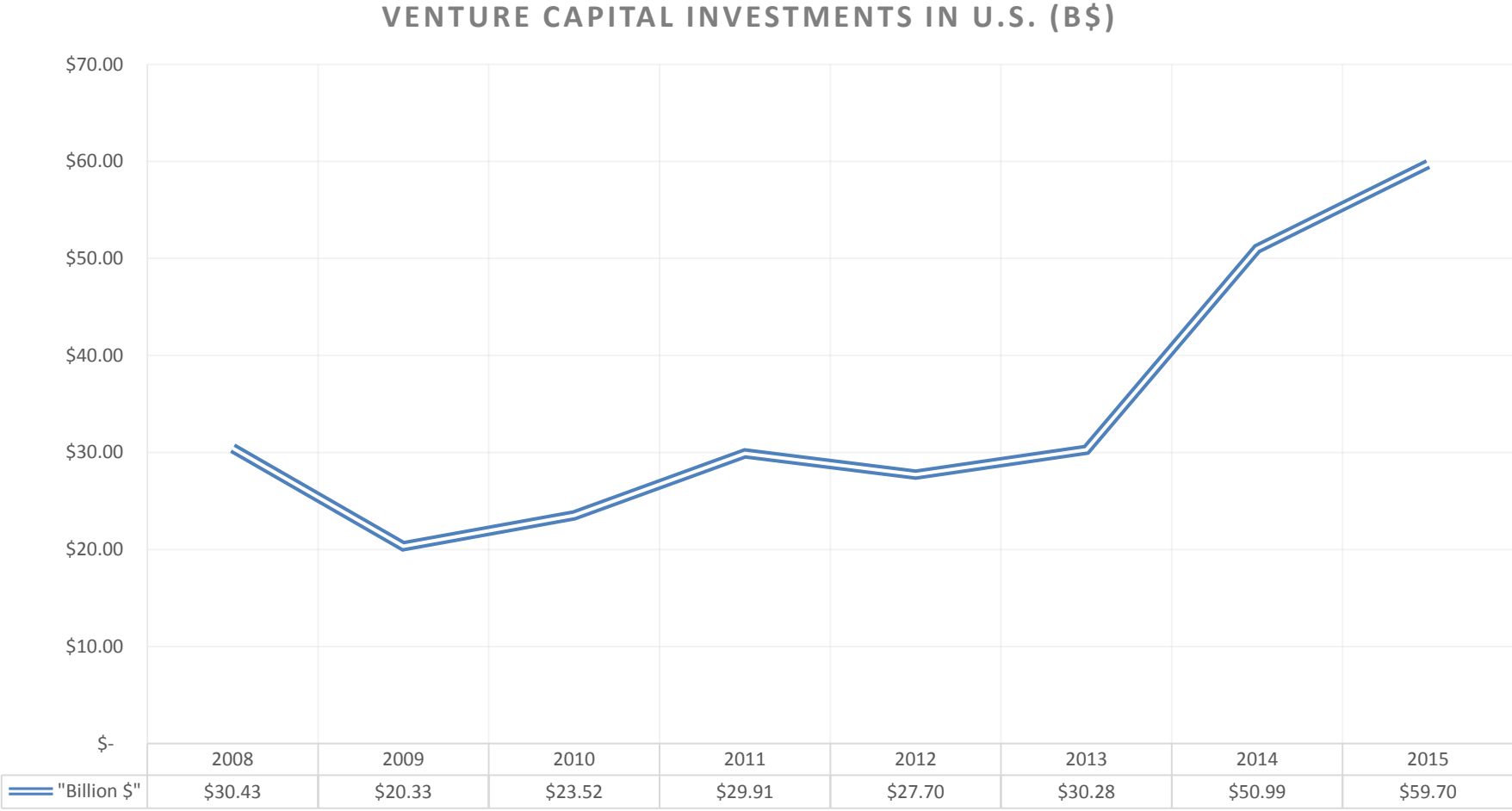


- “We can argue over the details, but we’ll make progress if we begin by agreeing on what drives economic growth and what must be encouraged: start-ups.”

Litan, 2012

# Private funding of “growth-oriented” firms seems to be on the rise!

---





**Marc Andreessen** ✓

@pmarca



**Follow**

"There's too much entrepreneurship: Disruption running wild!" "There's too little entrepreneurship: Economy stalling out!"

RETWEETS

**55**

LIKES

**78**



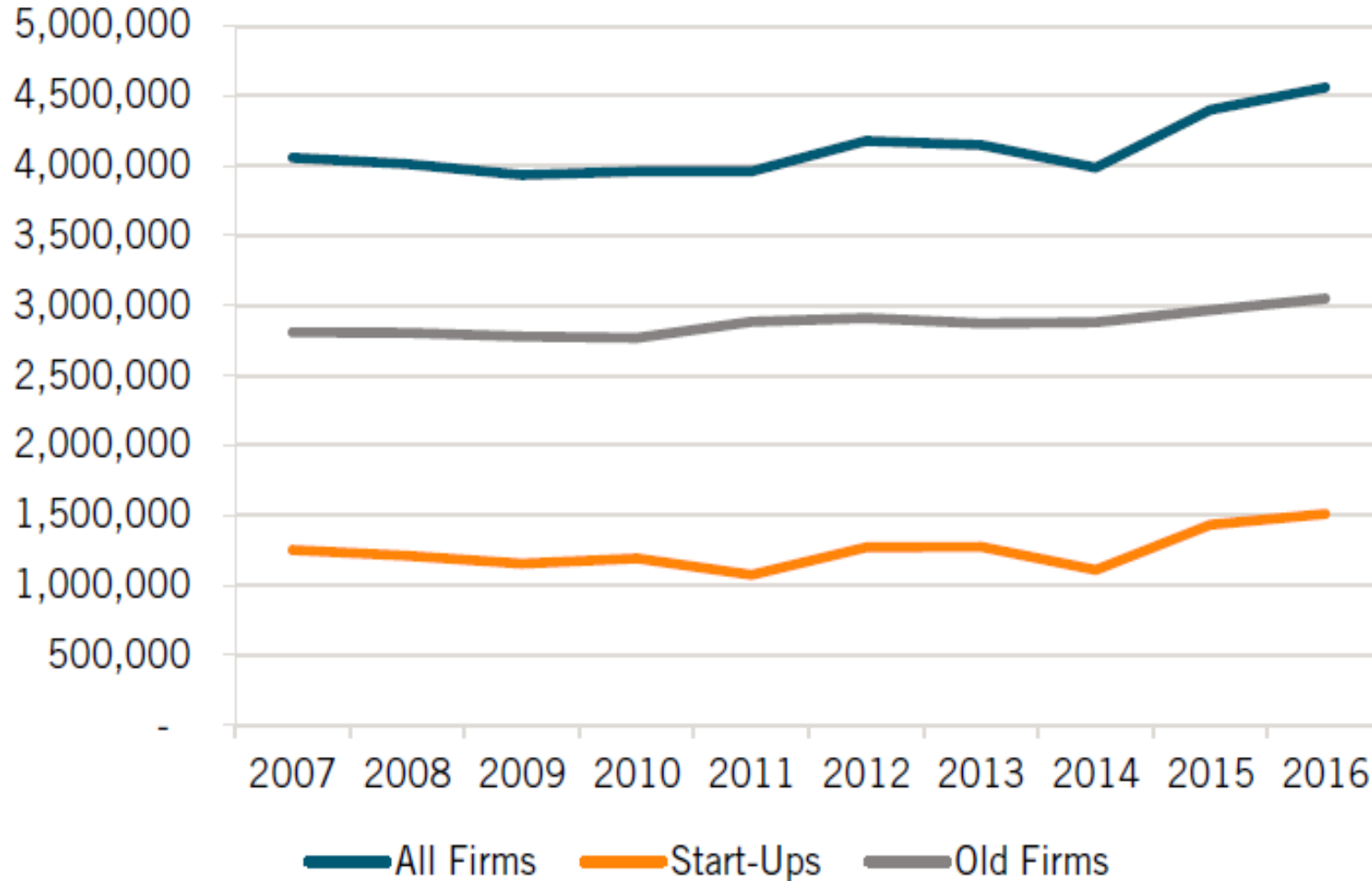
9:11 PM - 2 Jan 2015

***WHAT IS THE STATE OF AMERICAN  
TECHNOLOGY-BASED START-UPS?***

***WHAT IS THE NEXT AGENDA?***

# Over the past decade, relative increase in the share of employment in tech-based start-up sector

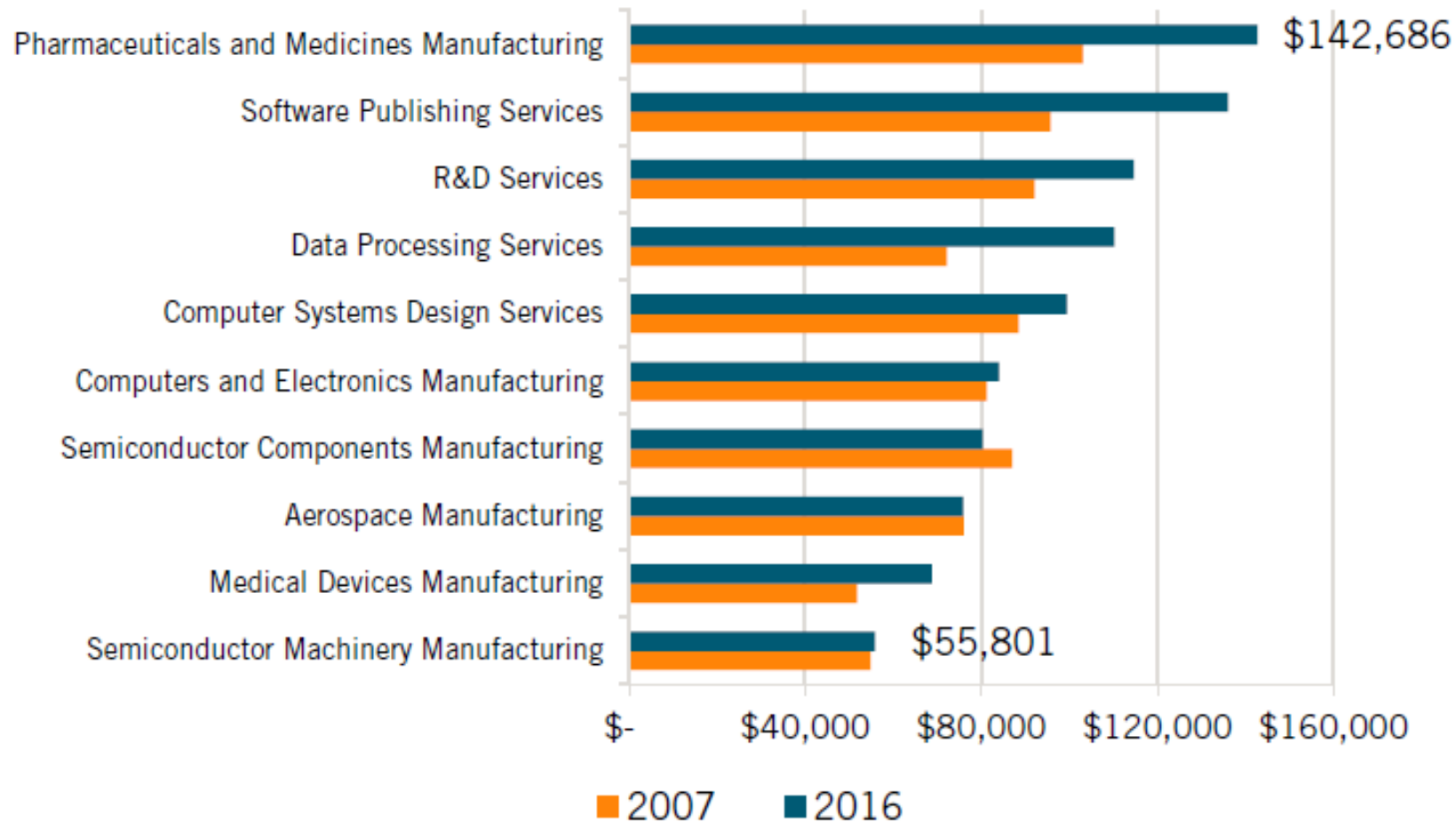
Figure 7: Employment in the Technology-Based Sector, 2007 to 2016





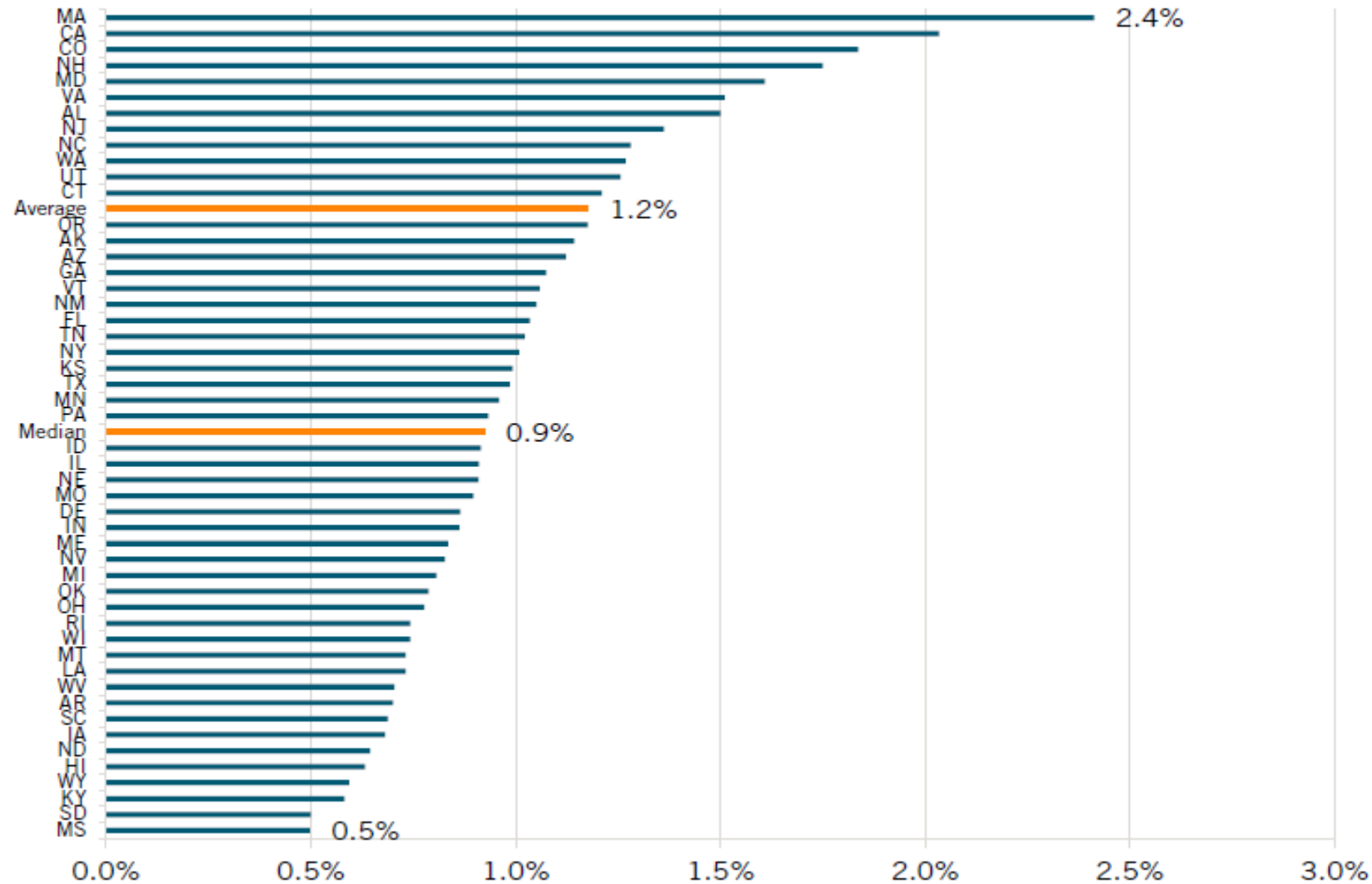
# Tech-Based Start-Ups are Good Jobs!

Figure 19: Average Start-Up Annual Wages (Real 2009 \$) by Industry, 2007 and 2016<sup>54</sup>


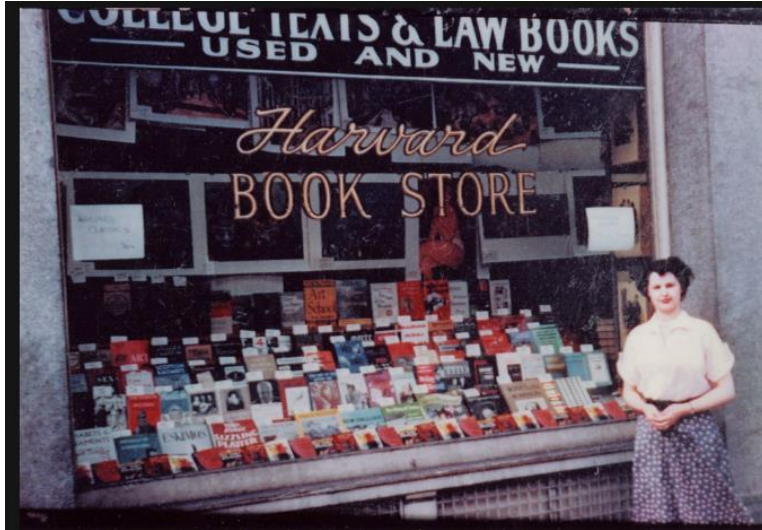


# Wide Variation Across States and Congressional Districts

Figure 33: State's Technology-Based Start-Up Employment as a Share of the State's Total Employment, 2016



# Start-Ups vary widely in their tech-based (i.e., growth) orientation



**Welcome to Amazon.com  
Books!**

*One million titles,  
consistently low prices.*

(If you explore just one thing, make it our personal notification service. We think it's very cool!)

**SPOTLIGHT! -- AUGUST 16TH**

These are the books we love, offered at Amazon.com low prices. The spotlight moves **EVERY** day so please come often.

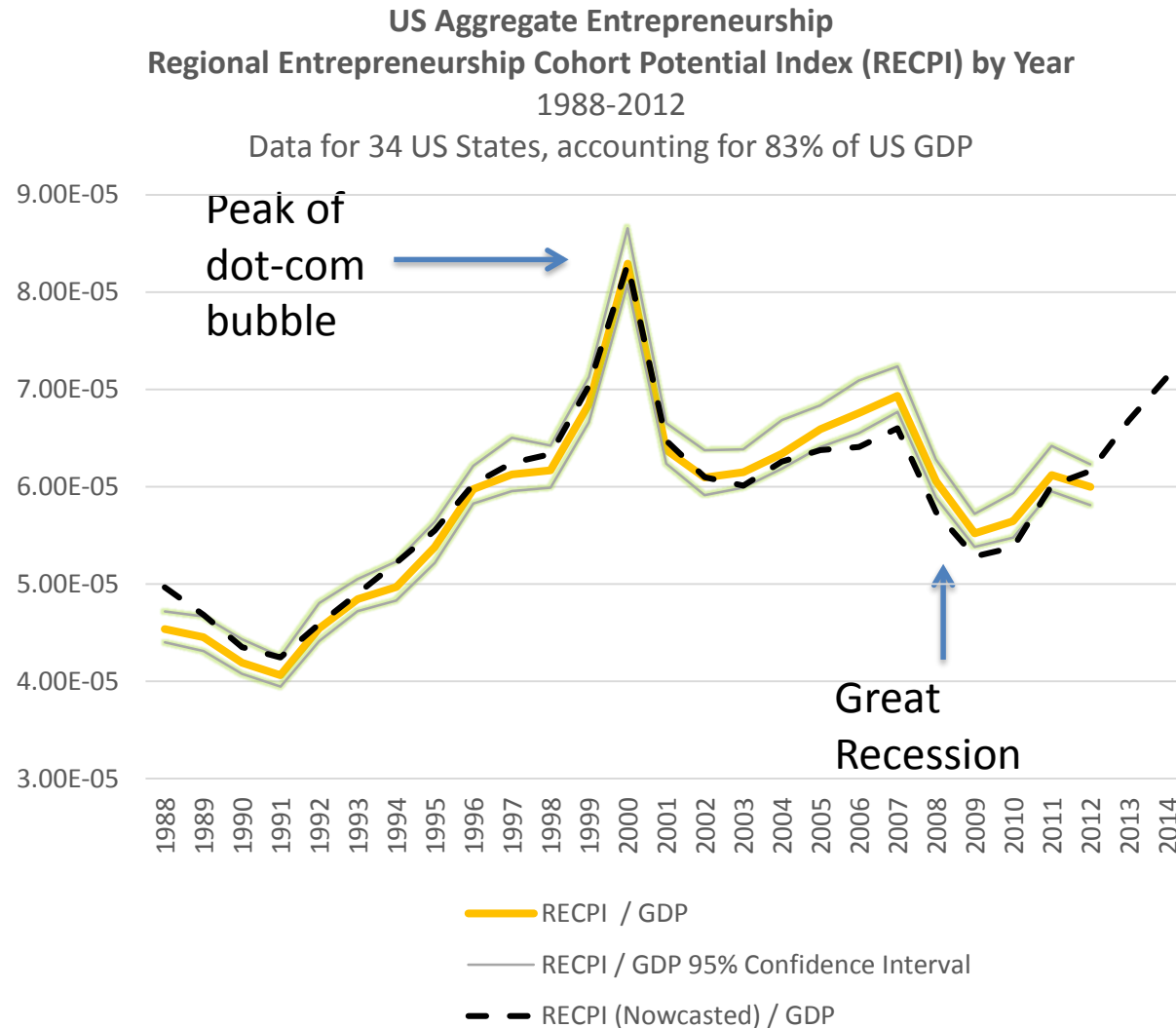
# High Growth is MASSIVELY Skewed Towards Growth-Oriented Firms

| Change in the Probability of Growth  |          |
|--------------------------------------|----------|
| Has Short Name                       | 83%      |
| Firm Named after Founder             | -70%     |
| Corporation (Not Partnership or LLC) | 278%     |
| Trademark in First Year              | 591%     |
| Patent and No Delaware Registration  | 2788%    |
| No Patent and Delaware Registration  | 4,491%   |
| Both Patent and Delaware Reg.        | 19,750%  |
| Sectoral Controls                    | Included |
| State Controls                       | Included |



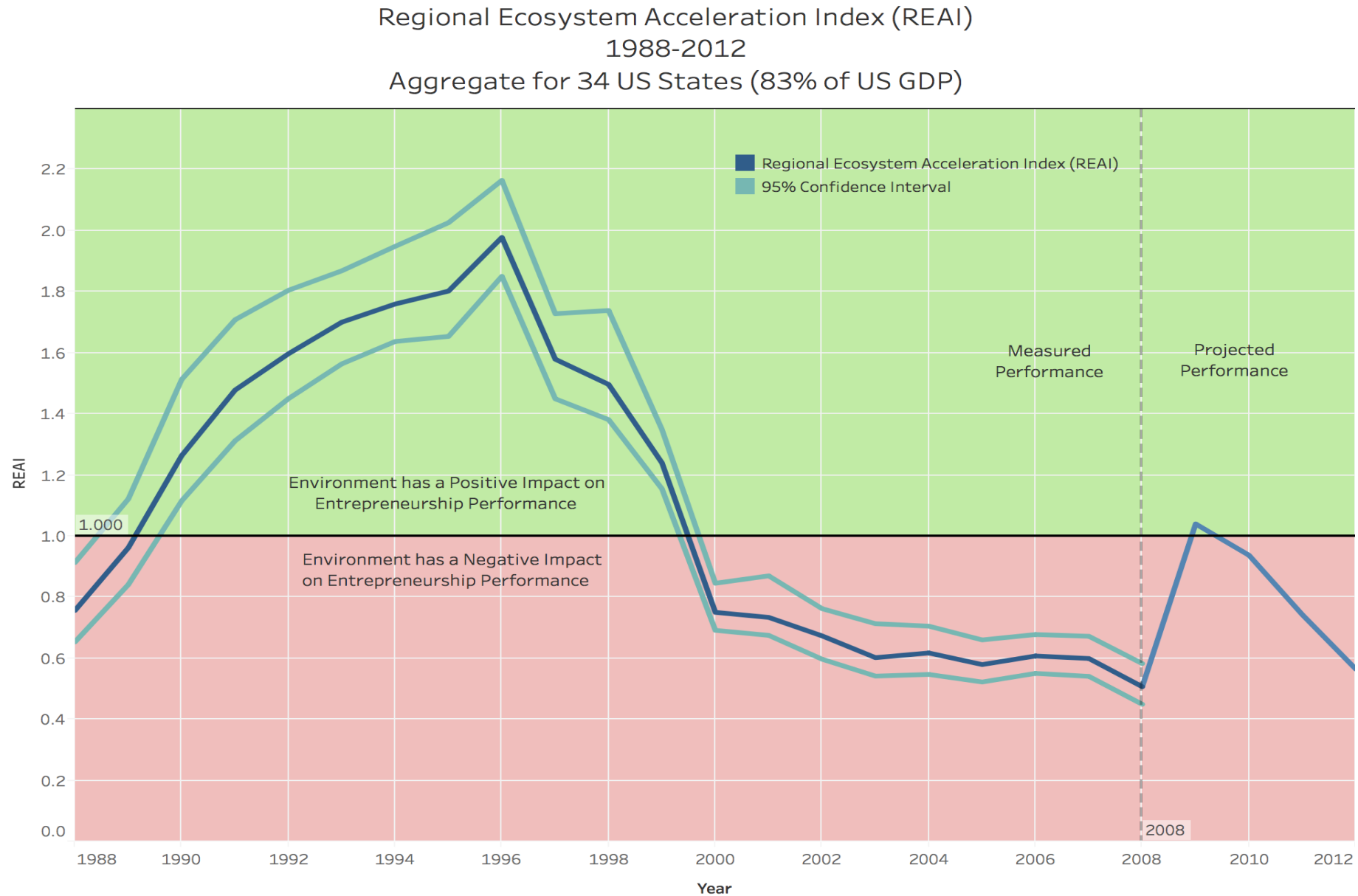


# After controlling for growth orientation, the US does NOT have a Start-Up Formation Rate Problem.....



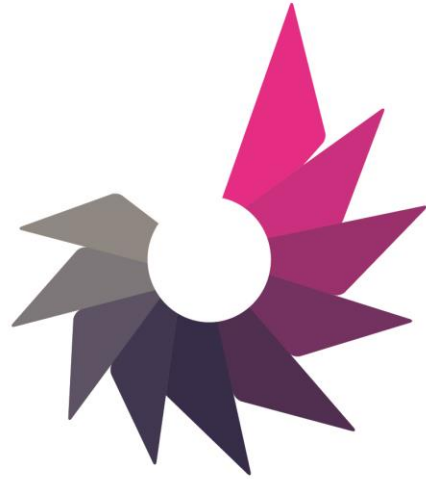
- RECPI / GDP shows
  - a sharp raise in potential during the late 1990
  - followed by a drop (but NOT a collapse) in 2001
  - and sustained *increase* after the Great Recession.
- Nowcasted Index tracks closely and documents “boom” since 2010

# The US has a Scaling Problem.....





*U.S. Small Business Administration*



# MIT REAP

Regional Entrepreneurship  
Acceleration Program



**MIT REAP**  
Regional Entrepreneurship  
Acceleration Program

**THANK YOU!**

[sstern@mit.edu](mailto:sstern@mit.edu)  
@sstern\_mit

[www.startupmaps.us](http://www.startupmaps.us)  
[reap.mit.edu](http://reap.mit.edu)

[www.scott-stern.com](http://www.scott-stern.com)