



STARTUP

Entrepreneurship:
The “Star Wars”
Model

Shomit Ghose

Mar. 26, 2019

shomit@acetylene.partners



- There is no one path to innovation success. Everyone has to find their own way.
- Some current approaches
- The “Star Wars” model for Danish universities



Why entrepreneurship matters

San Jose Ranked Second in World's Fastest-Growing Cities

July 13, 2018 by Elisabeth Handler



growing economy, 2014-2016.

An in-depth study of the growth of cities over time based on employment and GDP growth statistics was just released by Brookings, and San Jose was the #2 city globally in terms of fastest-

The New York Times

The Pleasure and Pain of Being California, the World's 5th-Largest Economy



A neighborhood in Oakland, Calif. Jim Wilson/The New York Times

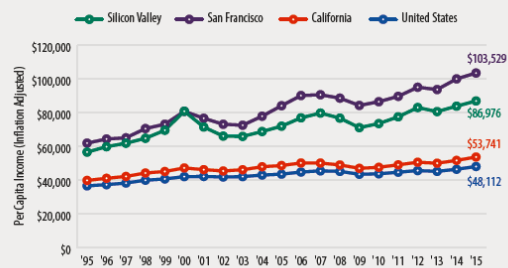
By Thomas Fuller

May 7, 2018



Per Capita Personal Income

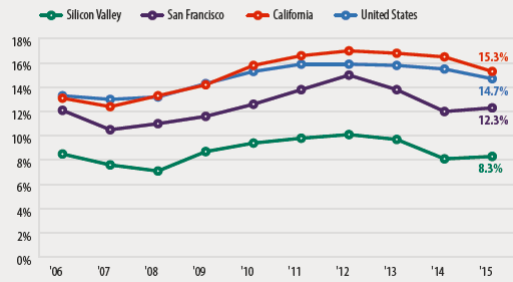
Santa Clara & San Mateo Counties, San Francisco, California, and the United States



Poverty Status

Percentage of the Population Living in Poverty

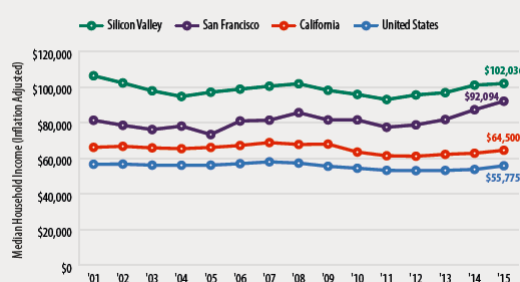
Santa Clara & San Mateo Counties, San Francisco, California, and the United States



Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

Median Household Income

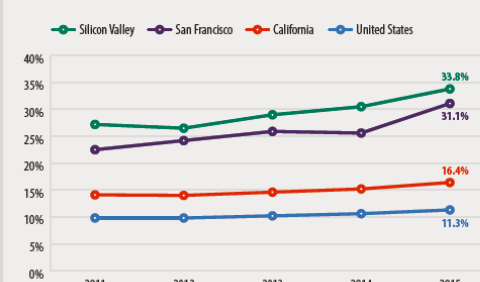
Santa Clara & San Mateo Counties, San Francisco, California, and the United States



Share of Households With Income Greater Than \$150,000 Annually

2011-2015

Santa Clara & San Mateo Counties, San Francisco, California, and the United States



Silicon Valley: Incomes

UNITED STATES DEPARTMENT OF LABOR

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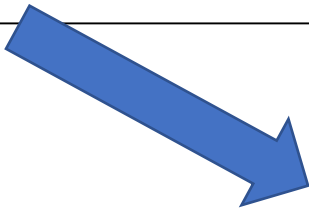
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County Employment and Wages in California – Fourth Quarter 2017



The 3 counties that comprise Silicon Valley rank 1st, 3rd and 4th in average weekly wage among America's large counties, :

- Santa Clara County - \$2,576
- San Mateo County - \$2,341
- San Francisco County - \$2,232

Why? Innovation Economies Drive Jobs

American Economic Review: Papers & Proceedings 100 (May 2010): 1-7
<http://www.aeaweb.org/articles.php?doi=10.1257/aer.100.2.1>

Local Multipliers

By ENRICO MORETTI*

Every time a local economy generates a new job by attracting a new business, additional jobs might also be created, mainly through increased demand for local goods and services. This positive effect on employment is partially offset by general equilibrium effects induced by changes in local wages and prices of local services. In this paper, I estimate the long-term employment multiplier at the local level. Specifically, I quantify the long-term change in the number of jobs in a city's tradable and nontradable sectors generated by an exogenous increase in the number of jobs in the tradable

The magnitude of local multipliers is important for regional economic development policies. State and local governments spend considerable amounts of taxpayer money on incentives to attract new businesses to their jurisdiction. Such location-based incentives are pervasive in manufacturing. However, the efficiency of these policies and their actual effects on employment are not fully understood, because there is little systematic evidence on the effects of successfully attracting a new firm on other parts of the local economy. The estimates in this paper help inform this debate.

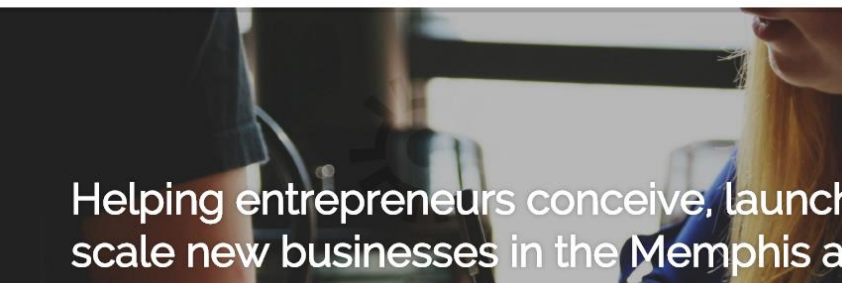
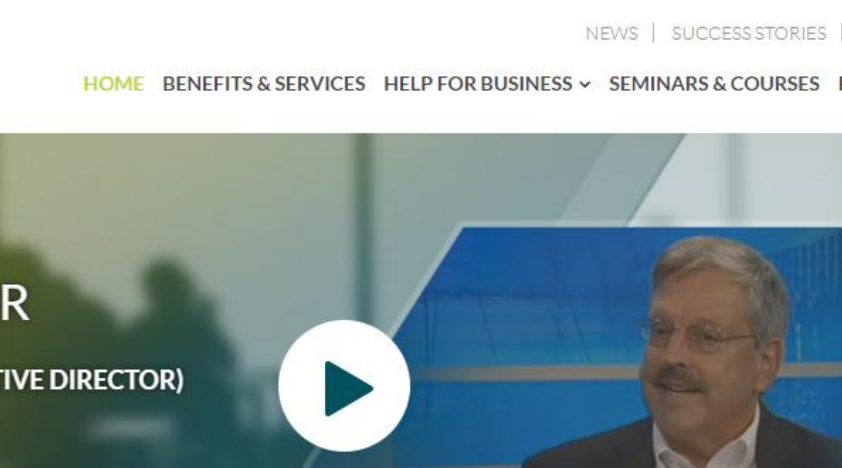
The high tech sector generates **the largest number of additional (non-tech) jobs: 4.9**

Current Approaches



What do...

- Toledo, Ohio
 - Missoula, Montana
 - Biloxi, Mississippi
 - Tulsa, Oklahoma and
 - Memphis, Tennessee
- Have in common?



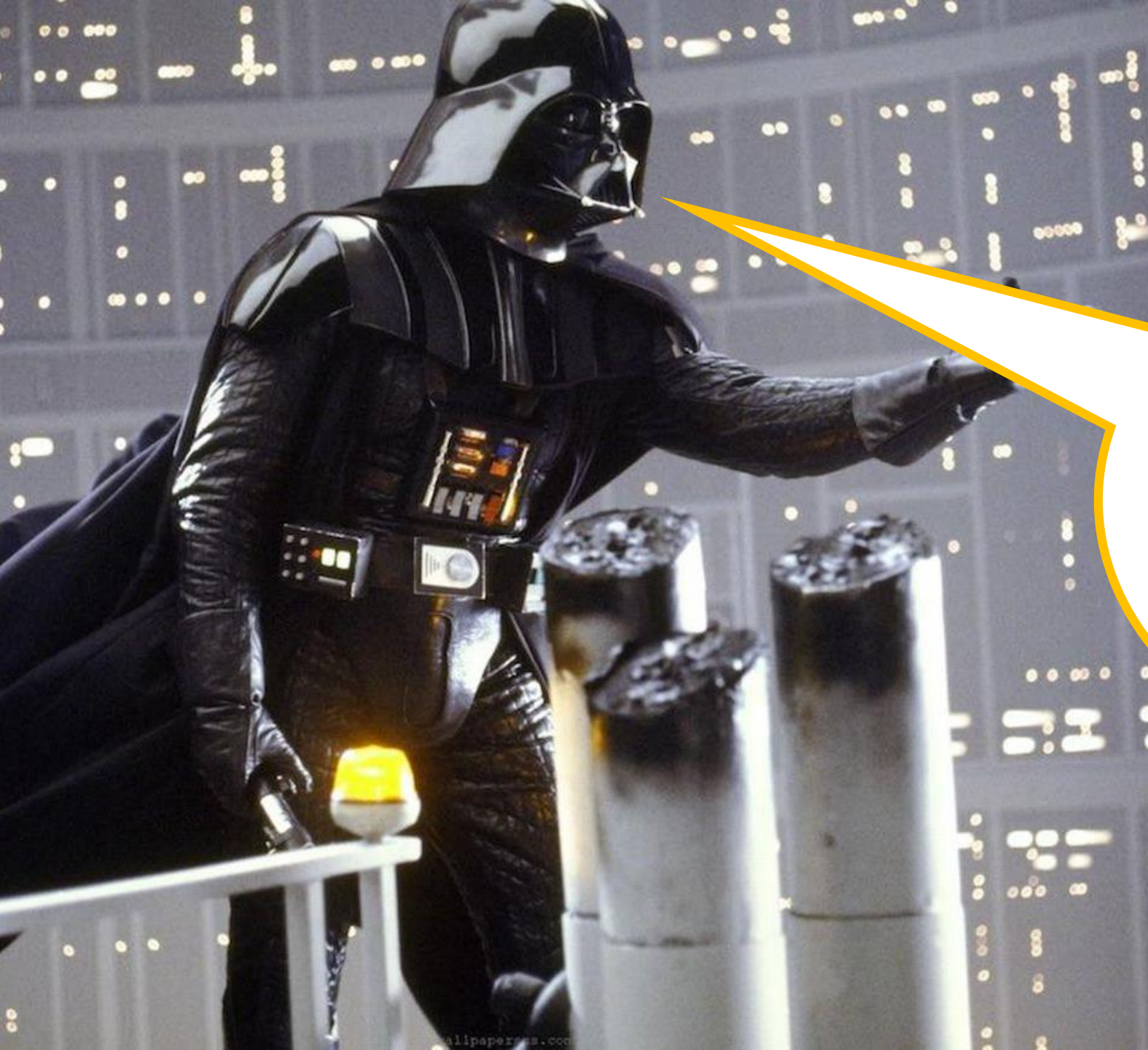
All have innovation
incubators!

Incubators & Silicon Valley

Start-up	Founded
HP	1939
Intel	1968
Apple	1976
Oracle	1977
Cisco	1984
NetFlix	1997
Google	1998
SalesForce	1999
Tesla	2003
Facebook	2004

Incubators did not create
Silicon Valley

Incubator	Founded
Y Combinator	2005
TechStars	2006
500 Startups	2010
Start-X	2011
Alchemist	2012



But what
about
innovation at
big
companies?

Innovation is not about doing the same thing better.
It's about doing something completely new.



All of these large companies have research labs to spur innovation. None gave rise to:

Nor will they!

A bronze statue of a Viking warrior, likely a Danish king or noble, sitting on a stone pedestal. The warrior is depicted with a long, flowing beard and mustache, wearing a helmet and armor. He is holding a sword across his lap and a large, round shield in front of him. The statue is set against a plain, light-colored background.

Hvad skal vi lave i Danmark?



The “Star Wars” Model of Entrepreneurship

Why the “Star Wars” Model of Entrepreneurship?



Big problems...



... being attacked by diverse teams

The Star Wars Model of Entrepreneurship



- Five key elements:

1. Business model: Disruptive, not incremental
2. Business model: Global scalability from Day 1
3. Team: It's about guidance, not money
4. Team: Cognitive diversity
5. Team: Risk-tolerance

1) Disruptive Business Models

- Name a company who won't be disrupted by Amazon or Google...
- ... just one ...
- Start-up business models need to be disruptive from the start, not incremental
 - With an eye on Amazon/Google
 - Disruptive is sustainable, incremental is not
 - Anticipate the future, don't reinvent the past



Disruptive

UBER



Incremental

SEGWAY®

Business model based disruptions

BUSINESS INSIDER
TECH FINANCE POLITICS STRATEGY LIFE ALL
PRIME INTELLIGENCE

Amazon could be gearing up to reveal Walmart, Kroger, and Aldi's worst nightmare

Hayley Peterson Mar 1, 2019, 4:30 PM



BUSINESS INSIDER
TECH FINANCE POLITICS STRATEGY LIFE ALL
PRIME INTELLIGENCE

It's becoming clearer than ever that Amazon is developing a 3rd-party logistics service to edge out FedEx and UPS now that Stamps.com has dumped USPS

Rachel Premack Feb 22, 2019, 12:27 PM



BUSINESS INSIDER
TECH FINANCE POLITICS STRATEGY LIFE ALL
PRIME INTELLIGENCE

Carpocalypse now: Lyft's founders are right — we're in the endgame for cars

Jim Edwards Mar 3, 2019, 3:44 AM



Side question: Is Tesla incremental or disruptive?

Case Study 1



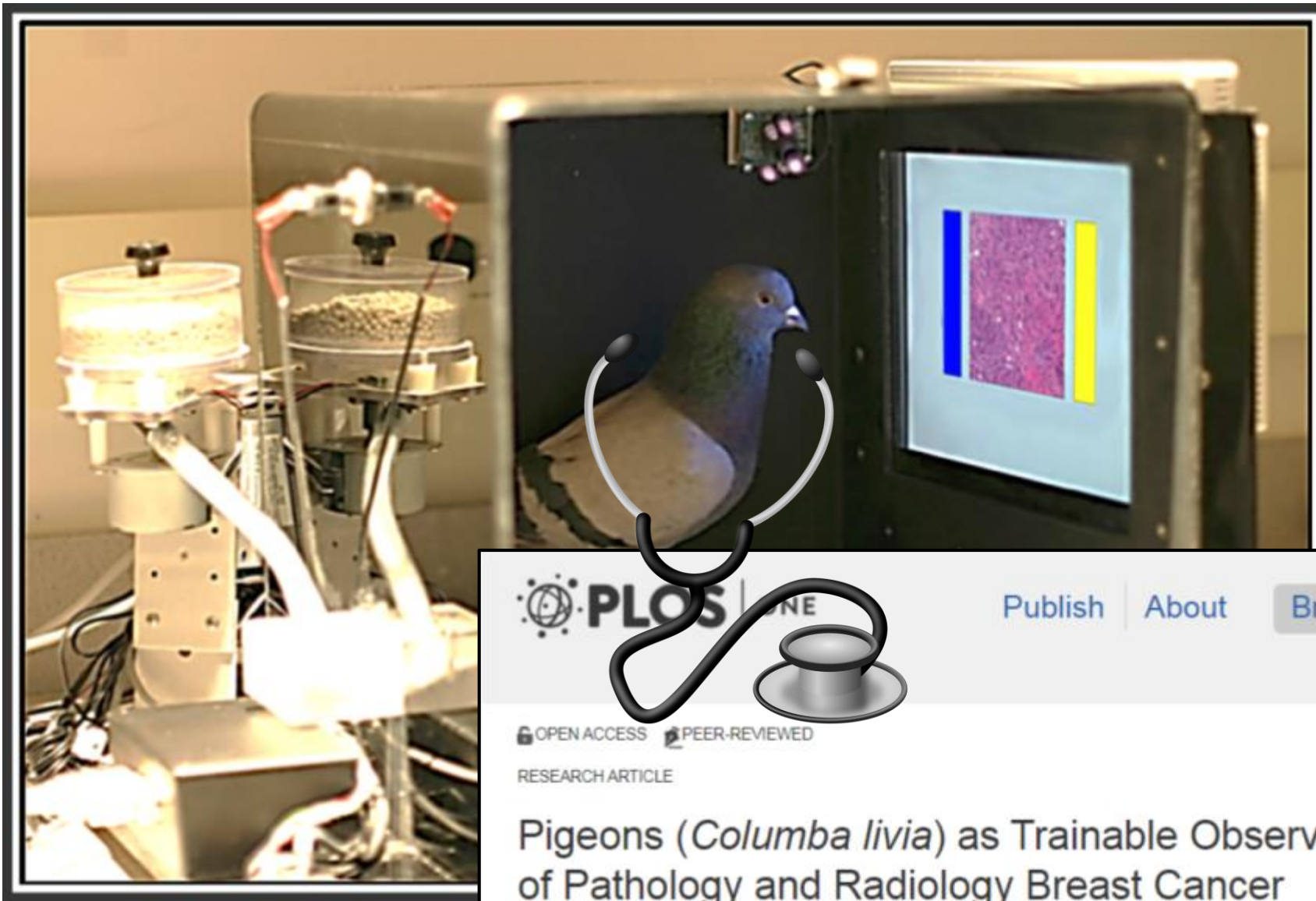
“Parallelizing compilers”



Great science doesn't correlate
(most of the time!) with great
business opportunity



“Disruptive” is sustainable,
“incremental” is not



Case Study 2

Disruptive Business Models: Read These



<https://scet.berkeley.edu/red-queen-inevitability-amazoogle-business-model/>



<https://scet.berkeley.edu/iron-man-vs-terminator-jobs-in-the-ai-century/>

2) Global impact business models

- Think big from Day 1: global impact
 - See Google, Amazon, Netflix, ...
- Too many Nordic start-ups target regional markets to start
 - Non-scalable business models; dooms the company to irrelevance and/or failure



3) It's About Guidance, Not Money

- Money is a commodity: it's everywhere
- Good judgment and guidance -- just as with parenting -- is the key to start-up success
 - Good judgment comes from actual experience



STANFORD
BUSINESS

GRADUATE
SCHOOL OF

the Experience

the Programs

the Resources

Change

Insights by Stanford Business

Topics

Q


Finance, Entrepreneurship

Shai Bernstein: Does Face Time with Investors Make a Startup More Successful?

Having investors you can easily interact with can help a business grow.

August 11, 2015 | by Eilene Zimmerman

4



About 40 percent of investors are located more than 600 miles from their portfolio companies. | istock

Want your startup to have an IPO? Start spending more time with your VCs.

New research by Stanford Graduate School of Business professor Shai Bernstein shows that the more time venture capital investors spend with their portfolio companies, the more likely those startups are to produce innovation and have an exit, either an IPO or an acquisition. "This is compelling evidence that the active involvement of venture capitalists is very important for their portfolio companies," says Bernstein.

It's About Guidance

The Impact of Venture Capital Monitoring

By **Shai Bernstein**, Xavier Giroud, Richard R. Townsend

Journal of Finance. August 2016, Vol. 71, Issue 4, Pages 1591-1622.

Finance

[View Publication ↗](#)

We show that venture capitalists' (VCs) on-site involvement with their portfolio companies leads to an increase in (1) innovation and (2) the likelihood of a successful exit. We rule out selection effects by exploiting

Find your Yoda or Obi-Wan Kenobi



4) Cognitive Diversity

Cognitive Diversity Drives Innovation

A collage of Star Wars imagery serves as the background. It includes the Death Star, Darth Vader, Leia Organa, Luke Skywalker, Han Solo, Chewbacca, R2-D2, and various X-wing fighters in space.

Talent, Technology and Tolerance in Canadian Regional Development

Working Paper Series: Ontario in the Creative Age

Prepared by:

Richard Florida, Charlotta Mellander,
and Kevin Stolarick

March 2009

regional income. The findings indicate that both human capital and the creative class have a direct effect on regional income. Openness and tolerance also have a significant effect on regional development in Canada. Openness toward the gay and lesbian population has a direct effect on both human capital and the creative class, while tolerance toward immigrants and visible minorities is directly associated with higher regional incomes. The university has a relatively weak effect on regional incomes and on technology as well. Management, business and finance, and science occupations have a sizeable effect on regional income; arts and culture occupations have a significant effect on technology; health and education occupations have no effect on regional income.

It's the people!

An endless supply of academic research on why diversity drives innovation

Does Female Representation in Top Management Improve Firm Performance? A Panel Data Investigation

Cristian L. Dezső
University of Maryland
Robert H. Smith School of Business
3347 Van Munching Hall
College Park, MD 20742
301-405-7832
cdezso@rhsmith.umd.edu

David Gaddis Ross
Columbia Business School
Uris Hall, Room 726
New York, NY 10027
212-854-5606
dr2175@columbia.edu

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IZA DP No. 8432

Collaborating With People Like Me: Ethnic Co-authorship within the US

Richard B. Freeman
Wei Huang

August 2014

An endless supply of academic research on why diversity drives innovation

Surface-Level Diversity and Decision-Making in Groups: When Does Deep-Level Similarity Help?

Katherine W. Phillips, Gregory B. Northcraft, Margaret A. Neale



The Demographics of Innovation in the United States

BY ADAMS NAGER, DAVID HART, STEPHEN EZELL, AND ROBERT D. ATKINSON | FEBRUARY 2016

An endless supply of academic research on why diversity drives innovation

Evidence for a Collective Intelligence Factor in the Performance of Human Groups

Anita Williams Woolley,^{1*} Christopher F. Chabris,^{2,3} Alex Pentland,^{3,4}
Nada Hashmi,^{3,5} Thomas W. Malone^{3,5}

Psychologists have repeatedly shown that a single statistical factor—often called “general intelligence”—emerges from the correlations among people’s performance on a wide variety of cognitive tasks. But no one has systematically examined whether a similar kind of “collective intelligence” exists for groups of people. In two studies with 699 people, working in groups of two to five, we find converging evidence of a general collective intelligence factor that explains a group’s performance on a wide variety of tasks. This “c factor” is not strongly correlated with the average or maximum individual intelligence of group members but is correlated with the average social sensitivity of group members, the equality in distribution of conversational turn-taking, and the proportion of females in the group.



Evidence for a Collective Intelligence Factor in the Performance of Human Groups

Anita Williams Woolley, *et al.*

Science 330, 686 (2010);

DOI: 10.1126/science.1193147

Silicon Valley's heterogeneous, horizontal networks vs. Boston's homogeneous, vertical networks...

Inside-Out: Regional Networks and Industrial Adaptation in Silicon Valley and Route 128

AnnaLee Saxenian
University of California, Berkeley

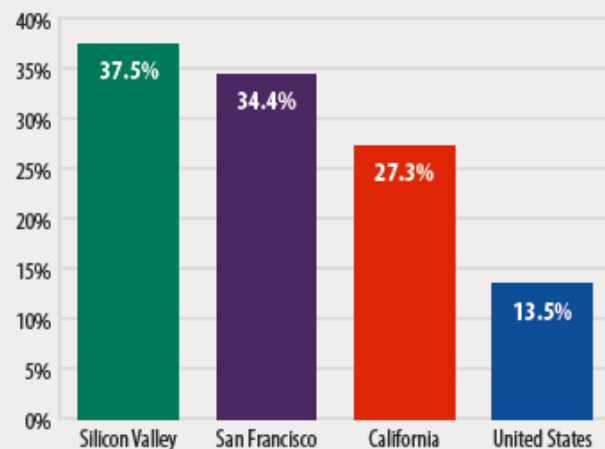
Silicon Valley has a regional, network-based industrial system that promotes learning and mutual adjustment among specialist producers of a complex of related technologies. The region's dense social networks and open labor markets encourage entrepreneurship and experimentation. Companies compete intensely while at the same time learning from one another about changing markets and technologies through informal communication and collaborative practices. Loosely linked team structures encourage horizontal communication among firm's divisions and with outside suppliers and customers. The functional boundaries within firms are porous in the network-based system, as are the boundaries among firms and between firms and local institutions, such as trade associations and universities.

In contrast, the Route 128 region is dominated by autarkic corporations that internalize a wide range of productive activities. Practices of secrecy and corporate loyalty govern relations between these firms and their customers, suppliers, and competitors, reinforcing a regional culture that encourages stability and self-reliance. Corporate hierarchies ensure that authority remains centralized, and information tends to flow vertically. Social and technical networks are largely internal to the firm, and the boundaries among firms and between firms and local institutions remain far more distinct in this independent, firm-based system.

Foreign Born

Percentage of the Total Population Who Are Foreign Born

Santa Clara & San Mateo Counties, San Francisco, California, and the United States | 2015



Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

Population Share That Speaks a Language at Home Other Than Exclusively English

	2005	2010	2015
Silicon Valley	48%	50%	51%
San Francisco	46%	45%	44%
California	42%	44%	45%
United States	19%	21%	21%

Foreign Born Share of Employed Residents Over Age 16, by Occupational Category

Santa Clara & San Mateo Counties, 2015

	All	Ages 25-44		
		Women	Men	Both
Computer & Mathematical	62.8%	75.9%	64.8%	67.2%
Architectural & Engineering	60.5%	77.4%	62.0%	65.5%
Natural Sciences	49.1%	38.1%	54.6%	46.9%
Medical & Health Services	46.7%	43.2%	45.2%	43.7%
Financial Services	46.9%	60.7%	29.8%	49.1%
Other Occupations	42.1%	41.6%	46.8%	44.5%
Total	45.6%	46.1%	50.9%	48.8%

Silicon Valley: Diversity

Source: 2017 Silicon Valley Index



Contents lists available at [ScienceDirect](#)

Journal of Financial Economics

journal homepage: www.elsevier.com/locate/jfec

The cost of friendship[☆]

Paul A. Gompers^{a,b}, Vladimir Mukharlyamov^c, Yuhai Xuan^{d,*}

^aHarvard Business School, Boston, MA 02163, United States

^bNational Bureau of Economic Research, Cambridge, MA 02138, United States

^cHarvard University, Cambridge, MA 02138, United States

^dUniversity of Illinois at Urbana-Champaign, Champaign, IL 61820, United States

A B S T R A C T

We investigate how personal characteristics affect people's desire to collaborate and whether this attraction enhances or detracts from performance in venture capital. We find that venture capitalists who share the same ethnic, educational, or career background are more likely to syndicate with each other. This homophily reduces the probability of investment success, and the detrimental effect is most prominent for early-stage investments. A variety of tests show that the cost of affinity is most likely attributable to poor decision-making by high-affinity syndicates after the investment is made. These results suggest that “birds-of-a-feather-flock-together” effects in collaboration can be costly.

Even venture capitalists need to be diverse to succeed

Large teams develop and small teams disrupt science and technology

Lingfei Wu, Dashun Wang & James A. Evans [✉](#)

Nature **566**, 378–382 (2019) | [Download Citation](#) [↓](#)

Abstract

One of the most universal trends in science and technology today is the growth of large teams in all areas, as solitary researchers and small teams diminish in prevalence^{1,2,3}. Increases in team size have been attributed to the specialization of scientific activities³, improvements in communication technology^{4,5}, or the complexity of modern problems that require interdisciplinary solutions^{6,7,8}. This shift in team size raises the question of whether and how the character of the science and technology produced by large teams differs from that of small teams. Here we analyse more than 65 million papers, patents and software products that span the period 1954–2014, and demonstrate that across this period smaller teams have tended to disrupt science and technology with new ideas and opportunities, whereas larger teams have tended to develop existing ones. Work from larger teams builds on more-recent and popular



Innovation comes from commando teams, not armies



Cognitive Diversity

Why these guys lost:

- Autocratic leader (differing opinions punishable by death)
- Homogeneous team: no cognitive diversity
- Unwieldy & large team

5) Risk Tolerance

- Think big, even if it means failure
 - Realize that most projects will fail. It's okay.
- There's no benefit to thinking small and winning small
- Risk-tolerance required of investors too:
 - Entrepreneur-friendly term sheets, not financially-engineered term sheets



The Star Wars Model of Entrepreneurship

- Five key elements:
 1. Disruptive, not incremental
 - Start with the business opportunity, not the cool technology
 2. Global impact from Day 1
 - Build business plans for global markets (scalability!)
 3. It's about guidance, not money
 - A foundation of experienced mentors
 4. Cognitive diversity
 - Facilitate small, cross-disciplinary teams
 5. Risk-tolerance
 - Don't be afraid of challenge; think big
- All of the above are about practice, not legislation, public policy, educational policy, or anything else outside your direct control!

Awaken Your
Force

