



CROWDFUNDING

“Promoting Innovative Growth:
Venture Capital, Early Stage Funding and IPOS”
Brookings and Private Capital Research Institute

The Brookings Institution
Washington DC
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THE PEBBLE STORY

Pebble Watch

- On April 11, 2012 Eric Migicovsky launched a crowdfunding campaign to raise capital to produce his Pebble watch

Who is Eric Migicovsky?

- From Vancouver, BC
- University of Waterloo
- Y Combinator, 2011
- Lives in Palo Alto, CA
- Created inPulse (Blackberry compatible smartwatch)
- Founded Pebble



What is the Pebble Watch?

- Can display messages from a smartphone
- Monochrome e-paper display with backlight
- Vibrating motor
- Three axis accelerometer
- Communicate with Android or iOS device using Bluetooth 4.0
- Water resistant
- Apps downloadable from the phone



Why did Eric need capital?

- Raised \$375k from angel investors
 - Tim Draper, DFJ
 - Paul Buchheit, YC
- Required capital (\$100k) for:
 - Production tooling
 - Large component order
 - Global Bluetooth certification
- “Hardware is much harder to raise money for. We were hoping we could convince some people to our vision, but it didn’t work out.”

(LA Times, April 18, 2012)



Offering

- \$99 – 1 black Pebble (first 200)
- \$115 – 1 black Pebble
- \$125 – 1 color Pebble
- \$220 – 2 black Pebbles
- \$235 – “hacker special” (100 only)
 - Early access to the SDK and a prototype; 1 color Pebble
- \$240- 2 color Pebbles
- \$550 – 5 color Pebbles
- \$1000 – 10 color Pebbles
- \$1250 – 10 color Pebbles, 1 custom watch face
- \$10,000 – 100 color Pebbles

What happened?

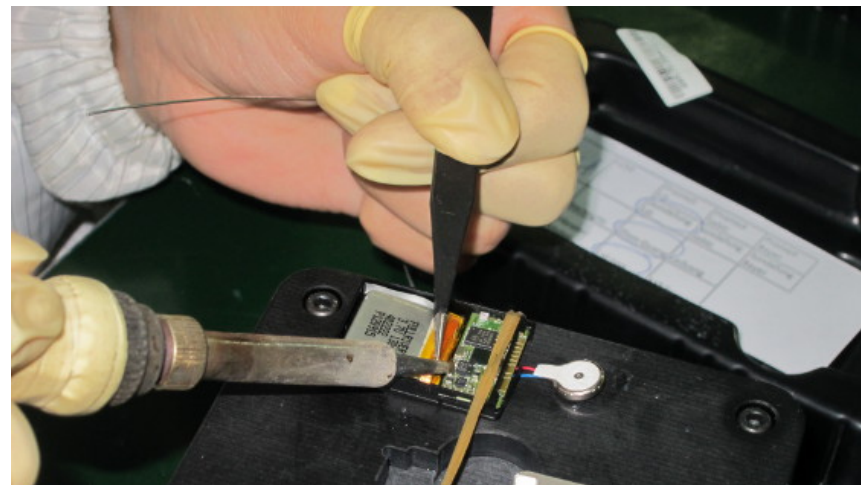
- Launched campaign on April 11, 2012
 - Target: \$100,000
 - \$100k in 2 hours
 - \$1m in 28hrs
- 37 days
- Closed campaign on May 18, 2012
 - \$10,266,845
 - 68,929 people
 - 85,000 watches (capped)

Buying from Inventors versus Retailers

- Estimated shipping date: September 2012
- “DV => PV => MP
- I’m heading to our factory in Dongguan, China on Saturday for 2 weeks of work on the Design Verification (DV) test build. After DV, we have one more test build scheduled in December called Production Verification (PV) before Pebble enters Mass Production (MP). As I mentioned in Update #17, our assembly line will be set up to manufacture 15,000 Pebbles per week. I know each one of you has a burning desire to see Pebble on their wrist, but I want to caution you that even after we begin MP it will still take us several weeks to manufacture all 85,000 Pebbles.” (Nov. 10, 2012)

Updates from the inventor

- “We have confirmation from our primary component supplier that the vast majority of our components have departed Arizona, flying towards Hong Kong and ultimately Dongguan, China. There are more than 110 electronic components inside each Pebble. It’s been a lot of fun finding 85,000 sets of everything!” (Oct 26, 2012)
- “While we’re not ready to start shipping out Pebbles yet, getting prepared to ship to 113 different countries has been quite a task. OK, just one of you lives in French Polynesia, but we care deeply about all our backers. That’s why we’ve been running extensive shipping tests to determine the best methods to use as we ship out 85,000 Pebbles. All the test shipments reached their destination. Outside of a postal strike in Uruguay, we found that our test shipments reached their destination even faster than we expected. We also learned some important lessons about all the different customs documentation requirements around the world.” (Nov 10, 2012)



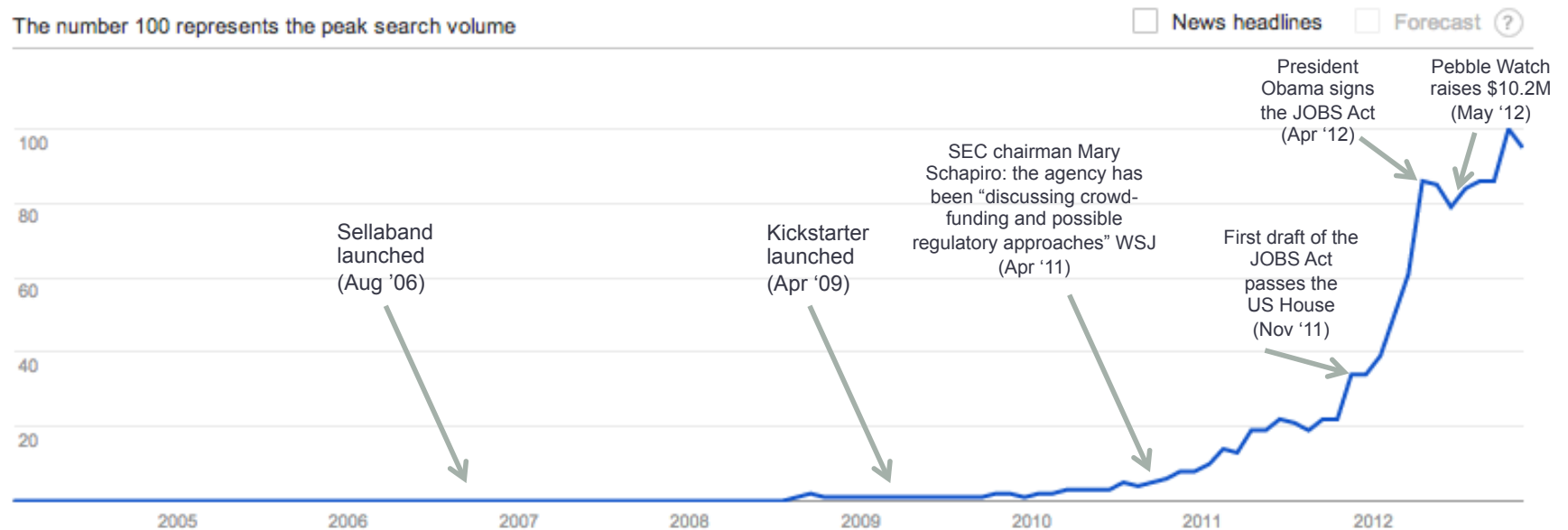
WHY IS CROWDFUNDING INTERESTING?

Google search volume for “crowdfunding”



Interest over time ?

The number 100 represents the peak search volume



Why is crowdfunding interesting?

- Does crowdfunding influence the rate and direction of inventive and entrepreneurial activity?
 - Does crowdfunding fund projects/companies that would not otherwise be funded?

		Different	
		No	Yes
More	No	Perfect substitute	Same amount of capital, but allocated differently
	Yes	More early-stage risk capital for similar projects	More capital, different types of projects

Why might crowdfunding be different?

- Different information
 - E.g., “wisdom of crowds”, social platform, identity of investors
- Different preferences
 - Risk/return, non-pecuniary (e.g., participation, customer, fun)
- Different rules
 - Provision point mechanism
 - Formalize family and friends
 - Small investments

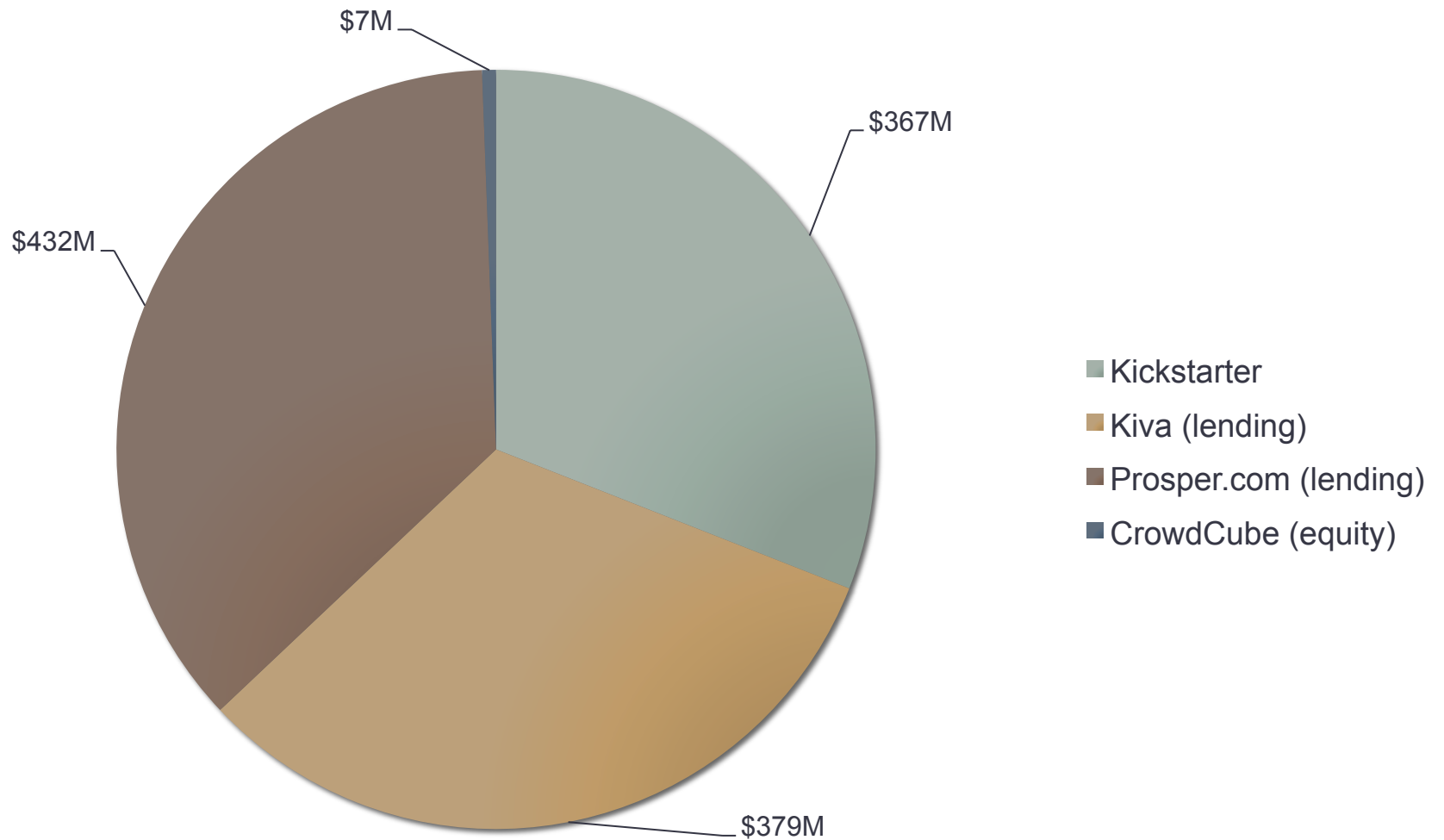
SIMILAR

Kickstarter Data

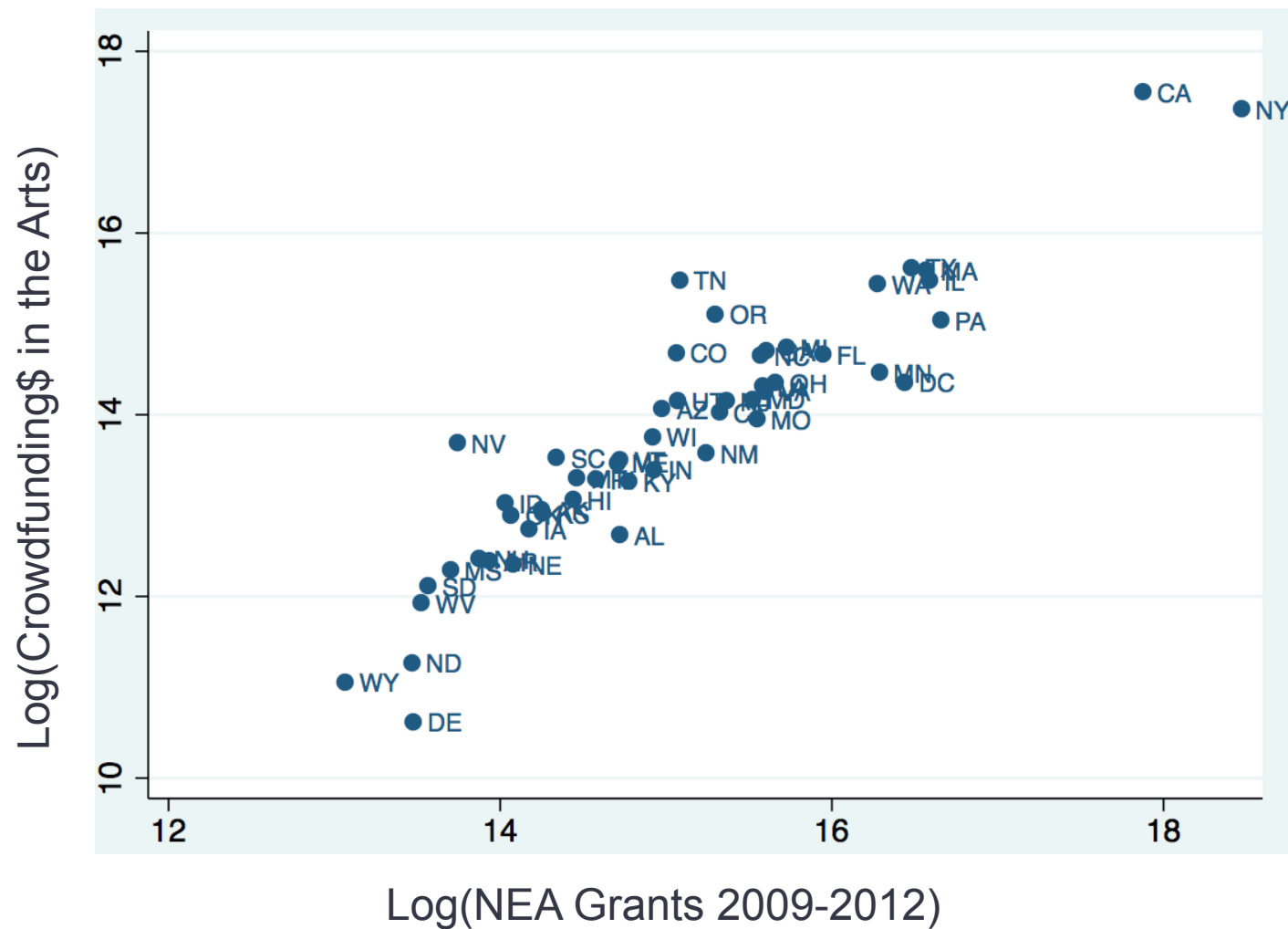
- Every successful project (27,403) since founding (June 2009) and October 2012
- \$293M invested across 13 categories
 - Art, Comics, Dance, Design, Fashion, Film & Video, Food, Games, Music, Photography, Publishing, Technology, Theater



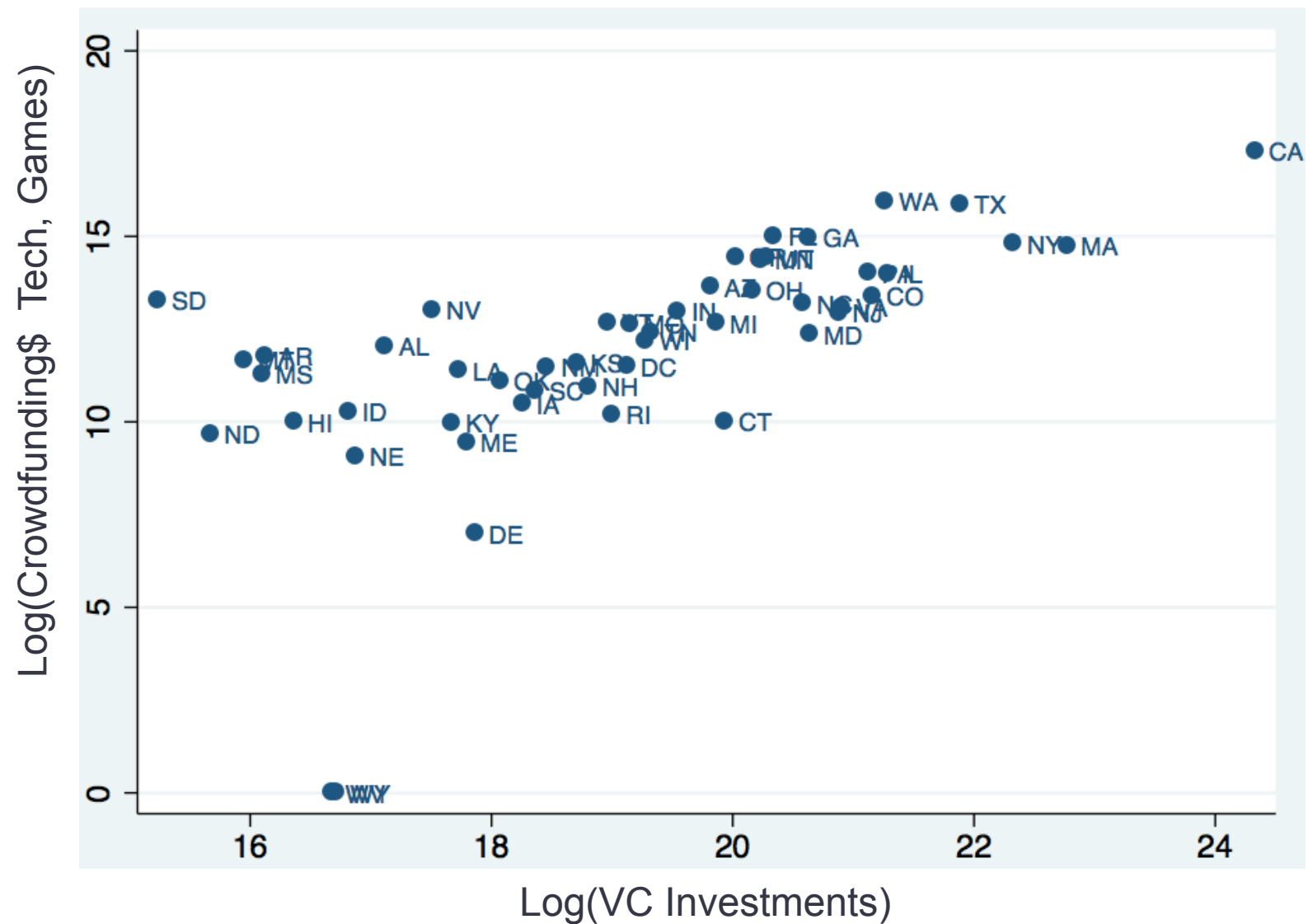
Kickstarter in context



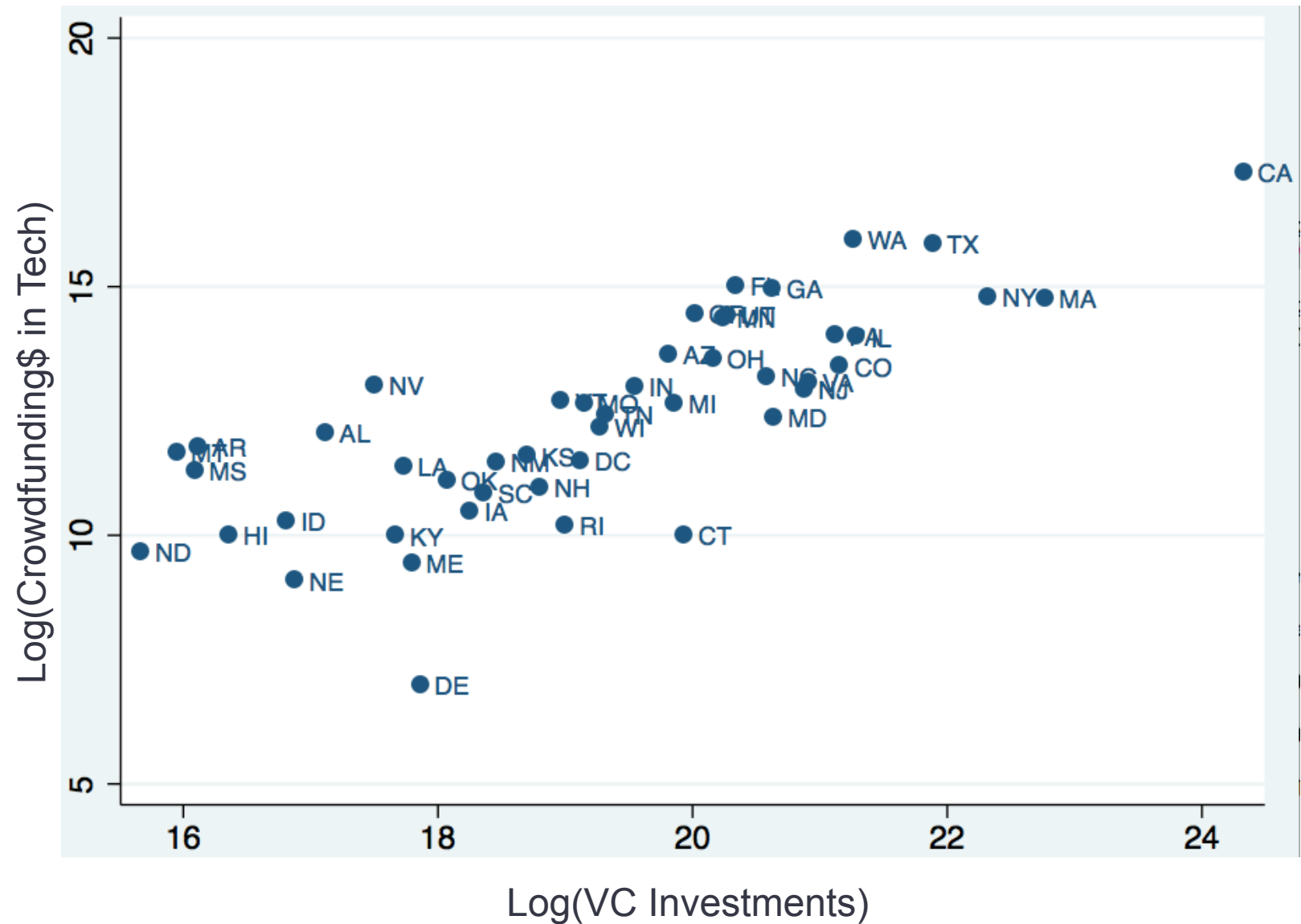
Crowdfunding and NEA Grants



Crowdfunding and VC Investment



Crowdfunding and VC Investment



Proxies for access to capital

- Increase in the Home Price Index (HPI)
 - Proxy for lower cost of capital through home-equity loan
- Issues
 - Although it may proxy for the overall strength of the local macroeconomic environment
 - Use local employment as a control for the strength of the local macroeconomic environment
 - Employment is unlikely to be an alternative source of capital in the amounts typically raised through crowdfunding campaigns
 - The goal is to isolate access to capital from the overall local macroeconomic conditions

Crowdfunding versus Alternative Sources of Capital (CBSA level)

	(1) Log(Funding) OLS	(2) Any Project Funded Logit	(3) # of Projects Funded OLS	(4) # of Projects Funded Poisson
Log(HPI)	-6.3482** (2.5766)			
Log(Employment)	9.8627 (6.0680)			
HPI		-0.0372*** (0.0142)	-0.2454*** (0.0733)	-0.0137** (0.0069)
Employment		0.0274 (0.0178)	1.2275*** (0.4659)	-0.0040 (0.0032)
Year=2010	1.9809*** (0.1570)	2.7600*** (0.2250)	0.8906* (0.4987)	2.2261*** (0.1356)
Year=2011	4.4714*** (0.2564)	4.7317*** (0.2758)	0.7788 (1.0993)	3.3735*** (0.2168)
Year=2012	5.9530*** (0.3039)	5.6797*** (0.3063)	0.5089 (2.1059)	3.8318*** (0.2123)
CBSA Fixed Effects	YES	YES	YES	YES
Observations	4,251	4,056	4,251	4,095
R-squared	0.383		0.246	
Number of CBSAs	327	312	327	315

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

HPI Effect by Project Size

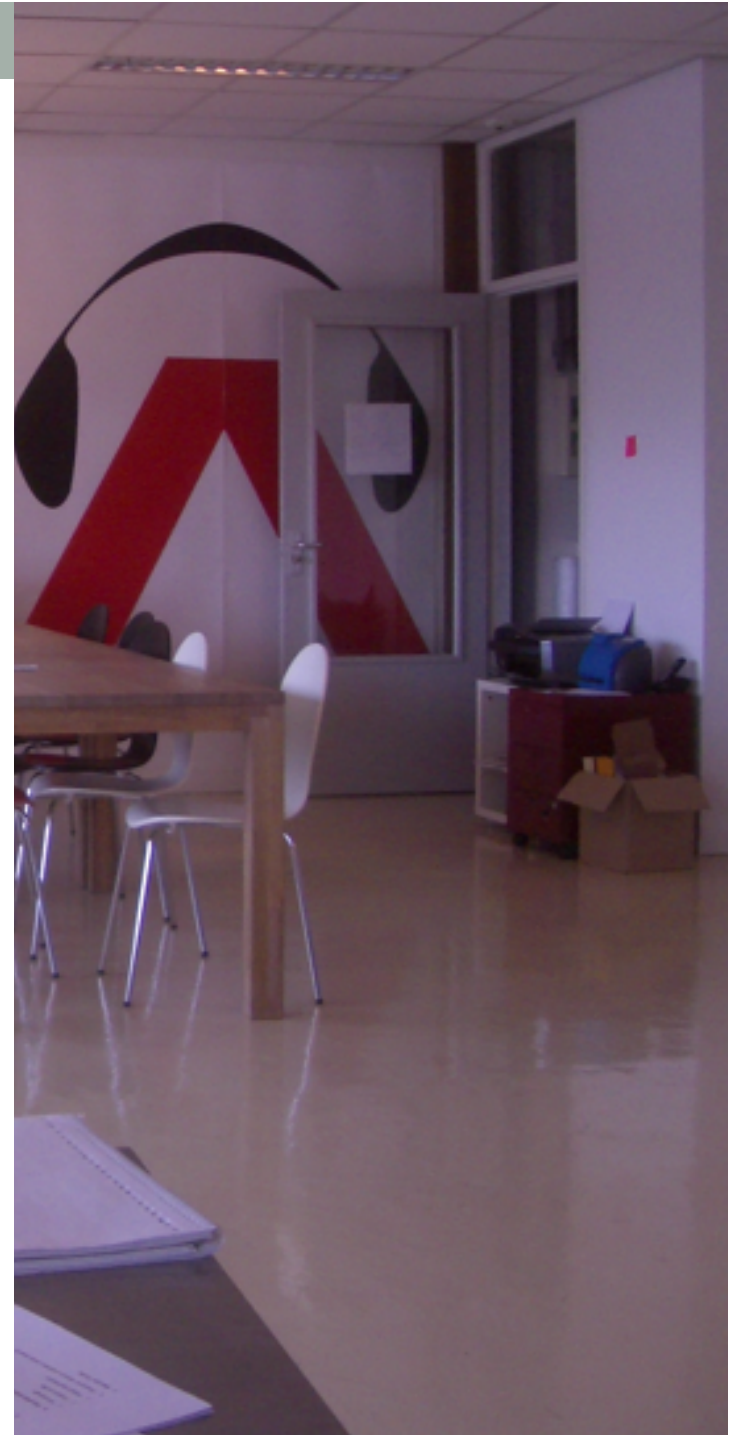
[illegible]

Sellaband

- Launched in 2006 in Amsterdam: “The granddaddy of crowdfunding”
- Investors can buy one or more shares in the artist’s future album at \$10 each
- Investors see information about the artist: bios, demo songs, blog, \$ raised to date...
- The goal is to reach 5000 shares (\$50,000)
- Revenues from albums are split between the artists, the investors, and Sellaband

Data

- Every investment (2006-2009)
- 4712 artists (15,517 investors)
- 34 raised \$50k (8,149 investors)
- Distance between artist and investor based on addresses and postal codes
- Artistic effort: song and video uploads, live shows



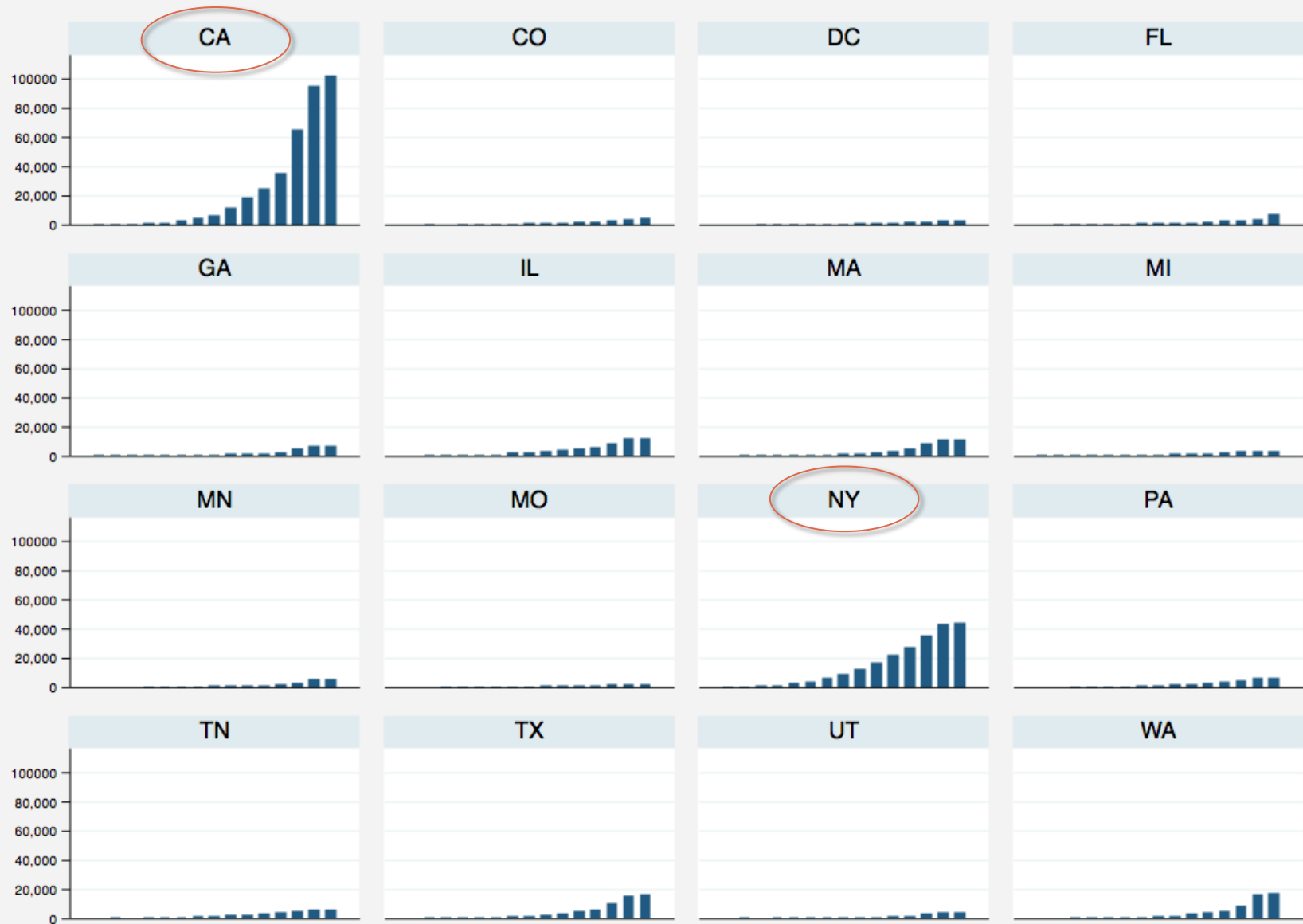
Distribution of capital is highly skewed

- Top 2% of projects account for 80% of capital raised

Skewed distribution of capital at KS

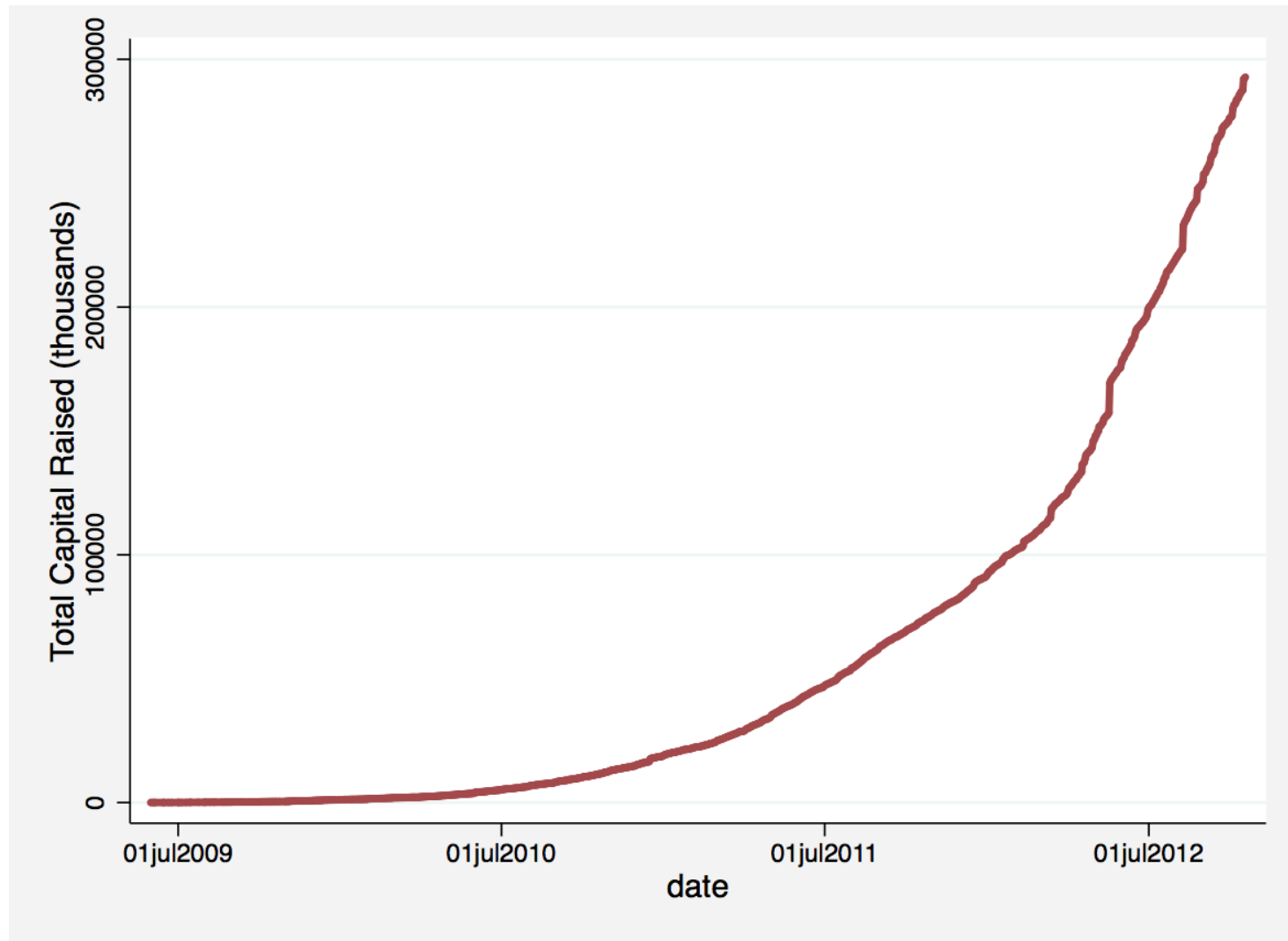
- Top 20% of projects (in terms of capital raised) account for 75% of total capital

Growth by State (thousands)

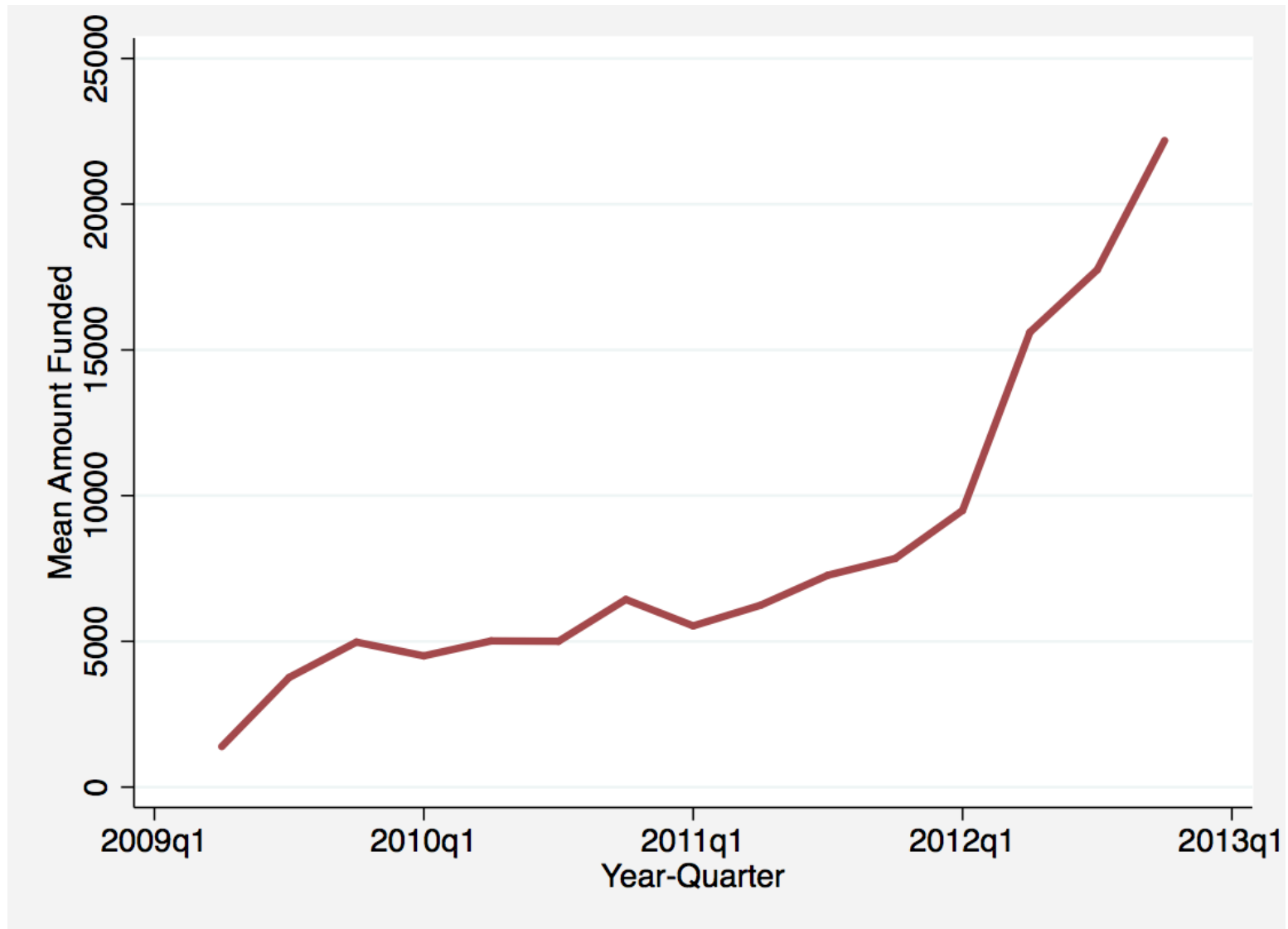


DIFFERENT

Cumulative Capital Raised on KS

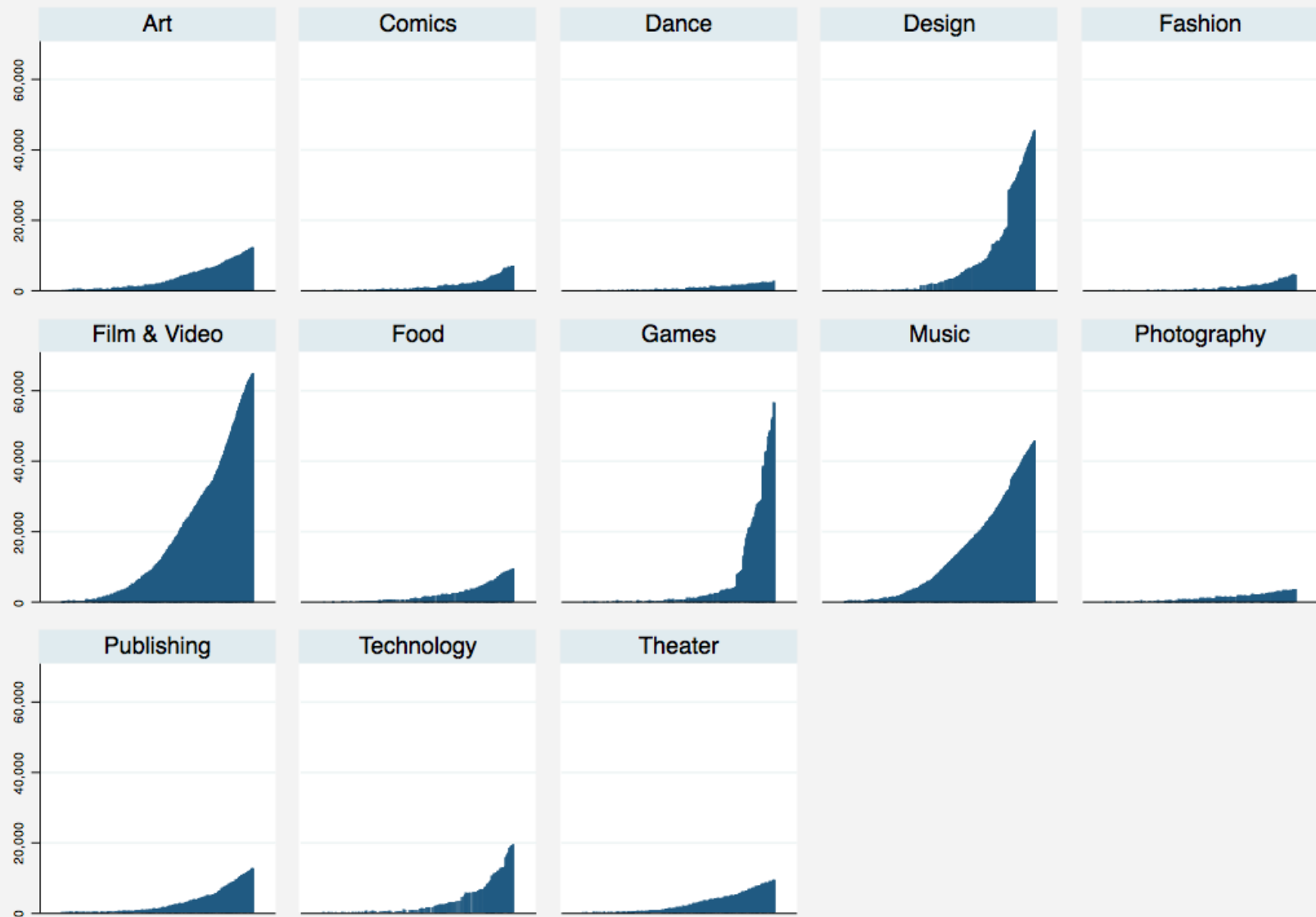


Mean Size of Projects



AGGREGATE STATISTICS OBFUSCATE VARIATION ACROSS SECTORS

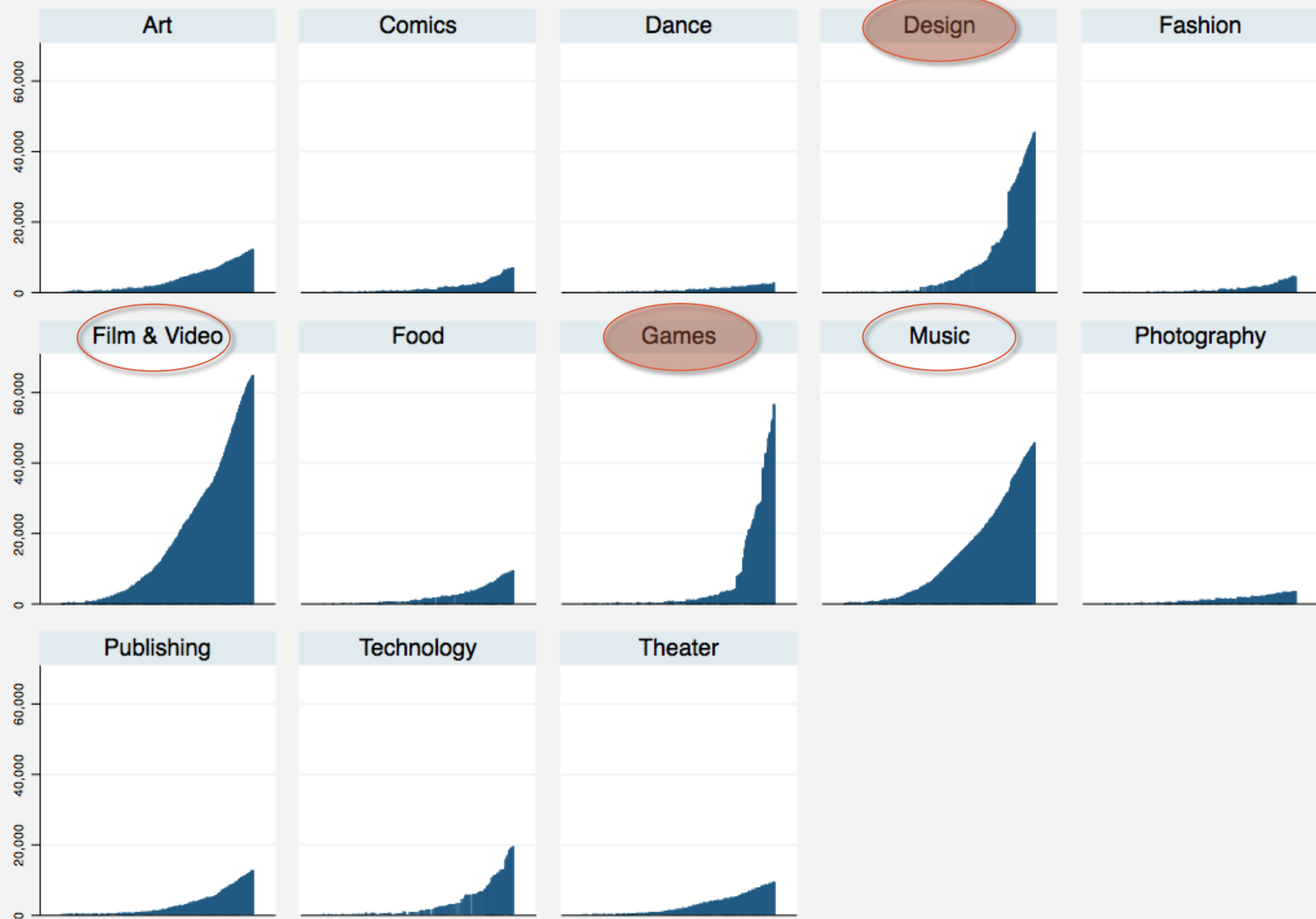
Capital Raised by Sector (thousands)



Capital Raised by Sector (thousands)



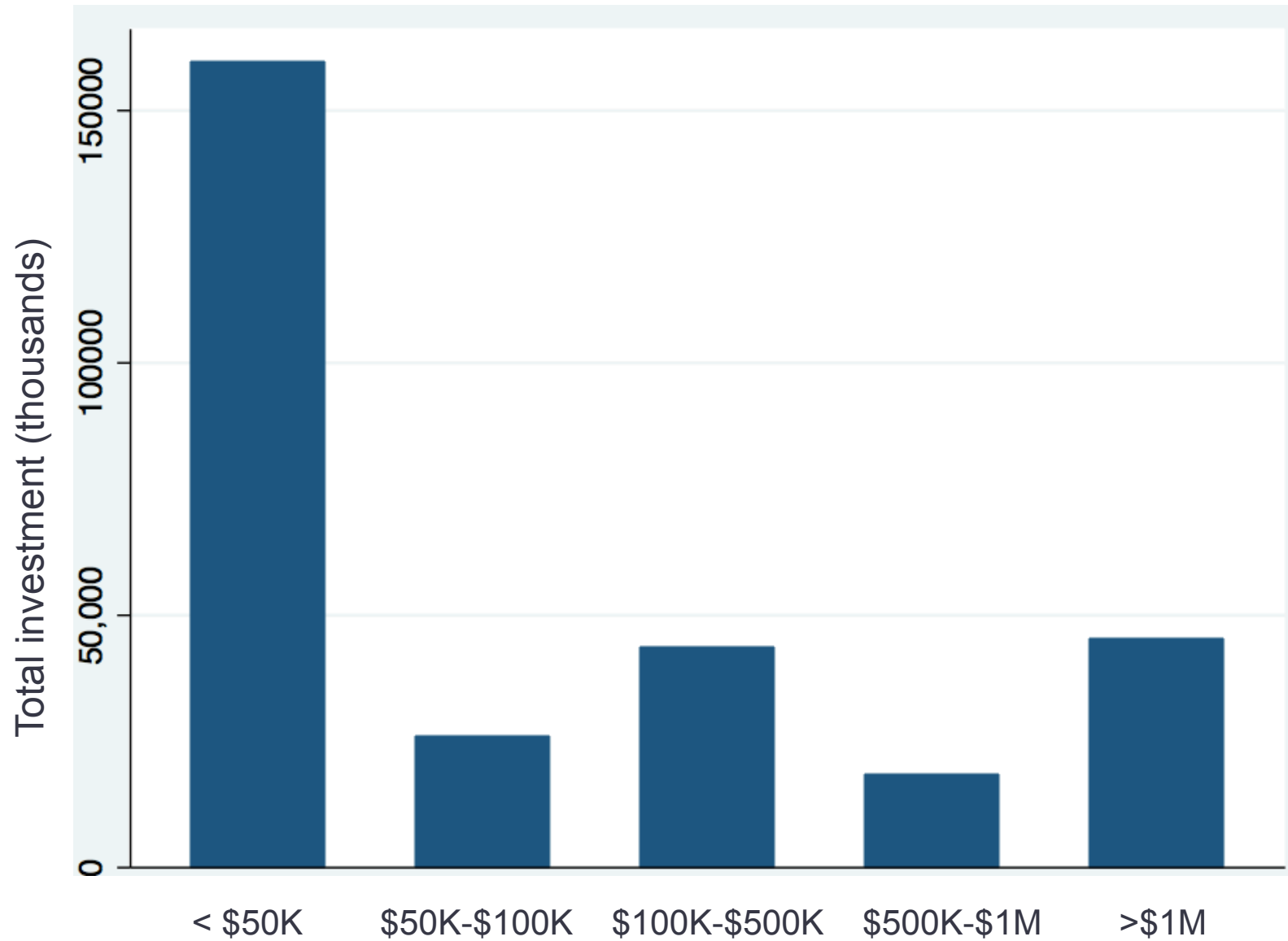
Capital Raised by Sector (thousands)



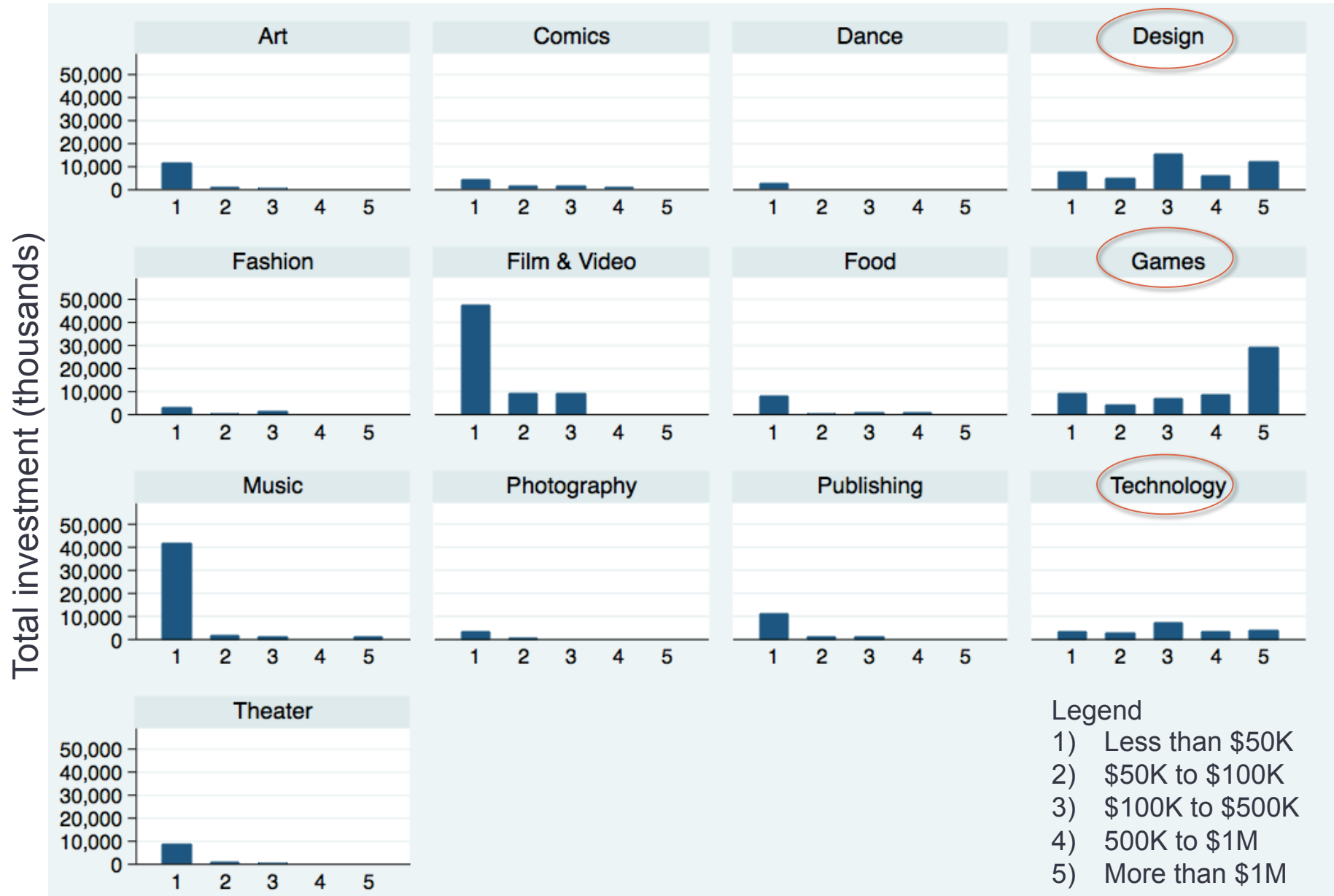
Capital Raised by Sector (thousands)



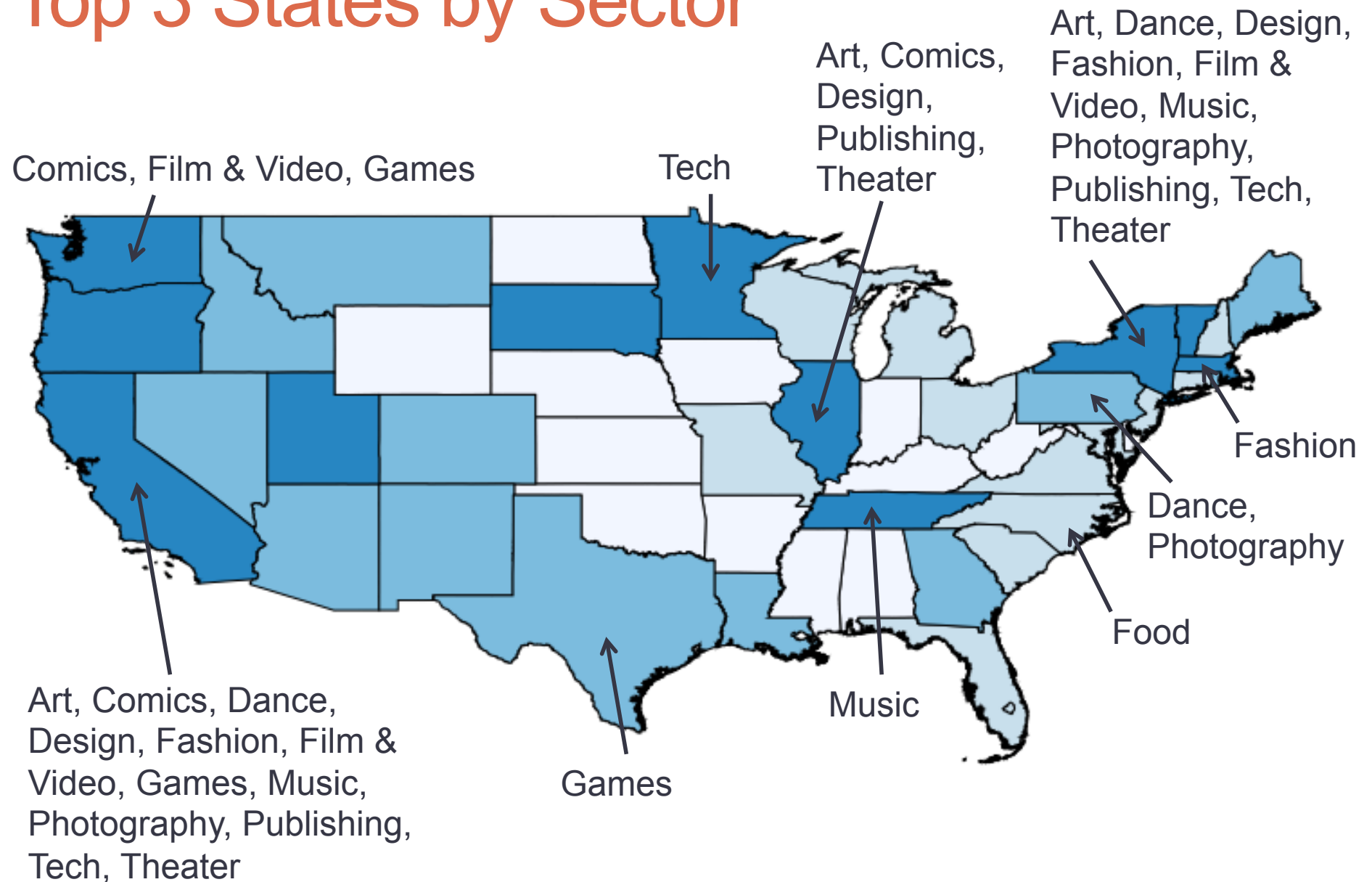
Investment Size



Investment Size by Sector



Top 3 States by Sector



MARKET SEGMENTATION FOR MULTIPLE ATTRIBUTES

Multiple Motivations (I)

OCULUS

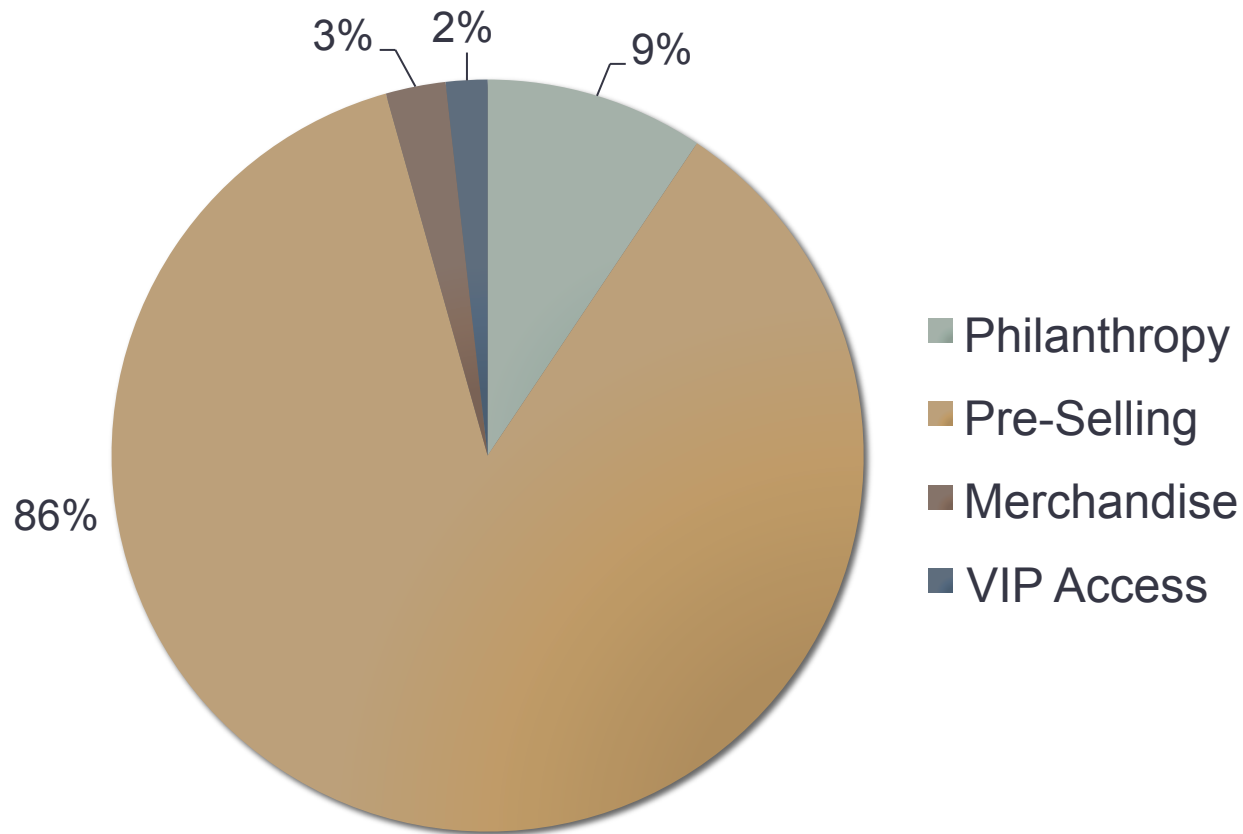
Raised \$2,437,429 (\$250K goal)

9,522 backers



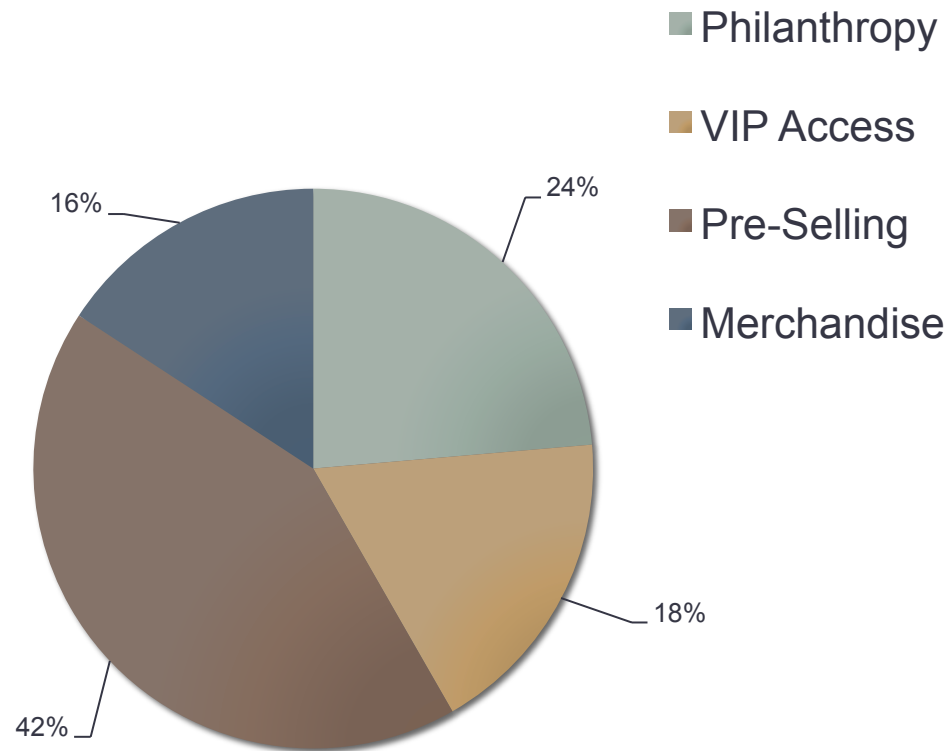
Amount	Backers	Total	Reward
\$10	1009	\$10,090	Thank You
\$15	209	\$3,135	Limited Edition Poster
\$25	434	\$10,850	T-Shirt
\$35	179	\$6,265	T-Shirt and Poster
\$75	106	\$7,950	Signed T-Shirt and Poster
\$275	100	\$27,500	Prototype, SDK
\$300	5640	\$1,692,000	Prototype, SDK, Videogame
\$335	859	\$287,765	Prototype, SDK, Videogame, T-Shirt, Poster
\$500	66	\$33,000	Prototype, SDK, Videogame, Signed T-Shirt, Signed Poster
\$575	216	\$124,200	2 Prototype, SDK, Videogame, Signed T-Shirt, Signed Poster
\$850	40	\$34,000	3 Prototype, SDK, Videogame, Signed T-Shirt, Signed Poster
\$1,400	20	\$28,000	5 Prototype, SDK, Videogame, Signed T-Shirt, Signed Poster
\$3,000	7	\$21,000	10 Prototype, SDK, Videogame, Signed T-Shirt, Signed Poster
\$5,000	7	\$35,000	1 day visit to Oculus and 10 Prototype, SDK, Videogame, Signed T-Shirt, Signed Poster

Multiple Motivations (II)



OCULUS
Raised \$2,437,429
9,522 backers





OPERA KIDS
Raised \$33,412
427 backers

GEOGRAPHY

Geography

- The average distance between an artist and an investors is approximately 3,000 miles

theLights - Low Hundreds Out Now!



Support status

\$560

\$50,000

[FINANCE MY ALBUM](#)

What's in it for me?

Genres:

Acoustic, Folk, Pop

[GIFTPART](#)

[WISHLIST](#)

[I'M A FAN](#)

[COMMENT](#)

[MESSAGE](#)

Playlist

- [Low Hundreds - Out May 11th!](#) 539
- [The new B-Side "Formerly Yours"](#) 211
- [Film Within A Film_1](#) 123

Tracks played: 873

Bulletins

[BBC RADIO 2 iPLAYER](#)

may 20, 2009

[LIVE @ BBC RADIO 2](#)

may 15, 2009

[Song of the week](#)

may 11, 2009

[NEW SONG & THANKYOU!](#)

may 4, 2009

[6 Pack](#)

april 28, 2009

[Ahem... your attention please](#)

april 24, 2009

Believers



Chris



Pacarina :: ...



Martin(Team ...



Mitchell fro...



Lucretia



Dagmar



JohanV



Claire S.

Believers 28

Discovered by [Paul McMaster](#).

Latest believer [Chris](#)

Latest investment 1 Parts by: [thomas shells](#)

Signed up april 17, 2009


Last updated july 4, 2009

Last seen july 4, 2009

Profile views 2362

SELLABAND

theLights - Low Hundreds Out Now!



Support status

\$560 \$50,000

[FINANCE MY ALBUM](#) What's in it for me?

Genres:
Acoustic, Folk, Pop

[GIFTPART](#) [WISHLIST](#) [I'M A FAN](#)

[COMMENT](#) [MESSAGE](#)



155 Freeman: Triple Canopy, Light Industry, Public School

An Art project in Brooklyn, NY by Triple Canopy • [send message](#)

[PROJECT HOME](#)[UPDATES](#)

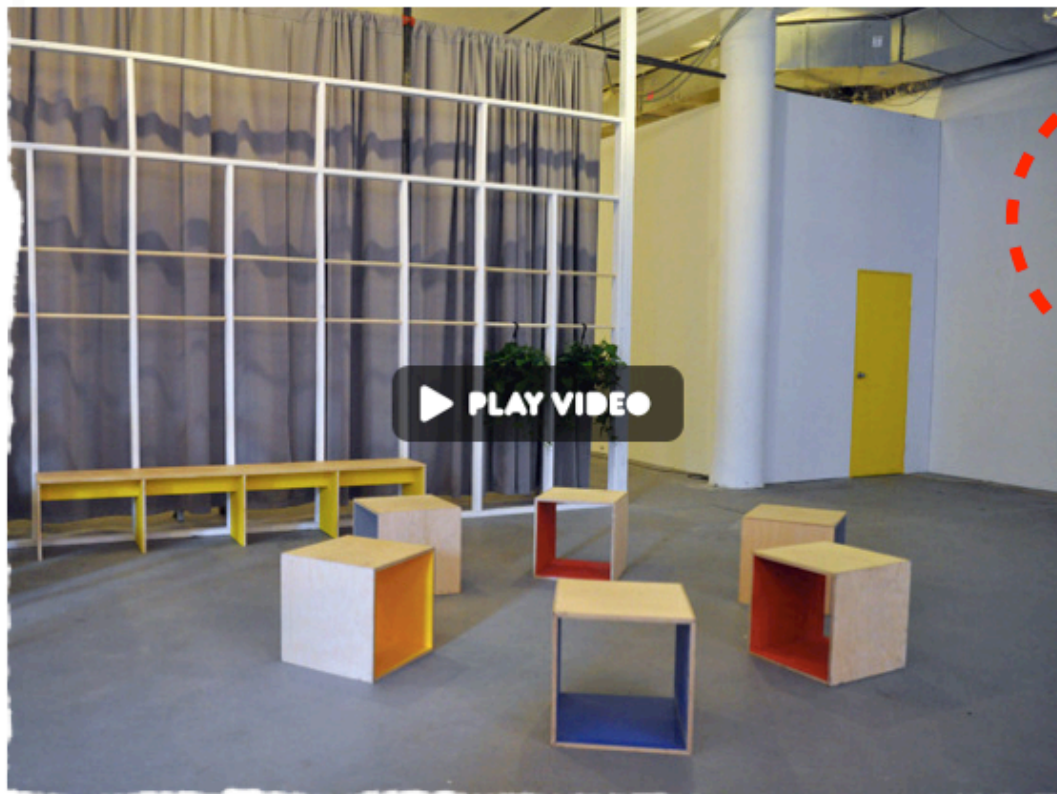
10

[BACKERS](#)

321

[COMMENTS](#)

3

[REMIND ME](#)[PLAY VIDEO](#)**321**

BACKERS

\$34,090

PLEGDED OF \$20,000 GOAL

53

HOURS TO GO

THIS PROJECT WILL BE FUNDED ON SUNDAY
JUL 10, 11:59PM EDT.

BACK THIS PROJECT

\$1 MINIMUM PLEDGE



in.gredients

The nation's first zero-waste, package-free grocery store!

TEAM:



[see more...](#)

LOCATION: Austin, Texas, United States

CATEGORY: Food

[Campaign Home](#)

[Updates | 200](#)

[Comments | 62](#)

[Funders | 104](#)

[Gallery | 2](#)

in.gredients: "The first zero-waste, package-fr...



SHARE THIS CAMPAIGN

<http://igg.me/p/30748?l=shlk>

[ADD TO FAVORITES](#)

\$9,546

RAISED OF \$15,000 GOAL

49

DAYS LEFT

\$100

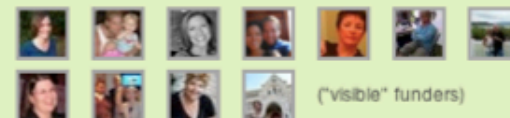
[CONTRIBUTE NOW](#)

Perks for your contribution:

Re-use me!: \$25

We'll send you a reusable container to use in our store!

45 Claimed > [Claim This Perk](#)



("visible" funders)

Arceli Ulan

 Brookes Point, Palawan, Philippines Food | Food

 Recommend



A loan of \$400 helps Arceli Ulan to buy additional mud crabs to sell.

87% raised, \$50 to go



Select amount to lend

\$25



Lend \$25

Repayment Term:

7 months ([more info](#))

Repayment Schedule:

Monthly

Pre-Disbursed:

Jun 3, 2011

Listed:

Jul 2, 2011

Currency Exchange Loss:

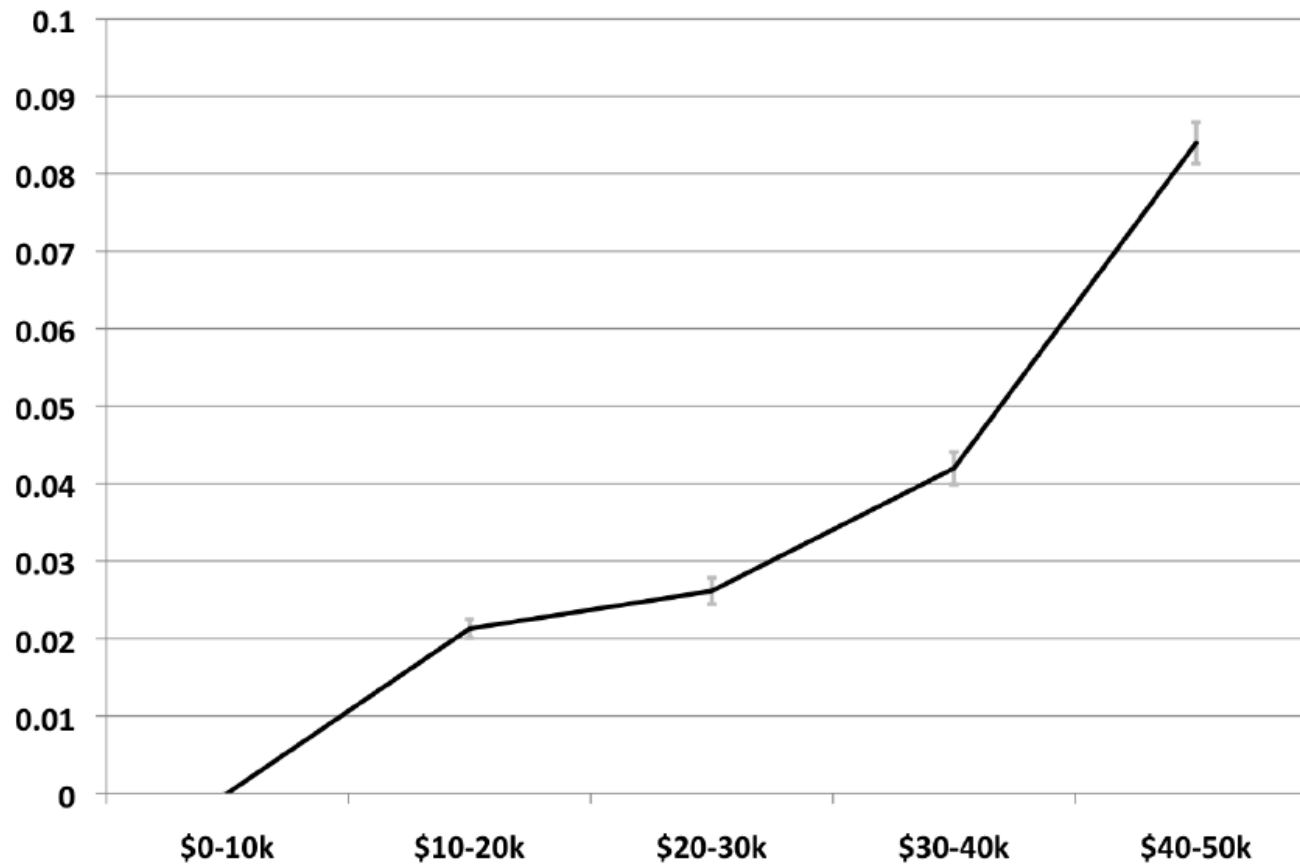
Possible

Default Protection:

Not Covered

Your funds will be used to backfill this loan.
Repayments will go to you.

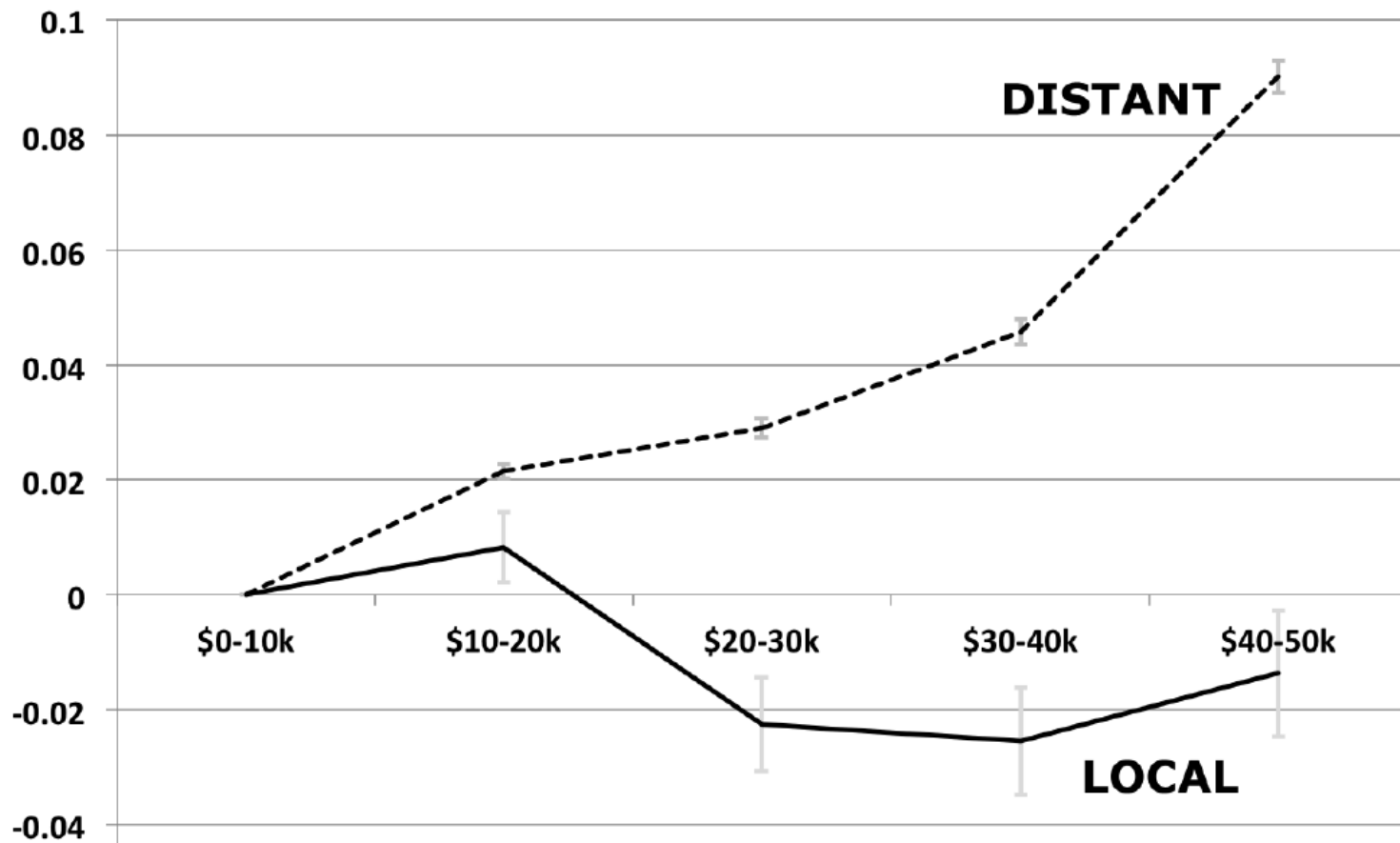
Investment propensity increases with cumulative investment



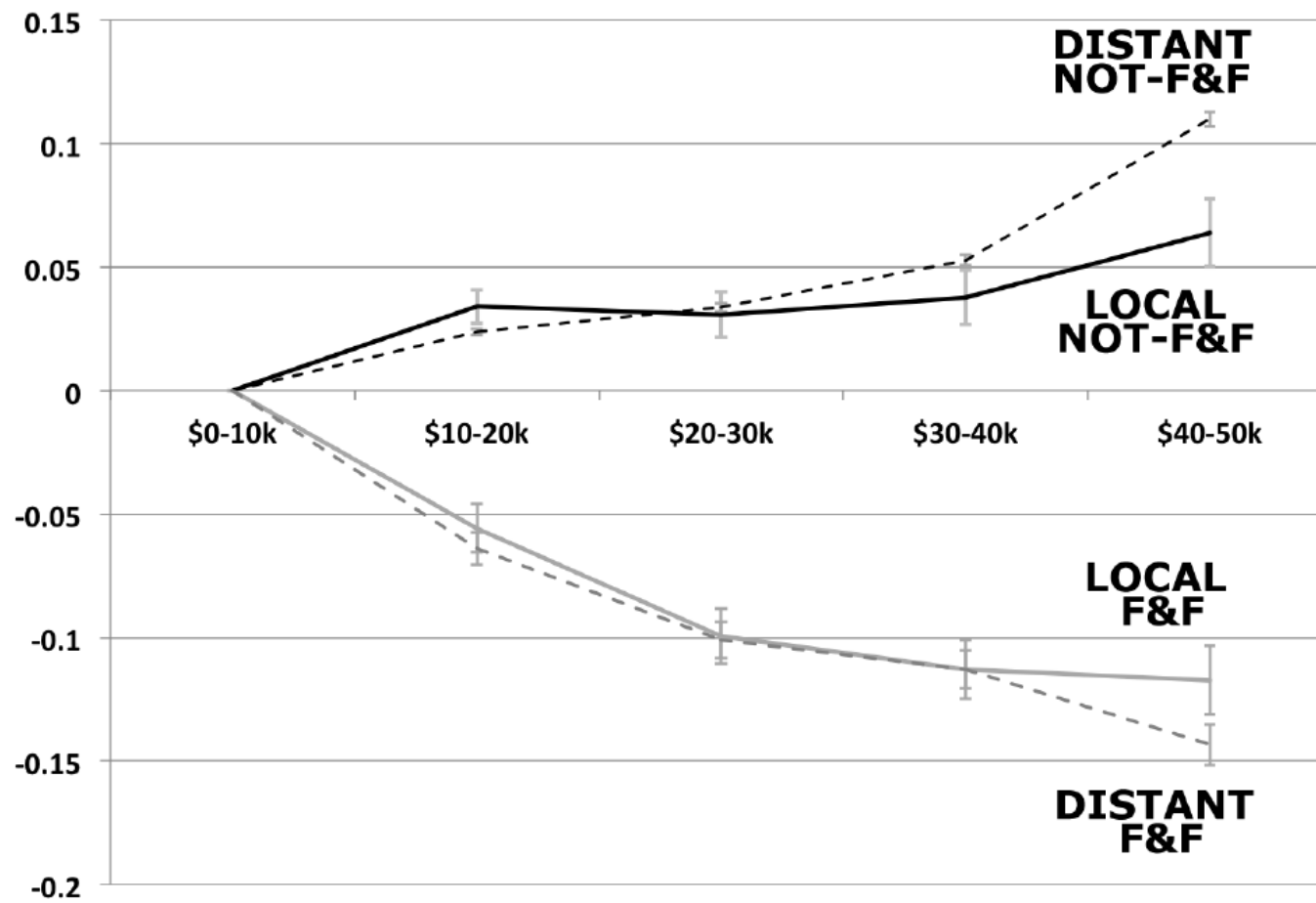
Local versus Distant

	Local	Distant
Propensity to invest	2.9%	0.8%
Average investment size	\$196	\$74
% total investment	13.5%	86.5%

Local and Distant Investors are Different



Local and Distant Investors are Similar, Controlling for F&F



More and different

- The popular assumption is that there will be more equity capital available to entrepreneurs, and that it will be at least somewhat different
- The portfolio of companies financed this way will reflect that crowdfunding disproportionately benefits the types of companies that:
 - benefit most from user/investors (B2C rather than B2B)
 - can most easily distinguish themselves from fraud in an online setting (market for reputation)
 - are least harmed from publishing the types of information required to support a crowdfunding campaign (disclosure)

THANK YOU
