Discussion: Entrepreneurial Peer Effects

Markus Mobius
Microsoft Research

November 3, 2023

Summary

Natural Experiment

1. MBA students at LBA are randomly assigned to "streams" ($\approx$ 400 students per year and 5 streams).
2. Measure on pre-MBA and post-MBA entrepreneurial activity:
   - without footprint: some self-reported activity
   - with footprint: LinkedIn activity
   - accomplished: with footprint *and* Pitchbook company page
3. Stream assignment *does not* depend on entrepreneurial activity.

Results: Post-MBA Entrepreneurship

	Post-MBA entrepreneur	Without footprint	With footprint	Footprint & not accomplished	Footprint & accomplished
Panel A: Peer share of …	(1)	(2)	(3)	(4)	(5)
Pre-MBA entrepreneurs	−0.188	−0.047	−0.140	−0.049	−0.091
	(0.177)	(0.065)	(0.183)	(0.143)	(0.129)
R^2	0.076	0.017	0.067	0.044	0.030
Panel B: Peer share of …	(6)	(7)	(8)	(9)	(10)
Entrepreneurs without footprint	−1.022***	0.061	−1.083***	−0.751***	−0.331**
	(0.251)	(0.117)	(0.250)	(0.202)	(0.153)
Entrepreneurs with footprint	0.228	−0.101	0.330**	0.301**	0.029
	(0.140)	(0.067)	(0.143)	(0.151)	(0.147)
R^2	0.079	0.017	0.071	0.047	0.031
Panel C: Peer share of …	(11)	(12)	(13)	(14)	(15)
Entrepreneurs without footprint	−0.981***	0.085	−1.066***	−0.735***	−0.331**
	(0.251)	(0.124)	(0.248)	(0.202)	(0.156)
Entrepreneurs with footprint & not accomplished	0.113	−0.169**	0.282*	0.254*	0.028
	(0.144)	(0.074)	(0.149)	(0.149)	(0.142)
Entrepreneurs with footprint & accomplished	1.358***	0.561**	0.797**	0.758**	0.039
	(0.470)	(0.286)	(0.374)	(0.343)	(0.347)
R^2	0.079	0.018	0.071	0.048	0.031
Observations	3,437	3,437	3,437	3,437	3,437
Number of entrepreneurs	200	44	156	111	45
Stratification controls	Yes	Yes	Yes	Yes	Yes
Cohort fixed effects	Yes	Yes	Yes	Yes	Yes
Notes:		standard errors are stream-clustered; *p<0.1; **p<0.05; ***p<0.01.			

Results: Post-MBA Entrepreneurship

	Post-MBA entrepreneur (1)	Without footprint (2)	With footprint (3)	Footprint & not accomplished (4)	Footprint & accomplished (5)
Panel A: Peer share of ...					
Pre-MBA entrepreneurs	−0.188	−0.047	−0.140	−0.049	−0.091
	(0.177)	(0.065)	(0.183)	(0.143)	(0.129)
R^2	0.076	0.017	0.067	0.044	0.030
Panel B: Peer share of ...	(6)	(7)	(8)	(9)	(10)
Entrepreneurs without footprint	−1.022***	0.061	−1.083***	−0.751***	−0.331**
	(0.251)	(0.117)	(0.250)	(0.202)	(0.153)
Entrepreneurs with footprint	0.228	−0.101	0.330**	0.301**	0.029
	(0.140)	(0.067)	(0.143)	(0.151)	(0.147)
R^2	0.079	0.017	0.071	0.047	0.031
Panel C: Peer share of ...	(11)	(12)	(13)	(14)	(15)
Entrepreneurs without footprint	−0.981***	0.085	−1.066***	−0.735***	−0.331**
	(0.251)	(0.124)	(0.248)	(0.202)	(0.156)
Entrepreneurs with footprint & not accomplished	0.113	−0.169**	0.282*	0.254*	0.028
	(0.144)	(0.074)	(0.149)	(0.149)	(0.142)
Entrepreneurs with footprint & accomplished	1.358***	0.561**	0.797**	0.758**	0.039
	(0.470)	(0.286)	(0.374)	(0.343)	(0.347)
R^2	0.079	0.018	0.071	0.048	0.031
Observations	3,437	3,437	3,437	3,437	3,437
Number of entrepreneurs	200	44	156	111	45
Stratification controls	Yes	Yes	Yes	Yes	Yes
Cohort fixed effects	Yes	Yes	Yes	Yes	Yes
Notes:			standard errors are stream-clustered; *p<0.1; **p<0.05		***p<0.01.

Results: Post-MBA Entrepreneurship

Panel A: Peer share of ...	Post-MBA entrepreneur (1)	Without footprint (2)	With footprint (3)	Footprint & not accomplished (4)	Footprint & accomplished (5)
Pre-MBA entrepreneurs	−0.188 (0.177)	−0.047 (0.065)	−0.140 (0.183)	−0.049 (0.143)	−0.091 (0.129)
R^2	0.076	0.017	0.067	0.044	0.030
Panel B: Peer share of ...	(6)	(7)	(8)	(9)	(10)
Entrepreneurs without footprint	−1.022*** (0.251)	0.061 (0.117)	−1.083*** (0.250)	−0.751*** (0.202)	−0.331** (0.153)
Entrepreneurs with footprint	0.228 (0.140)	−0.101 (0.067)	0.330** (0.143)	0.301** (0.151)	0.029 (0.147)
R^2	0.079	0.017	0.071	0.047	0.031
Panel C: Peer share of ...	(11)	(12)	(13)	(14)	(15)
Entrepreneurs without footprint	−0.981*** (0.251)	0.085 (0.124)	−1.066*** (0.248)	−0.735*** (0.202)	−0.331** (0.156)
Entrepreneurs with footprint & not accomplished	0.113 (0.144)	−0.169** (0.074)	0.282* (0.149)	0.254* (0.149)	0.028 (0.142)
Entrepreneurs with footprint & accomplished	1.358*** (0.470)	0.561** (0.286)	0.797** (0.374)	0.758** (0.343)	0.039 (0.347)
R^2	0.079	0.018	0.071	0.048	0.031
Observations	3,437	3,437	3,437	3,437	3,437
Number of entrepreneurs	200	44	156	111	45
Stratification controls	Yes	Yes	Yes	Yes	Yes
Cohort fixed effects	Yes	Yes	Yes	Yes	Yes

Notes: standard errors are stream-clustered; *p<0.1; **p<0.05; ***p<0.01.

Results: Human Capital Acquisition/Interest

	Entrepreneurship Club events	Entrepreneurship electives taken
Panel A: absolute number	(1)	(2)
Peer share of entrepreneurs without footprint	−12.478**	−3.096***
	(5.782)	(1.164)
Peer share of entrepreneurs with footprint	8.802**	1.837*
	(3.479)	(0.992)
R^2	0.366	0.492
Panel B: share of total	(3)	(4)
Peer share of entrepreneurs without footprint	−0.254***	−0.301***
	(0.090)	(0.101)
Peer share of entrepreneurs with footprint	0.105**	0.148*
	(0.054)	(0.080)
R^2	0.372	0.495
Observations	3,437	3,437
Stratification controls	Yes	Yes
Cohort fixed effects	Yes	Yes

Notes: standard errors are stream-clustered; $^*p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$.

Summary

- Effects are both significant and large in economic terms.
- Human capital acquisition evidence suggests real effects.
- Future work on seating charts looks promising.

Channels

Summary

Possible channels for peer influence:

1. Better PR: spending time with entrepreneurs teaches peers the value of LinkedIn and Pitchbook.
   - inconsistent with the human capital evidence

Summary

Possible channels for peer influence:

1. Better PR: spending time with entrepreneurs teaches peers the value of LinkedIn and Pitchbook.
   - inconsistent with the human capital evidence
2. Role Models
   - successful entrepreneurs provide confidence
3. Generic Knowledge/Ideas
   - successful entrepreneurs provide/vet ideas
   - advice on financing
   - contacts (angle investors etc.)

Summary

Possible channels for peer influence:

1. Better PR: spending time with entrepreneurs teaches peers the value of LinkedIn and Pitchbook.
   - inconsistent with the human capital evidence
2. Role Models
   - successful entrepreneurs provide confidence
3. Generic Knowledge/Ideas
   - successful entrepreneurs provide/vet ideas
   - advice on financing
   - contacts (angle investors etc.)
4. Specific Knowledge/Ideas
   - like generic knowledge but in the same industry

Summary

Possible channels for peer influence:

1. Better PR: spending time with entrepreneurs teaches peers the value of LinkedIn and Pitchbook.
   - inconsistent with the human capital evidence
2. Role Models
   - successful entrepreneurs provide confidence
3. Generic Knowledge/Ideas
   - successful entrepreneurs provide/vet ideas
   - advice on financing
   - contacts (angle investors etc.)
4. Specific Knowledge/Ideas
   - like generic knowledge but in the same industry
5. Direct collaboration
   - successful entrepreneurs find co-founder among their peers

Role Models

Panel A: Peer share of ...	Post-MBA entrepreneur (1)	Without footprint (2)	With footprint (3)	Footprint & not accomplished (4)	Footprint & accomplished (5)
Pre-MBA entrepreneurs	−0.188 (0.177)	−0.047 (0.065)	−0.140 (0.183)	−0.049 (0.143)	−0.091 (0.129)
R^2	0.076	0.017	0.067	0.044	0.030
Panel B: Peer share of ...	(6)	(7)	(8)	(9)	(10)
Entrepreneurs without footprint	−1.022*** (0.251)	0.061 (0.117)	−1.083*** (0.250)	−0.751*** (0.202)	−0.331** (0.153)
Entrepreneurs with footprint	0.228 (0.140)	−0.101 (0.067)	0.330** (0.143)	0.301** (0.151)	0.029 (0.147)
R^2	0.079	0.017	0.071	0.047	0.031
Panel C: Peer share of ...	(11)	(12)	(13)	(14)	(15)
					−0.331** (0.156)
					0.028 (0.142)
					0.039 (0.347)
					0.031
					3,437
					45
Stratification controls	Yes	Yes	Yes	Yes	Yes
Cohort fixed effects	Yes	Yes	Yes	Yes	Yes
Notes:			standard errors are stream-clustered; *p<0.1; **p<0.05; ***p<0.01.		

> For most successful entrepreneurs (who might also be the most confident) absence of good peers hurts.

Role Models

	Post-MBA entrepreneur	Entrepreneurship Club events	Entrepreneurship electives taken
Panel A: Peer share of ...	(1)	(2)	(3)
Entrepreneurs without footprint × Female	−0.877*** (0.294)	−9.251 (7.321)	−6.542*** (2.335)
Entrepreneurs without footprint × Male	−1.199*** (0.323)	−14.302** (6.428)	−1.178 (1.320)
Entrepreneurs with footprint × Female	0.159 (0.274)	6.185 (6.874)	0.312 (1.808)
Entrepreneurs with footprint × Male	0.435* (0.240)	10.425*** (3.805)	2.732** (1.103)
Without-equal (F-stat.)	0.478	0.388	0.255
With-equal (F-stat.)	0.334	3.372*	1.171
R^2	0.071	0.366	0.493
Panel B: Peer share of ...	(4)	(5)	(6)
Entrepreneurs without footprint who were female	−1.062** (0.430)	−11.998 (10.393)	−7.002*** (2.083)
Entrepreneurs without footprint who were male	−1.093*** (0.276)	−11.974 (8.461)	−0.508 (1.575)
Entrepreneurs with footprint who were female	0.337 (0.286)	14.499* (7.672)	5.381*** (1.545)
Entrepreneurs with footprint who were male	0.324* (0.184)	5.977 (4.004)	0.433 (1.087)
Without-equal (F-stat.)	0.002	0.001	0.0001
With-equal (F-stat.)	0.790	3.368*	3.087*
R^2	0.071	0.366	0.493
Observations	3,437	3,437	3,437
Stratification controls	Yes	Yes	Yes
Cohort fixed effects	Yes	Yes	Yes

Role Models

	Post-MBA entrepreneur	Entrepreneurship Club events	Entrepreneurship electives taken
Panel A: Peer share of ...	(1)	(2)	(3)
Entrepreneurs without footprint × Female	−0.877*** (0.294)	−9.251 (7.321)	−6.542*** (2.335)
Entrepreneurs without footprint × Male	−1.199*** (0.324)	−14.302** (6.428)	−1.178 (1.320)
Entrepreneurs with footprint × Female	0.159 (0.274)	6.185 (6.874)	0.312 (1.808)
Entrepreneurs with footprint × Male	0.435* (0.240)	10.425*** (3.805)	2.732** (1.103)
Without-equal (F-stat.)	0.478	0.388	0.255
With-equal (F-stat.)	0.334	3.372*	1.171
R^2	0.071	0.366	0.493
Panel B: Peer share of ...	(4)	(5)	(6)
Entrepreneurs without footprint who were female	−1.062** (0.430)	−11.998 (10.393)	−7.002*** (2.083)
Entrepreneurs without footprint who were male	−1.093*** (0.276)	−11.974 (8.461)	−0.508 (1.575)
Entrepreneurs with footprint	0.337	14.499*	5.381***

Homophily ⇒ do women (men) have a larger effect on women (men)?

Observations	5,457	5,457	5,457
Stratification controls	Yes	Yes	Yes
Cohort fixed effects	Yes	Yes	Yes

Role Models: New Evidence

- Role model channel should be effective independent of the industry
- Collect information on the pre-MBA and post-MBA industry to see whether the influence is industry-specific.
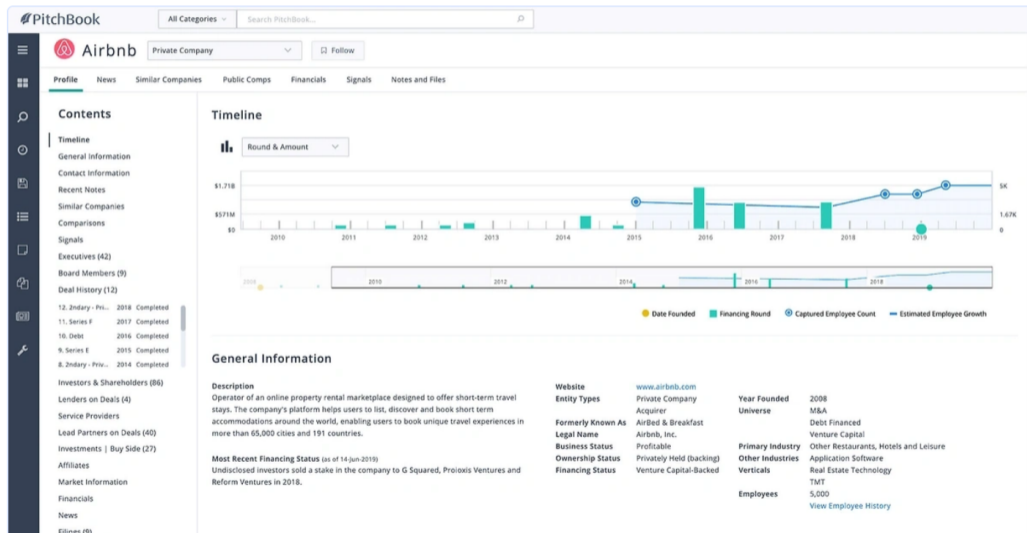
Specific Knowledge/Ideas

- Azoulay (QJE 2010): Superstar Extinction - superstar collaborators as source of ideas
- Add survey evidence: who of their peers was asked for advice?
- Pitchbook provides some board/investor information: did post-MBA entrepreneurs tap the networks of pre-MBA peers?
  - Scrape this information first.
 - Add specifically in the survey through auto-complete.

Specific Knowledge/Ideas

- Similar to the generic channel but works within an industry.
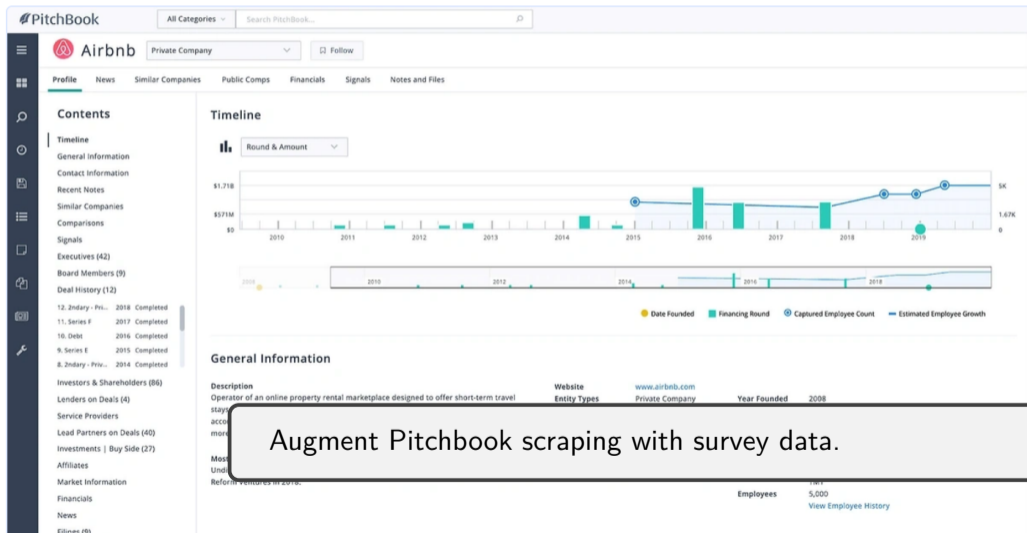- Use industry information from LinkedIn, Pitchbook and possibly a survey.

Direct Collaboration

Direct Collaboration

Pitchbook provides info on executives and board members.

Direct Collaboration

Augment Pitchbook scraping with survey data.
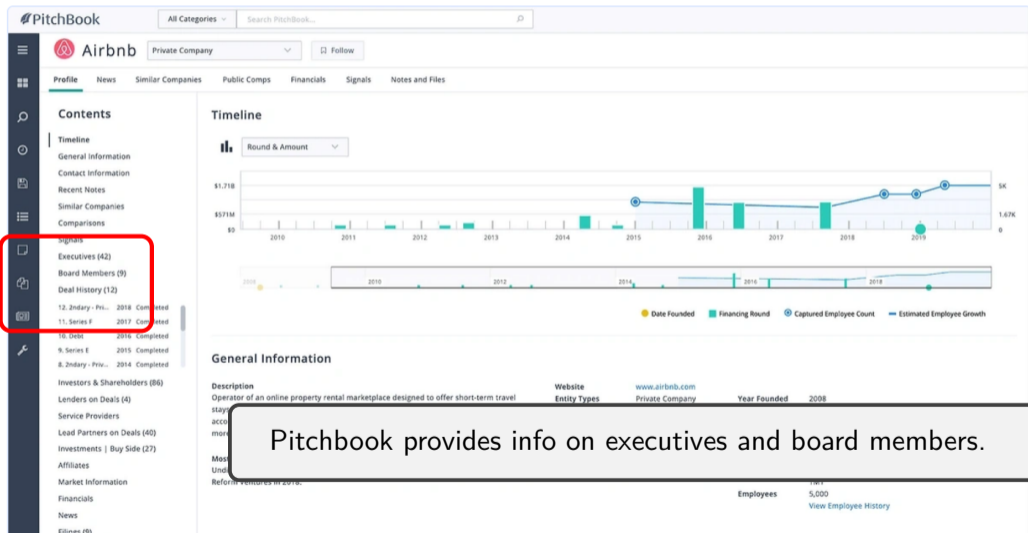
Summary

- Amazing dataset with exciting preliminary results
- Scraping of industry data, board members and executives from Pitchbook helps distinguish channels.
- Sending out survey to LBS MBAs could provide a lot of insights (especially when combined with pre-scraped data).