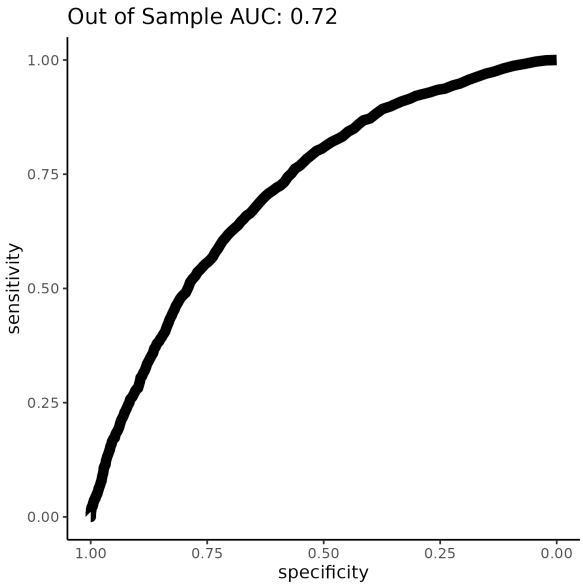
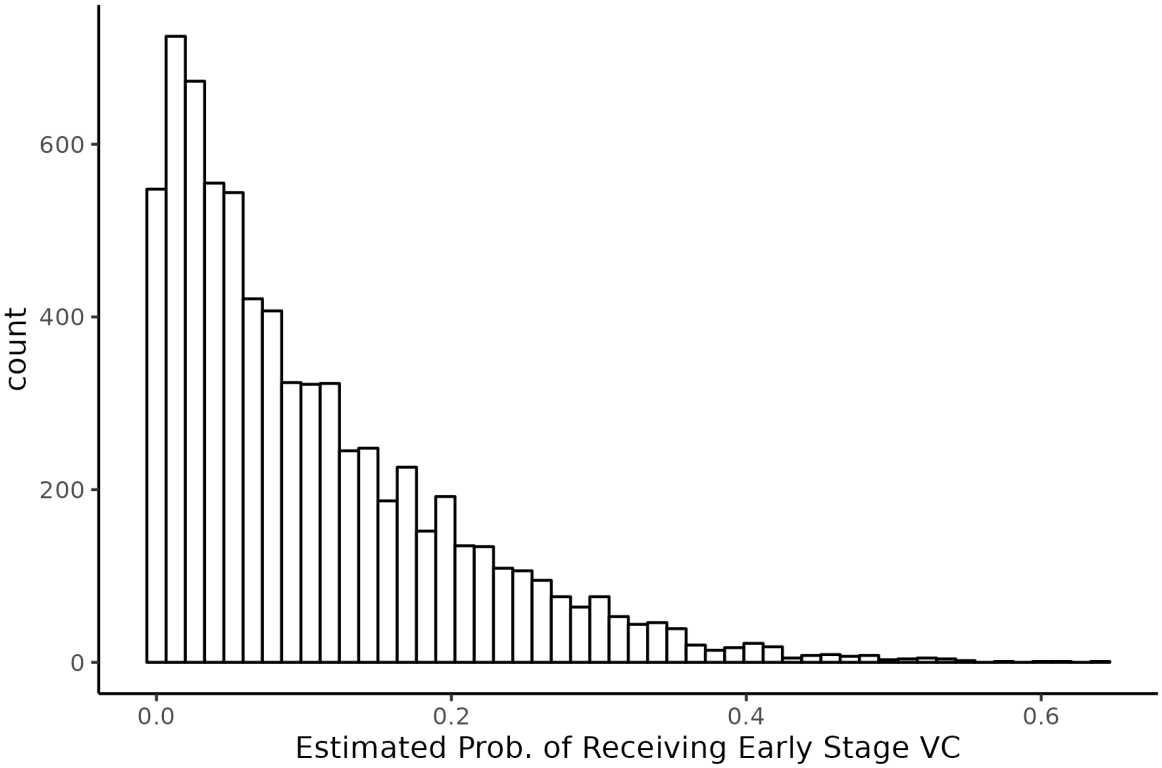
Figure 1: ROC score distribution for selection model



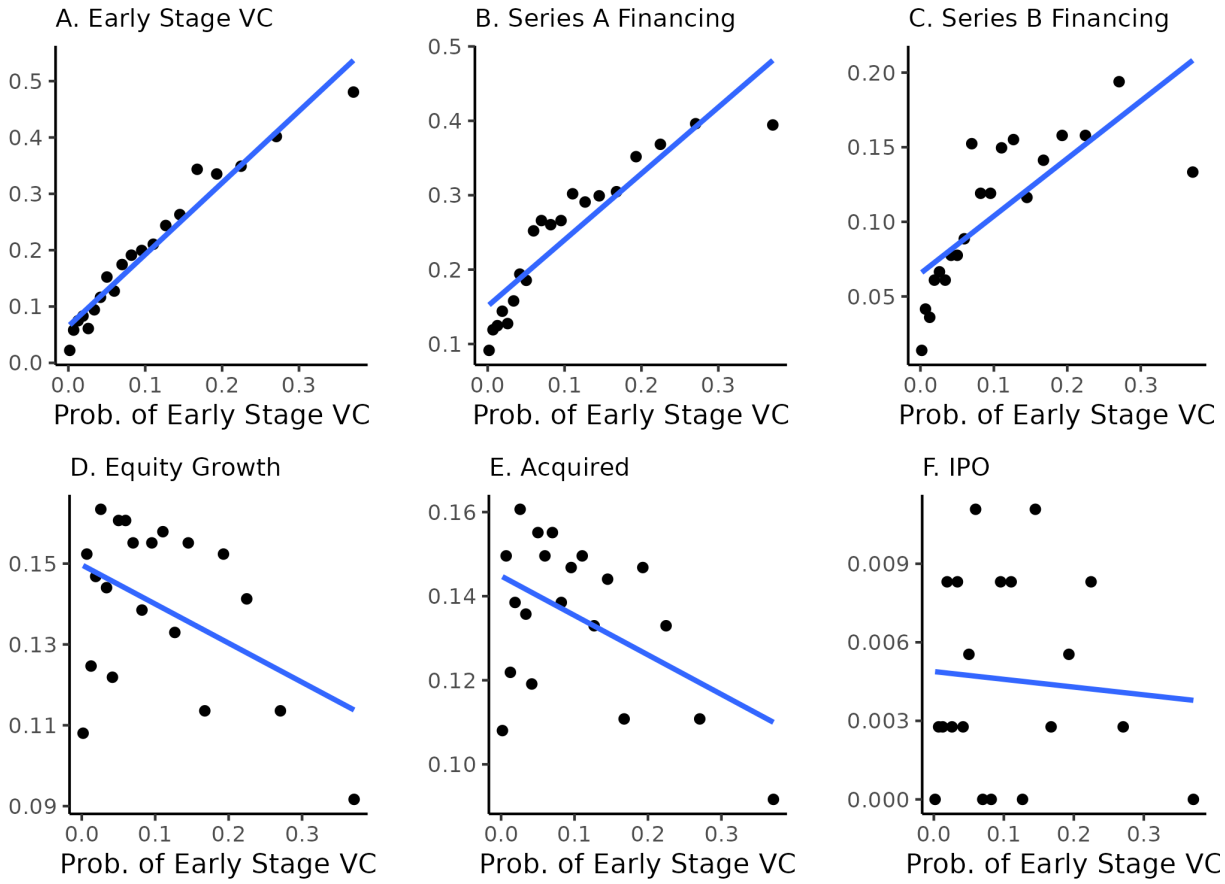
Notes: This figure reports the out-of-sample ROC score of a random forest model using a set of high dimensional startup observables to predict the probability that a venture capitalist has funded a startup's early stage round, in a sample of startups that received early stage financing.

Figure 2: Histogram of Predictions



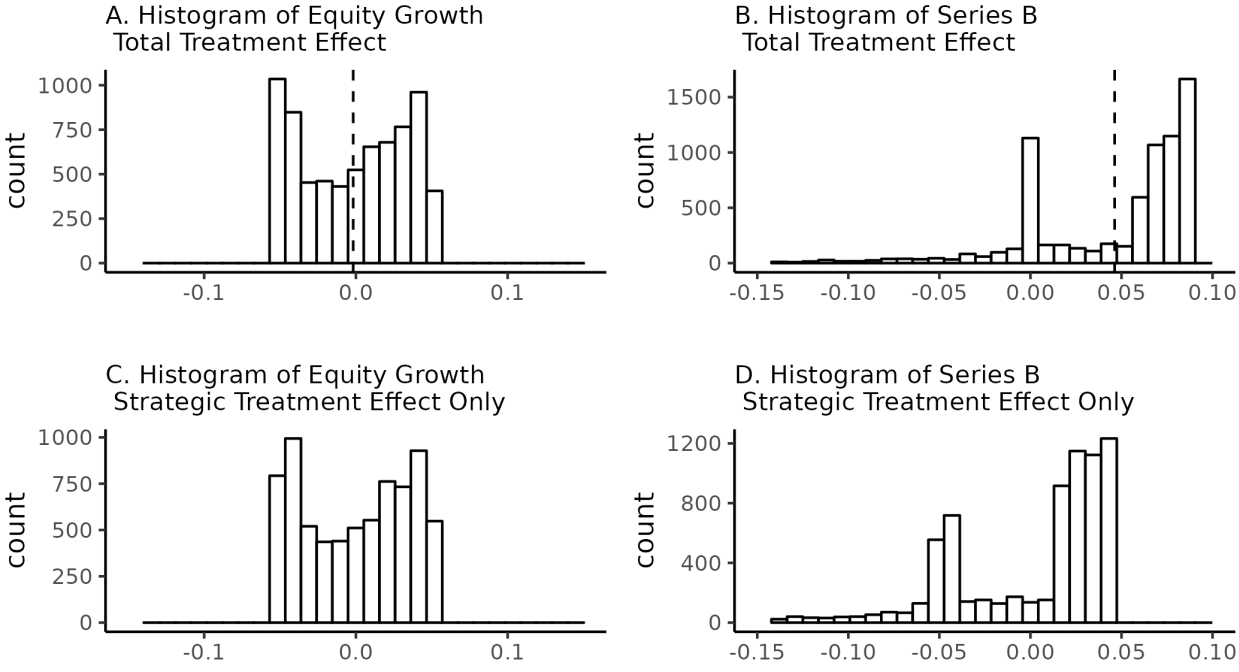
Notes: This figure reports the histogram of out of sample predicted probability of receiving venture capital financing from a random forest model using a set of high dimensional startup observables, in a sample consisting only of startups that received early stage financing.

Figure 3: Binned scatterplot for outcomes across the distribution of predicted probability of venture capital



Notes: This figure plots binned scatterplots on the out of sample predicted probability of receiving venture capital from our random forest model. The relationship between this probability and the receipt of VC is positive, but the relationship to other outcomes is more nuanced.

Figure 4: Distribution of treatment effects



Notes: This figure reports estimated treatment effects ($\hat{\Delta}$) for the firms in our sample. The dashed line in panels A and B represent the mean treatment effect for firms.

Table 1: Summary Statistics

Statistic	Mean	St. Dev.	N
Amount Raised Total	11,592,973.000	71,123,260.000	7,219
Seed Amount Raised	1,309,721.000	1,512,657.000	7,219
Angel Funding Amount Raised	114,929.200	452,395.500	7,219
Early Stage Amount Raised	1,593,344.000	1,608,507.000	7,219
Series A Amount Raised	1,923,141.000	4,852,012.000	7,219
Series B Amount Raised	2,150,582.000	8,973,669.000	7,219
Seed VC	0.187	0.390	7,219
Pre Seed VC	0.008	0.088	7,219
Early Stage VC	0.199	0.399	7,219
Equity Growth	0.139	0.346	7,219
IPO	0.005	0.067	7,219
Acquisition	0.135	0.342	7,219

Notes: Data represents U.S. based firms in Crunchbase founded between 2005 and 2017 that raised a form of eary stage financing, defined as any of a seed round, a pre-seed round, crowd-funding, angel, or grants. *Seed VC* is an indicator equal to 1 if the startup receives seed financing from a venture capitalist. *Early Stage VC* is an indicator equal to 1 if the startup receives any form of early stage financing from a venture capitalist. *Equity Growth* is an indicator equal to 1 if the startup achieves an equity through either IPO or Acquisition.

Table 2: Strategic Determinant Function: Top Features for Strategic Treatment Effect of VC on Equity Growth

	Dependent variable:					
	Equity Growth				Raised Series B	
	OLS	Double LASSO	OLS	Double LASSO	OLS	Double LASSO
	(1)	(2)	(3)	(4)	(5)	(6)
Early Stage VC	0.025^{*}	-0.011			0.091^{***}	0.046^{***}
	(0.014)	(0.015)			(0.015)	(0.013)
Seed VC			0.026^{*}	-0.010		
			(0.014)	(0.014)		
Observations	7,219	7,219	7,219	7,219	7,219	7,219
R^2	0.095	0.147	0.095	0.150	0.053	0.106

Notes: Estimates the impact of early stage venture capital on firm outcomes. Columns (1), (3), and (5) report naive OLS estimators with no controls. Columns (2), (4), and (6) report estimates using the double LASSO approach of Belloni et al (2014). Founding year fixed effects are included in all regressions. Standard errors clustered at the state level are reported. *p<0.1; **p<0.05; ***p<0.01

Table 3: Top Features Predicting Venture Capital vs Other Forms of Financing in a Random Forest

rank	Variable	Mean Decrease Accuracy
1	Early Stage Financing Bin	36.826
2	City: San Francisco x Industry: Biotechnology	12.544
3	School: Universityof x Industry: Artificial Intelligence	9.205
4	City: New York X Harvard	8.887
5	City: Portland x Industry: Enterprise Software	8.877
6	City: Austin x Industry: Machine Learning	8.799
7	City: Boulder x Industry: Software	8.730
9	City: New York x Industry: Predictive Analytics	7.755
10	Industry: Open Source	7.612
11	City: Boston x Industry: Fin Tech	7.554
12	Industry: Machine Learning	7.323
13	Industry: Ed Tech	6.988
14	City: Austin x Industry: Artificial Intelligence	6.632
15	School: Stanford x Industry: Analytics	6.322
16	Industry: 3DTechnology	6.136
17	School: Stanford x Industry: Artificial Intelligence	5.845
18	State: Michigan	5.727
19	City: Mountain View x Industry: ECommerce	5.705
20	City: New York X Stanford	5.573
21	School: Harvard	5.549
22	City: San Francisco x Industry: Retail	5.539
23	City: San Francisco x Industry: Health Diagnostics	5.454
24	City: Boulder x Industry: Saa S	5.416
25	Industry: Artificial Intelligence	5.382
26	City: San Francisco x Industry: Information Technology	5.226
27	School: Stanford	5.226
28	City: Boston X Harvard	5.042
30	City: Atlanta x Industry: Information Technology	4.933
31	School: Universityof	4.933
32	Industry: Sales Automation	4.850
33	City: San Jose X Universityof	4.829
34	School: Stanford x Industry: Health Care	4.779
35	City: San Francisco x Industry: Education	4.721
36	City: Chicago X Kellogg School	4.560
38	Industry: Computer Vision	4.460
39	School: MIT x Industry: Analytics	4.378
40	City: San Francisco x Industry: Cloud Computing	4.335
41	City: Austin X Berkeley	4.299
42	City: San Francisco x Industry: Robotics	4.265
44	City: New York x Industry: Virtual Reality	4.145

Notes: This table reports the top features selected by feature importance score in a random forest model predicting whether a firm gets venture capital financing or a different form of financing. The random forest model is run with a 10-fold cross validation.

Table 4: Strategic Determinant Function: Top Features for Strategic Treatment Effect of VC on Equity Growth

	Variable	Coefficient	Coefficient/ATE
Panel A: Most Positive Features			
1	City: San Mateo X MIT	0.020	-10.900
2	City: Denver X UCLA	0.018	-9.960
3	City: Boston X Stanford	0.016	-8.790
4	City: Cambridge X Universityof	0.014	-7.950
5	City: San Mateo X Columbia	0.013	-7.010
6	City: Boulder X NYU	0.011	-6.170
7	City: Palo Alto X Berkeley	0.011	-5.900
8	City: Seattle X Wharton School	0.011	-5.900
9	City: San Francisco x Industry: Music	0.011	-5.840
10	City: Atlanta X Kellogg School	0.009	-5.010
11	City: San Francisco X Stanford	0.009	-4.840
12	School: Stanford x Industry: Saa S	0.007	-3.950
13	City: San Francisco X Stanford x Industry: Internet	0.006	-3.450
14	School: Harvard x Industry: Machine Learning	0.006	-3.390
15	City: San Francisco X MIT	0.006	-3.110
16	City: New York x Industry: Legal	0.005	-3.060
17	City: San Francisco x Industry: Cloud Infrastructure	0.005	-3.060
18	Industry: Mobile	0.004	-2.500
19	City: San Francisco x Industry: Social Media	0.004	-2.500
20	City: Santa Monica X Harvard	0.004	-2.340
Panel B: Most Negative Features			
563	City: Los Angeles x Industry: Education	-0.022	12.400
564	City: Austin x Industry: Analytics	-0.023	12.630
565	City: Los Angeles x Industry: Saa S	-0.023	12.900
566	Industry: Cloud Infrastructure	-0.024	13.180
567	City: Chicago X Kellogg School	-0.024	13.410
568	City: New York x Industry: ELearning	-0.024	13.460
569	City: Santa Monica x Industry: Internet	-0.024	13.520
570	City: Portland x Industry: Enterprise Software	-0.025	13.740
571	City: New York x Industry: Web Development	-0.025	14.180
572	School: Berkeley	-0.026	14.460
573	Industry: Aerospace	-0.028	15.350
574	City: Brooklyn x Industry: Software	-0.028	15.520
575	Industry: Open Source	-0.028	15.630
576	City: Brooklyn x Industry: Social Media	-0.028	15.630
577	City: Boston x Industry: Fin Tech	-0.028	15.690
578	City: Santa Clara x Industry: Software	-0.028	15.800
579	City: New York x Industry: Leisure	-0.030	16.630
580	City: Santa Monica x Industry: Software	-0.032	17.520
581	City: Austin x Industry: Artificial Intelligence	-0.034	18.970
582	City: Boulder x Industry: Software	-0.035	19.410
583	City: Mountain View x Industry: ECommerce	-0.041	22.580

Notes: This table reports the top features selected by a penalized LASSO model with the estimates of the strategic treatment effect for VC on equity growth, and their associated coefficients.

Table 5: Strategic Determinant Function: Top Features for Strategic Treatment Effect of VC on Series B Financing

	Variable	Coefficient	Coefficient/ATE
Panel A: Most Positive Features			
1	City: Miami X Harvard	0.025	0.540
2	City: Boston X Stanford	0.016	0.340
3	City: Atlanta X Kellogg School	0.014	0.300
4	City: Sunnyvale X Berkeley	0.013	0.280
5	City: San Mateo X MIT	0.012	0.260
6	City: Seattle X Universityof	0.011	0.230
7	City: Los Angeles X Duke	0.011	0.230
8	City: San Francisco x Industry: Social Media	0.009	0.190
9	City: Palo Alto X Berkeley	0.008	0.170
10	City: Denver X UCLA	0.006	0.140
11	City: Austin X Columbia	0.005	0.110
12	City: Los Angeles X MIT	0.004	0.090
13	City: New York x Industry: Payments	0.004	0.090
14	City: San Francisco x Industry: Content	0.004	0.090
15	Industry: Mobile	0.004	0.080
16	City: San Francisco x Industry: Social	0.004	0.080
17	City: New York x Industry: Search Engine	0.004	0.080
18	City: San Francisco x Industry: Mobile	0.004	0.080
19	City: Los Angeles x Industry: Information Technology	0.003	0.070
20	City: San Francisco x Industry: Digital Media	0.003	0.070
Panel B: Most Negative Features			
335	City: Mountain View X Universityo	-0.047	-1.030
336	City: Palo Alto x Industry: Artificial Intelligence	-0.047	-1.030
337	City: New York x Industry: Web Development	-0.051	-1.100
338	City: New York x Industry: Logistics	-0.051	-1.100
339	City: Mountain View x Industry: ECommerce	-0.052	-1.130
340	City: New York X Harvard	-0.054	-1.160
341	City: Boulder x Industry: Software	-0.056	-1.200
342	City: Los Angeles x Industry: Saa S	-0.059	-1.270
343	City: Los Angeles x Industry: Marketplace	-0.060	-1.290
344	School: Universityof x Industry: Artificial Intelligence	-0.061	-1.320
345	School: Harvard x Industry: Fin Tech	-0.061	-1.320
346	City: San Francisco x Industry: Foodand Beverage	-0.061	-1.330
347	City: San Francisco x Industry: Robotics	-0.064	-1.390
348	City: Boulder x Industry: Saa S	-0.064	-1.400
349	City: Austin x Industry: Machine Learning	-0.065	-1.400
350	City: Portland x Industry: Enterprise Software	-0.069	-1.490
351	City: San Jose X Universityof	-0.073	-1.570
352	City: Portland X Duke	-0.078	-1.700
353	City: Mountain View X Columbia	-0.083	-1.800
354	City: Austin x Industry: Artificial Intelligence	-0.083	-1.800
355	City: San Francisco x Industry: Biotechnology	-0.147	-3.180

Notes: This table reports the top features selected by a penalized LASSO model with the estimates of the strategic treatment effect for VC on raising Series B financing, and their associated coefficients.

Table 6: The Role of Strategic Coherence

Statistic	Equity Growth STE Estimates	Series B STE Estimates
R Squared Full Model	0.773	0.702
R Squared Non Interacted Model	0.711	0.534
Value of Coherence	0.088	0.315

Notes: This table reports the out-of-sample R-squared from two penalized LASSO models with estimates of the strategic treatment effect (STE) as the dependent variable. A *Full Model*, using all observables and their two-way interactions, and a *Non Interacted Model* introducing only the observables linearly. The percentage increase from the non interacted to the full model represents the importance of coherence for a managerial strategy. Column (1) uses the STE estimates for equity growth (IPO or acquisition) as the dependent variable, while column (2) uses the STE estimates for getting a series B.