

Entrepreneurial Fundraising Strategies and the Gender Gap: Theory and Evidence from Equity Crowdfunding

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Online Appendix

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Table A1: Oster analysis for coefficient stability

Panel A - Table A1: Coefficient Stability for Table 3

All A1 tables report the coefficients associated with the main independent variables, their standard errors, and the delta parameter from Oster (2019) associated with each of these coefficients under increasingly strict specifications. We use the standard assumption of $R_{max} = \min\{1.3 \cdot R_{sq}, 1\}$. Values for delta above 1 suggest the coefficients are not sensitive to unobservable information.

Panel A is based on Table 3. All regressions include the following controls: Team Size, Prior SEEDRS, SEIS/EIS, Sector and Quarter. The first two columns make use of the full sample. Founder characteristics are defined as Entrepreneurial Experience, Managerial Experience, and Education. The remaining columns are based on the restricted sample of successful campaigns. The fifth column includes the controls from the fourth column, plus the controls for product and delivery mode. The last column shows the full specification which also includes GPT Growth and GPT Capital.

	Base	+ Founder Characteristics	Base (Restricted Sample)	+ Founder Characteristics	+ Product and Delivery FEs	Full Specification
Panel A: Continuous Models						
Female Share	-0.380** (-2.76)	-0.347** (-2.53)	-0.678** (-3.08)	-0.588** (-2.71)	-0.610** (-2.90)	-0.614** (-2.81)
Delta	-	1.139	-	1.049	1.340	1.951
Observations	767	767	333	333	333	329
R-squared	0.358	0.371	0.367	0.387	0.392	0.411
Panel B: Dummy Models						
All Female	-0.280* (-1.81)	-0.266* (-1.72)	-0.533** (-2.18)	-0.427* (-1.65)	-0.439* (-1.83)	-0.451* (-1.82)
Delta	-	1.910	-	0.909	1.026	1.536
Mixed-Gender	-0.320** (-2.28)	-0.283** (-2.12)	-0.445 (-1.64)	-0.402* (-1.67)	-0.417* (-1.72)	-0.412* (-1.65)
Delta	-	0.920	-	1.983	3.010	3.291
Observations	767	767	333	333	333	329
R-squared	0.360	0.374	0.367	0.394	0.399	0.417

Panel B - Table A1: Coefficient Stability for Table 5: Total Effects

Panel B is based on Columns 1 and 2 of Table 5, concerning total effects. All regressions include the following controls: Team Size, Prior SEEDRS, SEIS/EIS, Sector and Quarter. The second column adds founder characteristics, defined as Entrepreneurial Experience, Managerial Experience, and Education. The third column includes the controls from the second column, plus the controls for product and delivery mode. The last column shows the full specification that also includes GPT Growth and GPT Capital.

	Base	+ Founder Characteristics	+ Product and Delivery FEs	Full Specification
Panel A: Continuous Models				
Female Share	-0.769*** (-3.51)	-0.685** (-3.14)	-0.716** (-3.31)	-0.713** (-3.22)
Delta	-	1.128	1.662	2.308
Observations	333	333	333	329
R-squared	0.363	0.380	0.387	0.410
Panel B: Dummy Models				
All Female	-0.716** (-2.95)	-0.619** (-2.40)	-0.639** (-2.64)	-0.645** (-2.62)
Delta	-	1.267	1.495	2.150
Mixed-Gender	-0.355 (-1.23)	-0.311 (-1.21)	-0.331 (-1.28)	-0.322 (-1.21)
Delta	-	1.473	2.823	2.783
Observations	333	333	333	329
R-squared	0.361	0.386	0.392	0.414

Table A2: Reporting of additional coefficients

Table A2 - Panel A: Additional coefficients for Table 3

		Funding Goal			
		Continuous model	Dummy model	Continuous model	Dummy model
SEIS	(D)	-0.671*** (-4.59)	-0.672*** (-4.64)	-0.581 (-1.60)	-0.541 (-1.48)
EIS	(D)	0.234 (1.55)	0.216 (1.45)	0.177 (0.50)	0.194 (0.55)
SECTOR	(D)				
	CLOTHING & HOME	-0.066 (-0.45)	-0.057 (-0.39)	-0.549 (-1.64)	-0.537 (-1.62)
	E-COMMERCE	-0.000 (-0.00)	0.011 (0.09)	-0.117 (-0.48)	-0.093 (-0.38)
	FINANCE	0.221 (1.38)	0.211 (1.31)	0.108 (0.35)	0.088 (0.28)
	FOOD & DRINK	0.252** (2.14)	0.263** (2.21)	0.092 (0.28)	0.102 (0.31)
	GAMES & ENTERTAINMENT	0.031 (0.26)	0.057 (0.47)	-0.380 (-1.32)	-0.339 (-1.19)
	TRANSPORT & TRAVEL	0.051 (0.46)	0.053 (0.48)	-0.292 (-0.98)	-0.269 (-0.88)
DELIVERY MODE	(D)				
	DIGITAL			-0.093 (-0.45)	-0.120 (-0.58)
	NON-DIGITAL			-0.008 (-0.04)	0.001 (0.01)
PRODUCT TYPE	(D)				
	B2B			-0.369 (-1.41)	-0.308 (-1.24)
	B2C			-0.079 (-0.39)	-0.050 (-0.26)
GPT VARIABLES		No	No	Yes	Yes
QUARTER	Fixed effects	Yes	Yes	Yes	Yes
N		767	767	329	329
Adjusted R-squared		0.344	0.346	0.334	0.338

Table A2 - Panel B: Additional coefficients for Table 4

		Campaign success			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
SEIS	(D)	0.448** (2.19)	0.437** (2.18)	0.298 (1.45)	0.290 (1.44)
EIS	(D)	0.703*** (3.57)	0.696*** (3.62)	0.795*** (4.22)	0.785*** (4.25)
SECTOR	(D)				
CLOTHING & HOME		0.439** (2.34)	0.424** (2.28)	0.405** (2.15)	0.391** (2.09)
E-COMMERCE		-0.093 (-0.49)	-0.085 (-0.44)	-0.132 (-0.68)	-0.120 (-0.62)
FINANCE		0.688*** (3.54)	0.694*** (3.58)	0.732*** (3.69)	0.735*** (3.71)
FOOD & DRINK		0.522** (2.52)	0.527** (2.61)	0.543** (2.55)	0.551** (2.64)
GAMES & ENTERTAINMENT		0.136 (0.62)	0.159 (0.73)	0.112 (0.51)	0.144 (0.66)
TRANSPORT & TRAVEL		0.288 (1.48)	0.268 (1.37)	0.276 (1.40)	0.257 (1.29)
GOAL & VALUATION		No	No	Yes	Yes
QUARTER	Fixed effects	Yes	Yes	Yes	Yes
N		767	767	767	767
Pseudo R-squared		0.200	0.198	0.213	0.212

Table A2 - Panel C: Additional coefficients for Table 5

		Funding Received			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
SEIS	(D)	-0.506 (-1.33)	-0.477 (-1.25)	0.085 (1.25)	0.075 (1.13)
EIS	(D)	0.270 (0.72)	0.297 (0.81)	0.084 (1.28)	0.093 (1.45)
SECTOR	(D)				
CLOTHING & HOME		-0.435 (-1.19)	-0.411 (-1.14)	0.128 (1.60)	0.140* (1.77)
E-COMMERCE		-0.155 (-0.60)	-0.133 (-0.51)	-0.031 (-0.49)	-0.033 (-0.53)
FINANCE		0.149 (0.45)	0.144 (0.43)	0.044 (0.64)	0.058 (0.82)
FOOD & DRINK		0.192 (0.55)	0.196 (0.56)	0.105 (1.30)	0.098 (1.17)
GAMES & ENTERTAINMENT		-0.366 (-1.17)	-0.320 (-1.02)	0.026 (0.25)	0.031 (0.31)
TRANSPORT & TRAVEL		-0.309 (-0.96)	-0.294 (-0.90)	-0.009 (-0.11)	-0.017 (-0.22)
DELIVERY MODE					
DIGITAL	(D)	-0.030 (-0.14)	-0.057 (-0.27)	0.065 (1.20)	0.065 (1.23)
NON-DIGITAL	(D)	-0.034 (-0.16)	-0.012 (-0.06)	-0.023 (-0.40)	-0.011 (-0.18)
PRODUCT TYPE					
B2B	(D)	-0.507* (-1.81)	-0.440 (-1.65)	-0.128** (-2.17)	-0.123** (-2.06)
B2C	(D)	-0.134 (-0.62)	-0.114 (-0.53)	-0.051 (-0.98)	-0.061 (-1.15)
GPT SCORES		Yes	Yes	Yes	Yes
QUARTER	Fixed effects	Yes	Yes	Yes	Yes
N		329	329	329	329
Adjusted R-squared		0.333	0.335	0.952	0.953

Table A3: Valuations and Investor Stakes

Table A3: Investor Equity Stake vs Post-Money Valuation

		Continuous Model		Dummy Model	
		Investor Equity Stake	Post-Money Valuation	Investor Equity Stake	Post-Money Valuation
FEMALES	(%)	-0.847 (-0.88)	-1.076 (-1.18)		
ALL-FEMALE	(D)			-0.202 (-0.20)	-0.415 (-0.42)
MIXED-GENDER	(D)			-1.592 (-1.62)	-1.656* (-1.82)
N			329		329
Correlation of Residuals			0.994		0.994
Breusch-Pagan Chi-2			324.833		324.852
P-value			0.000		0.000

Table A4: Investments by investors with unknown gender

		Total Investment from Investors of Unknown Gender			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.453 (-5.11)		0.213 (-1.41)	
ALL-FEMALE	(D)		-0.493 (-1.40)		-0.002 (-0.01)
MIXED-GENDER	(D)		0.075 (0.18)		0.508 (1.53)
GOAL				1.034*** (9.04)	1.032*** (8.98)
VALUATION				0.137 (1.39)	0.123 (1.25)
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		329	329	329	329
Adjusted R-squared		0.261	0.269	0.499	0.503

Table A5. Interactions with other founder characteristics

Table A5 - Panel A: Interaction with Entrepreneurial Experience

		Funding goal		Funding received	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.189** (-2.83)		-0.220** (-3.27)	
ALL-FEMALE	(D)		-0.317 (-1.09)		-0.505* (-1.76)
MIXED-GENDER	(D)		-0.502* (-1.73)		-0.355 (-1.13)
ENT. EXP.		0.160** (2.34)	0.328* (1.92)	0.146* (1.92)	0.303 (1.61)
FEMALES X ENT. EXP.		-0.048 (-1.03)		-0.063 (-1.28)	
ALL-FEMALE X ENT. EXP.			-0.665* (-1.74)		-0.674* (-1.77)
MIXED-GENDER X ENT. EXP.			0.447 (1.06)		0.188 (0.43)
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		329	329	329	329
Adjusted R-Squared		0.333	0.339	0.333	0.333

Table A5 - Panel B: Interaction with Senior Management Experience

		Funding goal		Funding received	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.199** (-2.67)		-0.231** (-3.08)	
ALL-FEMALE	(D)		-0.098 (-0.31)		-0.446 (-1.34)
MIXED-GENDER	(D)		-1.401* (-1.71)		-1.371 (-1.51)
MAN. EXP.		0.007 (0.08)	0.079 (0.36)	0.005 (0.05)	0.091 (0.37)
FEMALES X MAN. EXP.		0.037 (0.41)		0.046 (0.51)	
ALL-FEMALE X MAN. EXP.			-0.496 (-1.20)		-0.313 (-0.74)
MIXED-GENDER X MAN. EXP.			1.276 (1.54)		1.350 (1.47)
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		329	329	329	329
Adjusted R-Squared		0.333	0.354	0.332	0.349

Table A5 - Panel C: Interaction with Education

		Funding goal		Funding received	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.188** (-2.81)		-0.218** (-3.25)	
ALL-FEMALE	(D)		-0.458* (-1.74)		-0.678** (-2.64)
MIXED-GENDER	(D)		-0.480* (-1.67)		-0.375 (-1.21)
EDUCATION		0.124 (1.62)	0.284 (1.12)	0.133 (1.58)	0.292 (1.06)
FEMALES X EDUCATION		0.044 (0.85)		0.068 (1.20)	
ALL-FEMALE X EDUCATION			0.073 (0.12)		0.320 (0.48)
MIXED-GENDER X EDUCATION			0.421 (0.94)		0.329 (0.72)
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		329	329	329	329
Adjusted R-Squared		0.333	0.335	0.333	0.331

Table A6. Post-SEEDRS performance

Table A6 uses the sample of companies that had successful SEEDRS campaigns. For companies with multiple campaigns, the variable FUNDING RECEIVED (SEEDRS) adds up the amounts raised on SEEDRS across all campaigns. The new dependent variables of interest are EXIT, a dummy variable for whether the company was acquired or went public; RECEIVED EXTERNAL FUNDING which is a dummy variable whether the company received any outside funding; and EXTERNAL FUNDING AMOUNT, using $\log(1 + \text{amount raised})$ where the amount raised is set to 0 for companies with RECEIVED EXTERNAL FUNDING = 0).

Table A6 Panel A: Descriptive Statistics

Variable	Average			
	ALL	ALL-MALE	ALL-FEMALE	MIXED-GENDER
	<i>N</i> =185	<i>N</i> =138	<i>N</i> =18	<i>N</i> =29
RECEIVED EXTERNAL FUNDING	.843	.855	.556***	.966
EXTERNAL FUNDING AMOUNT	11.3	11.6	6.97***	12.6
EXIT	.119	.123	.111	.103

Table A6 Panel B: Key correlations

			1	2	3	4	5	6	7	8
RECEIVED EXT FUNDING	1		1							
EXT FUNDING AMOUNT	2		0.943***	1						
EXIT	3		0.158**	0.267***	1					
FUNDING GOAL	4	G_i	-0.045	0.154**	0.234**	1				
INVESTMENT RECEIVED (SEEDRS)	5		-0.123*	0.129*	0.249***	0.817***	1			
FEMALES (%)	6	X_i	-0.166**	-0.196**	-0.022	-0.139*	-0.202**	1		
ALL-FEMALE (D)	7	X_i	-0.260***	-0.274***	-0.008	-0.102	-0.163**	0.869***	1	
MIXED-GENDER (D)	8	X_i	0.145**	0.11	-0.021	-0.052	-0.08	0.350***	-0.142*	1

Table A6 Panel C: Exit

		Exit					
		Total effect		Direct effect		Alt. Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	0.027 (0.38)		0.040 (0.57)		0.041 (0.58)	
ALL-FEMALE	(D)		0.039 (0.45)		0.051 (0.60)		0.057 (0.67)
MIXED-GENDER	(D)		0.008 (0.11)		0.010 (0.14)		0.011 (0.15)
GOAL				0.027 (0.50)	0.025 (0.46)	0.024 (0.39)	0.015 (0.24)
VALUATION				0.055* (1.86)	0.059* (1.89)	0.055* (1.84)	0.058* (1.85)
FUNDING RECEIVED (SEEDRS)						0.003 (0.07)	0.011 (0.28)
ALL CONTROLS		Yes	Yes	Yes	Yes	Yes	Yes
N		184	184	184	184	184	184
Adjusted R-squared		0.101	0.093	0.143	0.139	0.137	0.134

Table A6 Panel D: Received External Funding

		External Funding Received					
		Total effect		Direct effect		Alt. Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.182*		-0.184*		-0.231**	
		(-1.73)		(-1.72)		(-2.16)	
ALL-FEMALE	(D)		-0.326**		-0.326**		-0.393**
			(-2.59)		(-2.57)		(-3.01)
MIXED-GENDER	(D)		0.162**		0.160**		0.151**
			(2.27)		(2.19)		(2.14)
GOAL				-0.012	-0.009	0.083	0.097*
				(-0.43)	(-0.28)	(1.46)	(1.70)
VALUATION				0.015	0.016	0.020	0.023
				(0.60)	(0.63)	(0.78)	(0.84)
FUNDING RECEIVED (SEEDRS)						-0.105**	-0.116**
						(-2.04)	(-2.35)
ALL CONTROLS		Yes	Yes	Yes	Yes	Yes	Yes
N		184	184	184	184	184	184
Pseudo R-squared		0.023	0.082	0.011	0.071	0.043	0.112

Table A6 Panel E: External Funding Amount

		External Funding Amount					
		Total effect		Direct effect		Alt. Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-3.074** (-2.05)		-2.889* (-1.89)		-3.037** (-2.01)	
ALL-FEMALE	(D)		-5.025** (-2.82)		-4.851** (-2.68)		-5.128** (-2.81)
MIXED-GENDER	(D)		1.776* (1.84)		1.850* (1.90)		1.813* (1.88)
GOAL				0.500 (1.09)	0.533 (1.13)	0.800 (0.89)	0.973 (1.09)
VALUATION				0.526 (1.15)	0.563 (1.18)	0.542 (1.17)	0.589 (1.22)
FUNDING RECEIVED (SEEDRS)						-0.332 (-0.42)	-0.483 (-0.63)
ALL CONTROLS		Yes	Yes	Yes	Yes	Yes	Yes
N		184	184	184	184	184	184
Adjusted R-squared		0.041	0.086	0.057	0.106	0.052	0.104

Table A7. Number of investors

Panel A - Table A7. The number of investors

		No. Investors (All)			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.534** (-3.29)		-0.259** (-2.08)	
ALL-FEMALE	(D)		-0.564** (-3.27)		-0.355** (-2.73)
MIXED-GENDER	(D)		-0.186 (-1.02)		-0.007 (-0.05)
GPT GROWTH		0.018** (2.39)	0.017** (2.29)	0.008 (1.22)	0.008 (1.25)
GPT CAPITAL		0.011** (2.05)	0.012** (2.07)	0.006 (1.31)	0.006 (1.36)
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		329	329	329	329
Adjusted R-Squared		0.263	0.262	0.496	0.499

Panel B - Table A7. The number of female investors

		No. Female Investors			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.209 (-1.09)		0.082 (0.55)	
ALL-FEMALE	(D)		-0.253 (-1.17)		-0.032 (-0.19)
MIXED-GENDER	(D)		-0.017 (-0.09)		0.176 (1.28)
GPT GROWTH		0.021** (2.74)	0.021** (2.66)	0.011 (1.64)	0.011* (1.70)
GPT CAPITAL		0.012* (1.84)	0.012* (1.87)	0.006 (1.14)	0.006 (1.19)
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		329	329	329	329
Adjusted R-Squared		0.226	0.224	0.472	0.478

Panel C - Table A7. The number of male investors

		No. Male Investors			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.580*** (-3.79)		-0.323** (-2.65)	
ALL-FEMALE	(D)		-0.609*** (-3.77)		-0.414** (-3.26)
MIXED-GENDER	(D)		-0.198 (-1.14)		-0.031 (-0.23)
GPT GROWTH		0.014** (2.02)	0.014* (1.93)	0.005 (0.76)	0.005 (0.80)
GPT CAPITAL		0.009* (1.83)	0.010* (1.85)	0.004 (1.01)	0.004 (1.05)
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		329	329	329	329
Adjusted R-Squared		0.254	0.252	0.488	0.492

Table A8. Average investment amounts

Panel A - Table A8. Average Investment Amount

		Average Investment Amount			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.178 (-1.10)		0.169 (1.43)	
ALL-FEMALE	(D)		-0.082 (-0.45)		0.169 (1.34)
MIXED-GENDER	(D)		-0.135 (-0.69)		0.104 (0.77)
GPT GROWTH		0.009 (1.06)	0.008 (0.95)	-0.003 (-0.49)	-0.003 (-0.53)
GPT CAPITAL		-0.001 (-0.26)	-0.002 (-0.30)	-0.007* (-1.80)	-0.007* (-1.83)
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		329	329	329	329
Adjusted R-Squared		0.187	0.193	0.567	0.567

Panel B - Table A8. Average Investment Amount from Female Investors

		Average Investment Amount from Female Investors			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	0.286 (0.75)		0.632** (2.08)	
ALL-FEMALE	(D)		0.215 (0.45)		0.432 (1.11)
MIXED-GENDER	(D)		0.238 (0.62)		0.544* (1.90)
GPT GROWTH		-0.001 (-0.08)	-0.002 (-0.13)	-0.012 (-0.82)	-0.013 (-0.80)
GPT CAPITAL		-0.005 (-0.51)	-0.004 (-0.47)	-0.010 (-1.20)	-0.010 (-1.16)
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		320	320	320	320
Adjusted R-Squared		0.042	0.040	0.232	0.238

Panel C - Table A8. Average Investment Amount from Male Investors

		Average Investment Amount from Male Investors			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.398** (-2.55)		-0.076 (-0.64)	
ALL-FEMALE	(D)		-0.301* (-1.86)		-0.065 (-0.51)
MIXED-GENDER	(D)		-0.283 (-1.50)		-0.063 (-0.44)
GPT GROWTH		0.017** (2.26)	0.017** (2.15)	0.006 (0.86)	0.006 (0.89)
GPT CAPITAL		0.002 (0.40)	0.002 (0.33)	-0.004 (-0.86)	-0.004 (-0.90)
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		329	329	329	329
Adjusted R-Squared		0.139	0.133	0.468	0.463

Table A9. Determinants of repeat campaigns

		Second Campaign			
		All First Campaigns		Successful First Campaigns	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	0.002 (0.01)		-0.689* (-1.77)	
ALL-FEMALE	(D)		-0.185 (-0.78)		-1.161** (-2.57)
MIXED-GENDER	(D)		0.277 (1.43)		0.118 (0.30)
PRIOR FUNDING RAISE				-0.453 (-1.15)	-0.546 (-1.34)
GPT VARIABLES		No	No	Yes	Yes
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		570	570	142	142

Table A10. Dropping repeat campaigns

Panel A - Table A10. Funding goals with repeat campaigns dropped

		Funding Goal			
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.228** (-2.18)		-0.282 (-1.27)	
ALL-FEMALE	(D)		-0.203* (-1.71)		-0.206 (-0.77)
MIXED-GENDER	(D)		-0.148 (-1.36)		-0.173 (-0.66)
GPT VARIABLES		No	No	Yes	Yes
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		570	570	184	184
Adjusted R-squared		0.400	0.399	0.412	0.414

Panel B- Table A10. Campaign success with repeat campaigns dropped

		Campaign success			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.088 (-0.47)		-0.129 (-0.68)	
ALL-FEMALE	(D)		-0.174 (-0.83)		-0.212 (-1.01)
MIXED-GENDER	(D)		0.086 (0.49)		0.060 (0.34)
GOAL				-0.130 (-1.52)	-0.127 (-1.48)
VALUATION				-0.052 (-0.65)	-0.061 (-0.76)
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		570	570	570	570

Panel C- Table A10. Funding received with repeat campaigns dropped

		Funding Received			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.376*		-0.095	
		(-1.75)		(-1.05)	
ALL-FEMALE	(D)		-0.402		-0.195**
			(-1.56)		(-2.07)
MIXED-GENDER	(D)		-0.124		0.048
			(-0.45)		(0.60)
GOAL				0.990***	0.991***
				(31.97)	(30.24)
VALUATION				0.018	0.022
				(0.78)	(0.93)
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		184	184	184	184
Adjusted R-squared		0.419	0.417	0.935	0.935

Table A11. Alternative Measure of Entrepreneurial Experience

Panel A- Table A11. Funding goal with alternative entrepreneurial experience

		Funding Goal			
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.369** (-2.76)		-0.695** (-3.19)	
ALL-FEMALE	(D)		-0.280* (-1.85)		-0.509** (-2.12)
MIXED-GENDER	(D)		-0.302** (-2.22)		-0.470* (-1.78)
ENT. EXP.-2		0.149 (1.45)	0.099 (1.16)	0.389** (2.09)	0.221 (1.44)
GPT VARIABLES		No	No	Yes	Yes
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		767	767	329	329
Adjusted R-squared		0.342	0.344	0.332	0.332

Panel B- Table A11. Campaign success with alternative entrepreneurial experience

		Campaign success			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.160 (-0.94)		-0.232 (-1.37)	
ALL-FEMALE	(D)		-0.142 (-0.74)		-0.190 (-1.00)
MIXED-GENDER	(D)		-0.072 (-0.47)		-0.140 (-0.90)
ENT. EXP.-2		-0.159 (-1.13)	-0.076 (-0.65)	-0.132 (-0.95)	-0.055 (-0.47)
GOAL				-0.167** (-2.68)	-0.170** (-2.69)
VALUATION				-0.068 (-1.03)	-0.067 (-1.00)
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		767	767	767	767

Panel C- Table A11. Funding received with alternative entrepreneurial experience

		Funding Received			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.785*** (-3.53)		-0.077 (-1.32)	
ALL-FEMALE	(D)		-0.696** (-2.89)		-0.176** (-2.96)
MIXED-GENDER	(D)		-0.357 (-1.26)		0.121** (2.11)
ENT. EXP.-2		0.294 (1.45)	0.104 (0.63)	-0.102** (-1.99)	-0.120** (-2.94)
GOAL				1.014*** (62.68)	1.016*** (58.43)
VALUATION				0.010 (0.56)	0.007 (0.41)
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		329	329	329	329
Adjusted R-squared		0.329	0.329	0.952	0.954

Table A12. Alternative Measure of Education

Panel A - Table A12. Funding goal with alternative education measure

		Funding Goal			
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.325** (-2.31)		-0.616** (-2.70)	
ALL-FEMALE	(D)		-0.223 (-1.40)		-0.448* (-1.76)
MIXED-GENDER	(D)		-0.278** (-2.15)		-0.387 (-1.56)
EDUCATION-2		0.003 (0.03)	-0.052 (-0.61)	-0.041 (-0.21)	-0.106 (-0.70)
GPTVARIABLES		No	No	Yes	Yes
ALLOTHER CONTROLS		Yes	Yes	Yes	Yes
N		756	753	323	321
Adjusted R-squared		0.333	0.338	0.320	0.329

Panel B - Table A12. Campaign success with alternative education measure

		Campaign success			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.129 (-0.75)		-0.190 (-1.11)	
ALL-FEMALE	(D)		-0.119 (-0.61)		-0.149 (-0.77)
MIXED-GENDER	(D)		-0.080 (-0.52)		-0.146 (-0.93)
EDUCATION-2		0.078 (0.61)	0.119 (1.08)	0.079 (0.61)	0.111 (0.99)
GOAL				-0.191** (-2.82)	-0.187** (-2.72)
VALUATION				-0.019 (-0.24)	-0.021 (-0.26)
ALLOTHER CONTROLS		Yes	Yes	Yes	Yes
N		756	753	756	753

Panel C - Table A12. Funding received with alternative education measure

		Funding Received			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.715** (-3.07)		-0.088 (-1.41)	
ALL-FEMALE	(D)		-0.651** (-2.53)		-0.194** (-3.06)
MIXED-GENDER	(D)		-0.289 (-1.11)		0.104* (1.83)
EDUCATION-2		-0.070 (-0.33)	-0.180 (-1.13)	-0.033 (-0.67)	-0.075* (-1.85)
GOAL				1.008*** (58.86)	1.010*** (54.97)
VALUATION				0.020 (0.75)	0.020 (0.73)
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		323	321	323	321
Adjusted R-squared		0.322	0.329	0.952	0.954

Table A13. Alternative GPT data

Panel A - Table A13. Pairwise correlations with alternative GPT data

This table shows the pairwise correlation between the GTP variables that were generated with a prompt to explain, labelled as GPT (EXP.), and the main GPT variables.

	No.		1	2	3	4
GROWTH GPT (EXP.)	1	Z_i	1			
CAPITAL GPT (EXP.)	2	Z_i	0.229***	1		
GROWTH GPT	3	Z_i	0.953***	0.225***	1	
CAPITAL GPT	4	Z_i	0.239***	0.948***	0.238***	1

Panel B - Table A13 Funding Goal with alternative GPT data

		Funding Goal			
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.347** (-2.53)		-0.607** (-2.81)	
ALL-FEMALE	(D)		-0.266* (-1.72)		-0.442* (-1.81)
MIXED-GENDER	(D)		-0.283** (-2.12)		-0.415* (-1.67)
ENT. EXP.	(%, D)	0.245* (1.86)	0.156 (1.60)	0.480** (2.35)	0.337** (2.15)
MAN. EXP.	(%, D)	0.113 (1.09)	0.159 (1.60)	0.029 (0.14)	0.262 (1.16)
EDUCATION	(%, D)	0.396** (2.35)	0.286** (2.43)	0.509 (1.64)	0.374* (1.85)
TEAM SIZE		0.124** (2.92)	0.120** (2.51)	0.169** (2.23)	0.172** (1.97)
PRIOR SEEDRS		-0.921*** (-9.26)	-0.910*** (-9.25)	-0.923*** (-6.86)	-0.921*** (-6.77)
GPT GROWTH (EXP.)				0.019* (1.90)	0.017* (1.73)
GPT CAPITAL (EXP.)				0.011 (1.54)	0.011 (1.52)
DELIVERY MODE	Fixed effects	No	No	Yes	Yes
PRODUCT TYPE	Fixed effects	No	No	Yes	Yes
SEIS/EIS	Fixed effects	Yes	Yes	Yes	Yes
SECTOR	Fixed effects	Yes	Yes	Yes	Yes
QUARTER	Fixed effects	Yes	Yes	Yes	Yes
N		767	767	329	329
Adjusted R-squared		0.344	0.346	0.329	0.333

Panel C - Table A13. Funding Received with alternative GPT data

		Funding Received			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.704** (-3.20)		-0.087 (-1.44)	
ALL-FEMALE	(D)		-0.634** (-2.60)		-0.183** (-2.98)
MIXED-GENDER	(D)		-0.324 (-1.22)		0.099* (1.77)
ENT. EXP.	(%, D)	0.440* (1.95)	0.279 (1.63)	-0.050 (-0.88)	-0.065 (-1.45)
MAN. EXP.	(%, D)	0.026 (0.11)	0.310 (1.23)	-0.002 (-0.03)	0.043 (0.79)
EDUCATION	(%, D)	0.565* (1.67)	0.387* (1.78)	0.041 (0.52)	0.002 (0.04)
TEAM SIZE		0.145* (1.87)	0.117 (1.28)	-0.027 (-1.35)	-0.059** (-2.68)
PRIOR SEEDRS		-0.889*** (-6.23)	-0.892*** (-6.22)	0.045 (1.11)	0.043 (1.09)
GPT GROWTH (EXP.)		0.024** (2.31)	0.022** (2.11)	0.005* (1.83)	0.005* (1.80)
GPT CAPITAL (EXP.)		0.008 (1.20)	0.008 (1.20)	-0.003 (-1.29)	-0.002 (-1.28)
GOAL				1.012*** (62.09)	1.015*** (58.07)
VALUATION				0.012 (0.71)	0.011 (0.65)
DELIVERY MODE	Fixed effects	Yes	Yes	Yes	Yes
PRODUCT TYPE	Fixed effects	Yes	Yes	Yes	Yes
SEIS/EIS	Fixed effects	Yes	Yes	Yes	Yes
SECTOR	Fixed effects	Yes	Yes	Yes	Yes
QUARTER	Fixed effects	Yes	Yes	Yes	Yes
N		329	329	329	329
Adjusted R-squared		0.326	0.328	0.952	0.953

Table A14. Bag of Words Analysis

Panel A - Table A14. Pairwise correlations for Bag of Words variables

	Growth GPT	Growth BOW	Capital GPT	Capital BOW
Growth GPT	1			
Growth BOW	0.154**	1		
Capital GPT	0.238***	0.103*	1	
Capital BOW	0.025	0.022	0.011	1

Panel B - Table A14. Funding Goal with Bag of Words

		Funding Goal			
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.347** (-2.53)		-0.639** (-3.16)	
ALL-FEMALE	(D)		-0.266* (-1.72)		-0.471** (-2.07)
MIXED-GENDER	(D)		-0.283** (-2.12)		-0.473** (-2.01)
ENT. EXP.	(%, D)	0.245* (1.86)	0.156 (1.60)	0.534** (2.64)	0.362** (2.32)
MAN. EXP.	(%, D)	0.113 (1.09)	0.159 (1.60)	0.040 (0.20)	0.229 (1.13)
EDUCATION	(%, D)	0.396** (2.35)	0.286** (2.43)	0.475 (1.57)	0.373* (1.88)
TEAM SIZE		0.124** (2.92)	0.120** (2.51)	0.141** (2.01)	0.149* (1.80)
PRIOR SEEDRS		-0.921*** (-9.26)	-0.910*** (-9.25)	-0.998*** (-8.04)	-0.992*** (-7.95)
GROWTH BOW				0.154*** (4.20)	0.146*** (4.08)
CAPITAL BOW				0.023 (1.04)	0.026 (1.18)
DELIVERY MODE	Fixed effects	No	No	Yes	Yes
PRODUCT TYPE	Fixed effects	No	No	Yes	Yes
SEIS/EIS	Fixed effects	Yes	Yes	Yes	Yes
SECTOR	Fixed effects	Yes	Yes	Yes	Yes
QUARTER	Fixed effects	Yes	Yes	Yes	Yes
N		767	767	328	328
Adjusted R-squared		0.344	0.346	0.358	0.361

Panel C - Table A14. Funding Received with Bag of Words

		Funding Received			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.748*** (-3.58)		-0.100 (-1.57)	
ALL-FEMALE	(D)		-0.674** (-2.92)		-0.195** (-2.99)
MIXED-GENDER	(D)		-0.390 (-1.56)		0.090* (1.68)
ENT. EXP.	(%, D)	0.495** (2.19)	0.297* (1.73)	-0.048 (-0.84)	-0.072 (-1.58)
MAN. EXP.	(%, D)	0.045 (0.21)	0.281 (1.24)	0.005 (0.10)	0.049 (0.88)
EDUCATION	(%, D)	0.530 (1.60)	0.384* (1.77)	0.043 (0.53)	0.001 (0.01)
TEAM SIZE		0.120* (1.68)	0.097 (1.12)	-0.024 (-1.21)	-0.055** (-2.61)
PRIOR SEEDRS		-0.968*** (-7.18)	-0.965*** (-7.17)	0.040 (0.97)	0.040 (1.00)
GROWTH BOW		0.169*** (4.20)	0.162*** (4.10)	0.012 (1.19)	0.012 (1.19)
CAPITAL BOW		0.017 (0.72)	0.018 (0.80)	-0.007 (-1.44)	-0.008 (-1.62)
GOAL				1.009*** (63.18)	1.013*** (59.71)
VALUATION				0.012 (0.66)	0.012 (0.65)
DELIVERY MODE	Fixed effects	Yes	Yes	Yes	Yes
PRODUCT TYPE	Fixed effects	Yes	Yes	Yes	Yes
SEIS/EIS	Fixed effects	Yes	Yes	Yes	Yes
SECTOR	Fixed effects	Yes	Yes	Yes	Yes
QUARTER	Fixed effects	Yes	Yes	Yes	Yes
N		328	328	328	328
Adjusted R-squared		0.357	0.357	0.952	0.953

Table A15. Adding currency indicator

Panel A - Table A15. Funding Goal with currency indicator

		Funding Goal			
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.346** (-2.51)		-0.635** (-2.88)	
ALL-FEMALE	(D)		-0.268* (-1.73)		-0.468* (-1.87)
MIXED-GENDER	(D)		-0.274** (-2.05)		-0.422* (-1.69)
GPT VARIABLES		No	No	Yes	Yes
CURRENCY INDICATOR		Yes	Yes	Yes	Yes
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		767	767	329	329
Adjusted R-squared		0.344	0.346	0.338	0.342

Panel B - Table A15. Campaign success with currency indicator

		Campaign success			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.152 (-0.90)		-0.221 (-1.30)	
ALL-FEMALE	(D)		-0.136 (-0.71)		-0.181 (-0.96)
MIXED-GENDER	(D)		-0.079 (-0.51)		-0.144 (-0.92)
GOAL				-0.174** (-2.79)	-0.174** (-2.75)
VALUATION				-0.067 (-1.02)	-0.065 (-0.97)
CURRENCY INDICATOR		Yes	Yes	Yes	Yes
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		767	767	767	767

Panel C - Table A15. Funding Received with currency indicator

		Funding Received			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.737** (-3.30)		-0.094 (-1.53)	
ALL-FEMALE	(D)		-0.665** (-2.67)		-0.189** (-3.03)
MIXED-GENDER	(D)		-0.333 (-1.25)		0.094* (1.70)
GOAL				1.009*** (60.84)	1.012*** (56.93)
VALUATION				0.012 (0.68)	0.011 (0.62)
CURRENCY INDICATOR		Yes	Yes	Yes	Yes
ALL OTHER CONTROLS		Yes	Yes	Yes	Yes
N		329	329	329	329
Adjusted R-squared		0.339	0.340	0.952	0.953

Table A16. Adding rejected amounts

		Funding Received			
		Total effect		Direct effect	
		Continuous model	Dummy model	Continuous model	Dummy model
FEMALES	(%)	-0.713*** (-3.35)		-0.104 (-1.60)	
ALL-FEMALE	(D)		-0.640** (-2.73)		-0.192** (-2.97)
MIXED-GENDER	(D)		-0.328 (-1.24)		0.080 (1.30)
ENT. EXP.	(%, D)	0.429* (1.93)	0.287* (1.69)	-0.054 (-0.90)	-0.050 (-1.00)
MAN. EXP.	(%, D)	0.040 (0.18)	0.321 (1.27)	0.015 (0.27)	0.061 (1.05)
EDUCATION	(%, D)	0.518 (1.51)	0.355 (1.63)	0.024 (0.29)	-0.007 (-0.12)
TEAM SIZE		0.137* (1.77)	0.111 (1.24)	0.070 (0.88)	-0.060** (-2.68)
PRIOR SEEDRS		-0.853*** (-6.16)	-0.855*** (-6.17)	0.090 (1.13)	0.047 (1.12)
GOAL				0.990*** (38.96)	0.991*** (37.03)
VALUATION				0.006 (0.34)	0.005 (0.25)
GPT SCORES		Yes	Yes	Yes	Yes
DELIVERY MODE	Fixed effects	Yes	Yes	Yes	Yes
PRODUCT TYPE	Fixed effects	Yes	Yes	Yes	Yes
SEIS/EIS	Fixed effects	Yes	Yes	Yes	Yes
SECTOR	Fixed effects	Yes	Yes	Yes	Yes
QUARTER	Fixed effects	Yes	Yes	Yes	Yes
N		329	329	329	329
Adjusted R-squared		0.343	0.346	0.937	0.938

Table A17. Oaxaca-Blinder Decomposition

Table A17. Oaxaca-Blinder Decomposition with Year Fixed Effects

		Funding Received		
		ALL FEMALE + MIXED-GENDER	ALL FEMALE	MIXED-GENDER
ALL-MALE		11.759***	11.759***	11.759***
FEMALE		11.257***	11.040***	11.389***
MALE/FEMALE GAP		0.502**	0.720**	0.370
<i>Contributions from gender differences in:</i>				
ENT. EXP.	(D)	-0.009 (-1.22) -1.79%	-0.007 (-0.76) -0.97%	-0.011 (-1.25) -2.97%
MAN. EXP.	(D)	0.003 (0.61) 0.60%	0.002 (0.41) 0.28%	0.002 (0.44) 0.54%
EDUCATION	(D)	0.000 (0.18) 0.00%	0.001 (0.39) 0.14%	-0.000 (-0.01) 0.00%
VALUATION		0.002 (0.62) 0.40%	0.005 (0.89) 0.69%	0.001 (0.35) 0.27%
GOAL		0.489** (2.38) 97.21%	0.633** (2.54) 87.92%	0.401 (1.46) 108.38%
TEAM SIZE		0.009 (1.09) 1.79%	-0.031** (-2.12) 6.37%	0.056** (2.34) 11.35%
GPT GROWTH		0.007 (1.05) 1.39%	0.017 (1.04) 3.39%	0.003 (0.66) 0.60%
GPT CAPITAL		0.002 (0.65) 0.40%	0.005 (0.90) 1.00%	0.002 (0.30) 0.40%
PRIOR SEEDRS, SEIS and EIS		-0.001 (-0.22) -0.20%	-0.002 (-0.23) -0.40%	-0.000 (-0.06) 0.00%
SECTOR	Fixed effects	-0.008 (-0.67) -1.59%	-0.025 (-1.06) -4.98%	0.001 (0.07) 0.20%
YEAR	Fixed effects	0.003 (0.25) 0.60%	-0.003 (-0.19) -0.60%	0.010 (0.67) 1.99%
All included variables		0.488** (2.34) 98.01%	0.581** (2.35) 58.30%	0.461 (1.62) 93.23%
N		329	278	298

Theory Appendix

Model derivation

In this model each entrepreneur faces an investment demand $y = n\psi\lambda$, where n is the number of investors investing in a given type of venture, ψ is the campaign signal investors receive from the entrepreneur, and λ is a commonly observed external signal that investors receive about the attractiveness of the venture.

We can think of n as a general shift parameter. For expositional convenience, we focus on the interpretation that n is the number of interested investors. In the last part of this proof, we explain how n can be related to gender and how it maps into our data.

Concerning ψ , we assume that investors treat the campaign goal, denoted by g , as a signal of the company's funding needs. Setting a higher goal sends a signal that the company needs more money, so investors respond to that signal. For tractability we use a constant elasticity specification $\theta(g) = g^\gamma$ with $\gamma \in (0,1)$.

Concerning λ , we assume that it has a negative exponential distribution with expected value μ , a density $\omega(\lambda) = \frac{1}{\mu} e^{-\frac{\lambda}{\mu}}$ and a cumulative distribution $\Omega(\lambda) = 1 - e^{-\frac{\lambda}{\mu}}$.

A campaign is only successful if the goal has been achieved, i.e., if $y \geq g$. The expected amount of funds raised is denoted by F and the probability of campaign success by S . They are given by $F = \int_{y=g}^{y=\infty} y(n, \psi, \lambda) d\Omega(\lambda)$ and $S = \int_{y=g}^{y=\infty} d\Omega(\lambda)$.

It is useful to apply some transformations of these integrals. For this we define $\hat{\lambda}$ to satisfy $n\psi\hat{\lambda} = g$. We find an explicit function of $\hat{\lambda}$ from $ng^\gamma\hat{\lambda} = g \Leftrightarrow \hat{\lambda} = \frac{g^{1-\gamma}}{n}$. With this we obtain

$F = \int_{\lambda=\hat{\lambda}}^{\lambda=\infty} n\psi \frac{\lambda}{\mu} e^{-\frac{\lambda}{\mu}} d\lambda$. Note that a campaign is successful whenever $\lambda \geq \hat{\lambda}$, which thus happens with probability $S = 1 - \Omega(\hat{\lambda}) = e^{-\frac{\hat{\lambda}}{\mu}}$.

Next, we use the memoryless property of the exponential distribution which says $E(\lambda|\lambda \geq \hat{\lambda}) =$

$$\frac{\int_{\lambda=\hat{\lambda}}^{\lambda=\infty} \frac{\lambda}{\mu} e^{-\frac{\lambda}{\mu}} d\lambda}{e^{-\frac{\hat{\lambda}}{\mu}}} = \mu + \hat{\lambda}. \text{ This implies } \int_{\lambda=\hat{\lambda}}^{\lambda=\infty} \frac{\lambda}{\mu} e^{-\frac{\lambda}{\mu}} d\lambda = (\mu + \hat{\lambda})e^{-\frac{\hat{\lambda}}{\mu}}$$

which we use in the above expression to get $F = n\theta(\mu + \hat{\lambda})e^{-\frac{\hat{\lambda}}{\mu}}$.

A risk-neutral entrepreneur chooses g to maximize F . Using $n\psi = \frac{g^{1-\gamma}}{\hat{\lambda}} g^\gamma = \frac{g}{\hat{\lambda}}$ we can rewrite the above expression of F to obtain $F = \frac{g}{\hat{\lambda}} (\mu + \hat{\lambda}) e^{-\frac{\hat{\lambda}}{\mu}}$. Further using $\hat{\lambda} = \frac{g^{1-\gamma}}{n}$

$\Leftrightarrow g = n^{\frac{1}{1-\gamma}} \hat{\lambda}^{\frac{1}{1-\gamma}}$ we obtain $F = n^{\frac{1}{1-\gamma}} \hat{\lambda}^{\frac{\gamma}{1-\gamma}} (\mu + \hat{\lambda}) e^{-\frac{\hat{\lambda}}{\mu}}$. Taking logs, we finally obtain

$$\log(F) = \frac{1}{1-\gamma} \log(n) + \frac{\gamma}{1-\gamma} \log(\hat{\lambda}) + \log(\mu + \hat{\lambda}) - \frac{\hat{\lambda}}{\mu}.$$

Maximizing F w.r.t. g is equivalent to maximizing $\log(F)$ w.r.t. $\hat{\lambda}$ (which is a function of g).

The first order condition (FOC) is given by $\frac{\gamma}{1-\gamma} \frac{1}{\hat{\lambda}} + \frac{1}{\mu + \hat{\lambda}} - \frac{1}{\mu} = 0$. To verify the concavity of the objective function we verify the second order condition, which is given by $-\frac{\gamma}{1-\gamma} \frac{1}{\hat{\lambda}^2} - \frac{1}{(\mu + \hat{\lambda})^2} < 0$.

After standard transformations of the FOC, we obtain the following quadratic equation:

$$\hat{\lambda}^2 - \mu \frac{\gamma}{1-\gamma} \hat{\lambda} - \mu^2 \frac{\gamma}{1-\gamma} = 0.$$

Solving this for the positive root we obtain after transformations:

$$\hat{\lambda} = \frac{\mu}{2} \left(\frac{\gamma}{1-\gamma} + \sqrt{\left(\frac{\gamma}{1-\gamma} \right)^2 + 4 \frac{\gamma}{1-\gamma}} \right)$$

The optimal $\hat{\lambda}$ thus only depends on μ and γ , but not on n .

Benchmark propositions

Proposition 1: The optimal g is increasing in n .

Proof: In equilibrium we have $g = n^{\frac{1}{1-\gamma}} \hat{\lambda}^{\frac{1}{1-\gamma}}$. The first term is increasing in n and the second term independent of n .

Proposition 2: The probability of campaign success S is independent of n .

Proof: In equilibrium we have $S = e^{-\frac{\hat{\lambda}}{\mu}}$ which is independent of n .

Proposition 3: The expected amount of funds raised F is increasing in n .

Proof: In equilibrium we have $F = n^{\frac{1}{1-\gamma}} \hat{\lambda}^{\frac{\gamma}{1-\gamma}} (\mu + \hat{\lambda}) e^{-\frac{\hat{\lambda}}{\mu}}$. The first term is increasing in n and the remaining terms are independent of n .

Proposition 4: The overfunding ratio is independent of n .

Proof: Using $F = \frac{g}{\lambda}(\mu + \hat{\lambda})e^{-\frac{\lambda}{\mu}}$ we can write the overfunding ratio as $\frac{F}{g} = \frac{1}{\lambda}(\mu + \hat{\lambda})e^{-\frac{\lambda}{\mu}}$. None of its terms depend on n .

Linking the model to gender and data

We now take a closer look at n , the number of available investors. If investors always invest the same amount, this is also total available funding. We consider gender issues and briefly explain the conditions under which assortive matching can lead to female entrepreneurs facing fewer interested investors.

Let $i = F, M$ be the superscript to denote female and male entrepreneurs, and $j = f, m$ the subscript to denote female and male investors. Let Q^F and Q^M be the total number of female and male entrepreneurs. Let P_j^i be the total number of investors of gender j that are interested in an entrepreneur of gender i . The total number of female investors is given by $P_f = P_f^F + P_f^M$, and similarly $P_m = P_m^F + P_m^M$ for male investors. The average number of investors interested in a given female entrepreneur is $n^F = \frac{P_f^F + P_m^F}{Q^F}$; similarly, $n^M = \frac{P_f^M + P_m^M}{Q^M}$ for a given male entrepreneur.

There is less funding for female entrepreneurs whenever

$$n^F < n^M \Leftrightarrow \frac{P_f^F + P_m^F}{Q^F} < \frac{P_f^M + P_m^M}{Q^M}.$$

It is useful to define:

$$q = \frac{Q^F}{Q^M}, p = \frac{P_f}{P_m}, \pi_f^F = \frac{P_f^F}{P_f}, \text{ and } \pi_m^M = \frac{P_m^M}{P_m}.$$

which implies

$$P_f^F = \pi_f^F P_f, P_f^M = (1 - \pi_f^F) P_f, P_m^M = \pi_m^M P_m, \text{ and } P_m^F = (1 - \pi_m^M) P_m.$$

After standard transformations we find

$$n^F < n^M \Leftrightarrow \frac{n^F}{n^M} = \frac{\pi_f^F p + (1 - \pi_m^M) 1}{(1 - \pi_f^F) p + \pi_m^M q} < 1$$

The left-hand side expression is increasing in p and π_f^F and decreasing in q and π_m^M .

To see whether this condition holds in our data we consult the following Table:

			ALL CAMPAIGNS	ALL-MALE CAMPAIGNS	FEMALE CAMPAIGNS
<i>Sample of Successful Campaigns</i>					
Fraction of campaigns with female founders	Q	Count	333	251	82
Female/Male campaign founder gap	q	Ratio	0.327		
<i>Male and Female investors (ignoring unknown gender):</i>					
Total number of male investors investing in	P_m	Count	46,804	38,883	7,921
Fraction of male investors investing in	π_m	%		83.1%	16.9%
Total number of female investors investing in	P_f	Count	7,819	6,477	1,342
Fraction of female investors investing in	π_f	%		82.8%	17.2%
Total number of male and female investors investing in	P	Count	54,623	45,360	9,263
Fraction of investors that are male		%	85.7%		
Fraction of investors that are female		%	14.3%		
Female/Male investor ratio	p	Ratio	0.167		
Average number of male and female investors for	n	Count	164	181	113
<i>All investors (Including Unknown Gender)</i>					
Total number of unknown gender investors investing in	P_u	Count	12,988	10,764	2,224
Fraction of unknown gender investors investing in	π_u	%		82.9%	17.1%
Total number of investors investing in		Count	67,611	56,124	11,487

This table consolidates mixed-gender and all-female teams into one column called "female campaigns"; the "male campaigns" column represents all-male teams. From the table we note that $p = 0.167$, $q = 0.327$, $\pi_f^F = 0.172$, $\pi_m^M = 0.831$, $(1 - \pi_m^M) = 0.169$, and $(1 - \pi_f^F) = 0.828$, so that

$$\frac{n^F}{n^M} = \frac{\pi_f^F p + (1 - \pi_m^M) 1}{(1 - \pi_f^F) p + \pi_m^M q} = \frac{0.172 * 0.167 + 0.169}{0.828 * 0.167 + 0.831} \frac{1}{0.327} = 0.624 < 1$$

This suggests that in our data female entrepreneurs should expect fewer interested investors.

Model extension with differential market depth

We briefly outline the model extension concerning differential market depth. Consider a slight modification of the model where investor demand can differ across different types of founders in the right tail, i.e., for high values of y . Specifically assume that the funding amount F has one additional term, so that

$$F = \int_{y=g}^{y=\infty} y(n, \psi, \lambda) d\Omega(\lambda) + \int_{\lambda=\lambda_0}^{\lambda=\infty} \varepsilon d\Omega(\lambda),$$

where $\hat{\lambda} < \lambda_0 < \infty$, and ε sufficiently small. The additional term can also be simplified as follows $\int_{\lambda=\lambda_0}^{\lambda=\infty} \varepsilon d\Omega(\lambda) = \varepsilon(1 - \Omega(\lambda_0))$, which is only a function of λ_0 and ε , which are both new exogenous parameters.

The additional term characterizes what we call ‘market depth.’ This pertains to extra funding that only occurs in the right tail of the distribution, i.e., for sufficiently high values of λ , where $y(\lambda)$ is well above the funding goal g . If $\varepsilon > 0$ ($\varepsilon < 0$) we say that the market has more (less) depth for that type of founder. The additional term does not depend on g and therefore has no effect on its first-order condition. It follows that Propositions 1 and 2 are not affected by it, i.e., neither g nor S are affected by ε . However, Propositions 3 and 4 are affected by ε , in the sense that higher values of ε increase total funding F and the overfunding ratio $\frac{F}{g}$.

In our empirical context we are specifically interested in female teams which we associate with lower values of n (relative to male teams). We now add an assumption that all-female teams have less market depth (i.e., $\varepsilon < 0$) and mixed-gender teams have more market depth (i.e., $\varepsilon > 0$). This assumption suffices to explain the empirical results in Table 5.

Concerning total funding F , the theory predicts that all-female teams have the lowest total funding (because $\varepsilon < 0$), mixed-gender teams have a bit more (because $\varepsilon > 0$), and all-male teams have the most (because of higher n). Empirically, this is exactly what we find in column 2 of Table 5.

Concerning the overfunding ratio, the theory predicts that all-female teams have a lower ratio than all-male teams. To see this, recall from Proposition 4 that for $\varepsilon = 0$ the ratio is the same, so for $\varepsilon < 0$ it is lower. By the same logic, mixed-gender teams have a higher overfunding ratio. Empirically, this is exactly what we find in column 4 of Table 5.