

Strategic Alliances and Venture Capital

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December 2, 2019



Introduction

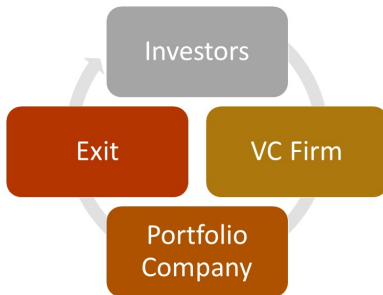


Figure 1: VC-cycle

Introduction

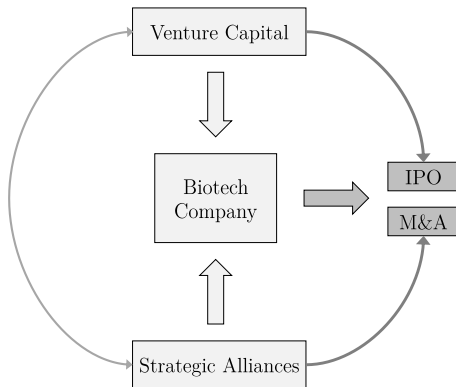


Figure 2: Alliances and VC

Introduction

What we know so far about how VCs contribute to strategic alliance formation (e.g. Lindsey, 2008):

- 1 VCs increase the alliance activity in their portfolio companies

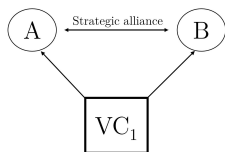
Introduction

What we know so far about how VCs contribute to strategic alliance formation (e.g. Lindsey, 2008):

- 1 VCs increase the alliance activity in their portfolio companies
- 2 Two VC-backed companies that obtained funding from the same VC more often pair in an alliance than companies that were financed by two different VCs

Introduction

Same-VC-backed alliance



Connected-VC-backed alliance

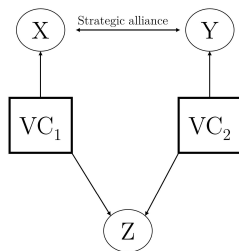


Figure 3: Same-VC-backed and connected-VC-backed alliances

Introduction

Problematic issues with strategic alliances:

- Search/transaction costs: Where to find the appropriate partner?
- Adverse selection: What is the quality of the potential partner?
- Moral hazard/expropriation risks: What is the effort of the partner? Will the partner steal my idea?

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→ All these issues are particularly pronounced in young biotech companies (low experience; missing networks; development of new, potentially highly valuable products; intangible assets)

Introduction

Connected VCs may help to reduce:

- Search/transaction costs: Connected VCs provide access to potential alliance partners
- Adverse selection: Connected VCs may certify the quality of their portfolio companies towards the partners
- Moral hazard/expropriation risks: Connected VCs may protect the counterparty by limiting misconduct in their portfolio companies

Research questions

This paper:

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- 1 Do portfolio companies benefit from bilateral ties between VCs when they form strategic alliances?
- 2 Do bilateral ties between VCs turn to be more important when transaction and information costs increase?
- 3 Are alliances between companies from connected VCs' portfolios associated with better exits?

Contribution to the literature

New findings to the literature that deals with:

- 1 Relations between VC financing and strategic alliance activity (e.g. Lindsey, 2008; Ozmel et al., 2013)

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- 3 VC value added (e.g. Gompers, 1995; Lerner, 1995; Helmann and Puri, 2002)
- 4 Management and strategy areas (e.g. Gulati, 1995)

VC-backed biotech companies and their strategic alliances

Country: United States

Industry: Biotechnology

Period: 2004 – 2016

Sample selection:

- Cohort of all US VC-backed biotech companies founded between 2004 and 2008
- Strategic alliances formed between 2004 and 2016

→ **Final sample:** 683 strategic alliances by 202 unique companies

VC-backed biotech companies and their strategic alliances

Data sources:

- 1 Alliances:
 - S&P Capital IQ
- 2 VC-financing, company characteristics and exits:
 - Dow Jones Venture Source
 - Thomson One VentureXpert
 - S&P Capital IQ
- 3 Patents:
 - Patstat

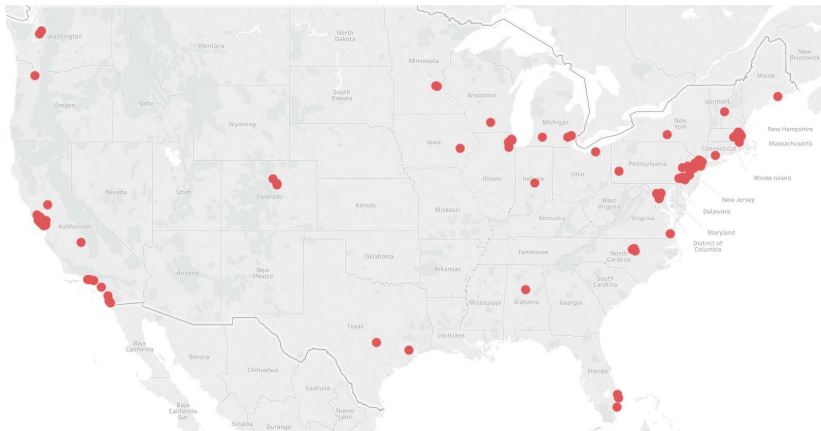


Figure 4: Geographical location of biotech companies

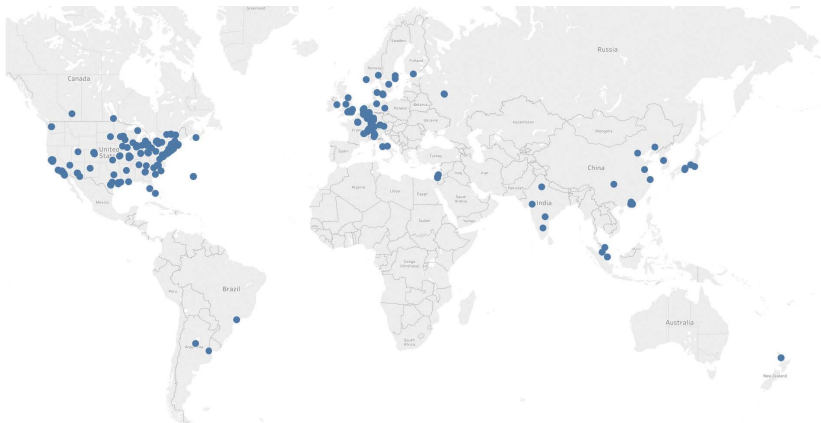


Figure 5: Geographical location of strategic alliance partners

Realized and counterfactual alliances (approach I)

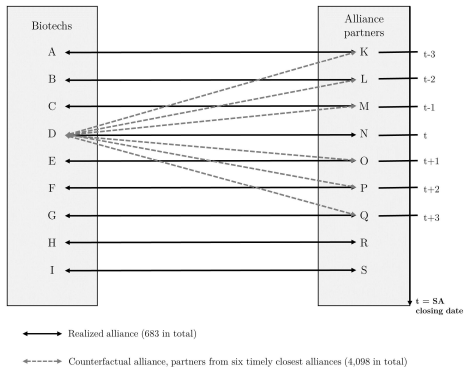


Figure 6: Construction of the sample of counterfactual alliances

Realized and counterfactual alliances (approach II)

Alternative approach: Propensity score matching (PSM)

- Based on alliance characteristics rather than alliance timing
- To obtain propensity scores, logistic regressions are estimated with the following explanatory variables:
 - 1 Founding year (biotech company and the strategic partner)
 - 2 Number of granted patents of the two companies
 - 3 Dummy variable that equals one if both partners are in the same (biotech) industry (and zero otherwise)
 - 4 Continent the partner is located

Realized and counterfactual alliances (approach II)

Alternative approach: Propensity score matching (PSM)

- Matching of six nearest neighbors to each realized alliance
- Biotech company in the counterfactual alliance pairs must be equal to the corresponding biotech company in the realized alliance pair

→ Counterfactual sample: six times larger sample than the sample of realized alliances

VC-dyad ties and alliance partner match (approach I)

DV: Realized alliance	(1)	(2)	(3)	(4)	(5)
Same-VC-backed	0.0859*** (0.0226)		0.0032 (0.0274)		0.0450** (0.0226)
VC-dyad ties (sum)		0.0068*** (0.0008)	0.0068*** (0.0009)		
VC-dyad ties (mean)				0.2853*** (0.0510)	0.2610*** (0.0516)
Total VC ties (sum)	0.0000 (0.0000)	-0.0001*** (0.0000)	-0.0001*** (0.0000)		
Total VC ties (mean)				-0.0065 (0.0040)	-0.0069* (0.0040)
VC similarity (sum)	0.0024*** (0.0006)	0.0021*** (0.0006)	0.0021*** (0.0006)		
VC similarity (mean)				0.0802*** (0.0265)	0.0779*** (0.0265)
Both VC-backed	0.0627*** (0.0122)	0.0440*** (0.0119)	0.0439*** (0.0119)	0.0141 (0.0120)	0.0108 (0.0121)
Previous alliances (dummy)	0.0037 (0.0112)	0.0024 (0.0110)	0.0024 (0.0110)	0.0004 (0.0116)	0.0003 (0.0116)
Distance	-0.0110*** (0.0027)	-0.0109*** (0.0027)	-0.0109*** (0.0027)	-0.0103*** (0.0028)	-0.0102*** (0.0028)
Same industry	-0.0127 (0.0124)	-0.0244** (0.0119)	-0.0244** (0.0119)	-0.0221* (0.0127)	-0.0223* (0.0127)
Age difference	0.0003*** (0.0001)	0.0003*** (0.0001)	0.0003*** (0.0001)	0.0003*** (0.0001)	0.0003*** (0.0001)
Patents	0.0023 (0.0043)	0.0008 (0.0043)	0.0008 (0.0043)	-0.0012 (0.0045)	-0.0011 (0.0045)
Year Dummies	Yes	Yes	Yes	Yes	Yes
N	4,781	4,781	4,781	4,781	4,781

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VC-dyad ties and alliance partner match (approach II)

DV: Realized alliance	(1)	(2)	(3)	(4)	(5)
Same-VC-backed	0.0792*** (0.0242)		0.0405 (0.0276)		0.0721*** (0.0230)
VC-dyad ties (sum)		0.0023*** (0.0005)	0.0019*** (0.0006)		
VC-dyad ties (mean)				0.1135*** (0.0290)	0.0883*** (0.0301)
Total VC ties (sum)	0.0001*** (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)		
Total VC ties (mean)				-0.0046 (0.0041)	-0.0050 (0.0041)
VC similarity (sum)	0.0015** (0.0006)	0.0014** (0.0007)	0.0014** (0.0007)		
VC similarity (mean)				0.0596** (0.0267)	0.0550** (0.0267)
Both VC-backed	0.0239** (0.0118)	0.0211* (0.0118)	0.0199* (0.0118)	0.0105 (0.0119)	0.0064 (0.0120)
Previous alliances (dummy)	-0.0018 (0.0113)	-0.0029 (0.0113)	-0.0028 (0.0113)	-0.0024 (0.0113)	-0.0026 (0.0113)
Year Dummies	Yes	Yes	Yes	Yes	Yes
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Total VC ties (sum)	0.0001*** (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)		
Total VC ties (mean)				-0.0046 (0.0041)	-0.0050 (0.0041)
VC similarity (sum)	0.0015** (0.0006)	0.0014** (0.0007)	0.0014** (0.0007)		
VC similarity (mean)				0.0596** (0.0267)	0.0550** (0.0267)
Both VC-backed	0.0239** (0.0118)	0.0211* (0.0118)	0.0199* (0.0118)	0.0105 (0.0119)	0.0064 (0.0120)
Previous alliances (dummy)	-0.0018 (0.0113)	-0.0029 (0.0113)	-0.0028 (0.0113)	-0.0024 (0.0113)	-0.0026 (0.0113)
Year Dummies	Yes	Yes	Yes	Yes	Yes
N	4,781	4,781	4,781	4,781	4,781

VC-dyad ties and alliance partner match (approach II)

DV: Realized alliance	(1)	(2)	(3)	(4)	(5)
Same-VC-backed	0.0792*** (0.0242)		0.0405 (0.0276)		0.0721*** (0.0230)
VC-dyad ties (sum)		0.0023*** (0.0005)	0.0019*** (0.0006)		
VC-dyad ties (mean)				0.1135*** (0.0290)	0.0883*** (0.0301)
Total VC ties (sum)	0.0001*** (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)		
Total VC ties (mean)				-0.0046 (0.0041)	-0.0050 (0.0041)
VC similarity (sum)	0.0015** (0.0006)	0.0014** (0.0007)	0.0014** (0.0007)		
VC similarity (mean)				0.0596** (0.0267)	0.0550** (0.0267)
Both VC-backed	0.0239** (0.0118)	0.0211* (0.0118)	0.0199* (0.0118)	0.0105 (0.0119)	0.0064 (0.0120)
Previous alliances (dummy)	-0.0018 (0.0113)	-0.0029 (0.0113)	-0.0028 (0.0113)	-0.0024 (0.0113)	-0.0026 (0.0113)
Year Dummies	Yes	Yes	Yes	Yes	Yes
N	4,781	4,781	4,781	4,781	4,781

VC-dyad ties and transaction and information costs

DV: Realized alliance	(1)	(2)	(3)	(4)	(5)	(6)
Same-VC-backed	-0.1357 (0.1047)	0.1179** (0.0458)				
VC-dyad ties (sum)			0.0028 (0.0037)	0.0105*** (0.0011)		
VC-dyad ties (mean)					0.0480 (0.2743)	0.5551*** (0.1198)
Total VC ties (sum)	0.0000 (0.0000)	0.0000 (0.0000)	-0.0000*** (0.0000)	-0.0001*** (0.0000)		
Total VC ties (mean)					-0.0073* (0.0042)	-0.0075* (0.0042)
VC similarity (sum)	0.0012*** (0.0002)	0.0013*** (0.0002)	0.0008*** (0.0002)	0.0008*** (0.0002)		
VC similarity (mean)					0.0758*** (0.0255)	0.0756*** (0.0255)
Both VC-backed	0.0577*** (0.0123)	0.0576*** (0.0123)	0.0342*** (0.0123)	0.0314** (0.0122)	0.0083 (0.0126)	0.0047 (0.0127)
Distance	-0.0141*** (0.0035)	-0.0119*** (0.0035)	-0.0144*** (0.0036)	-0.0126*** (0.0034)	-0.0134*** (0.0037)	-0.0114*** (0.0035)
Same industry	-0.0134 (0.0132)	-0.0135 (0.0133)	-0.0236* (0.0130)	-0.0103 (0.0135)	-0.0223* (0.0132)	-0.0116 (0.0137)
Same-VC-backed x Distance	0.0347** (0.0145)					
Same-VC-backed x Same industry		-0.0151 (0.0675)				
VC-dyad ties (sum) x Distance			0.0007* (0.0004)			
VC-dyad ties (sum) x Same industry				-0.0044*** (0.0016)		
VC-dyad ties (mean) x Distance					0.0507 (0.0367)	
VC-dyad ties (mean) x Same industry						-0.2415* (0.1468)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
N	4,781	4,781	4,781	4,781	4,781	4,781

VC-dyad ties and transaction and information costs

DV: Realized alliance	(1)	(2)	(3)	(4)	(5)	(6)
Same-VC-backed	-0.1357 (0.1047)	0.1179** (0.0458)				
VC-dyad ties (sum)			0.0028 (0.0037)	0.0105*** (0.0011)		
VC-dyad ties (mean)					0.0480 (0.2743)	0.5551*** (0.1198)
Total VC ties (sum)	0.0000 (0.0000)	0.0000 (0.0000)	-0.0000*** (0.0000)	-0.0001*** (0.0000)		
Total VC ties (mean)					-0.0073* (0.0042)	-0.0075* (0.0042)
VC similarity (sum)	0.0012*** (0.0002)	0.0013*** (0.0002)	0.0008*** (0.0002)	0.0008*** (0.0002)		
VC similarity (mean)					0.0758*** (0.0255)	0.0756*** (0.0255)
Both VC-backed	0.0577*** (0.0123)	0.0576*** (0.0123)	0.0342*** (0.0123)	0.0314** (0.0122)	0.0083 (0.0126)	0.0047 (0.0127)
Distance	-0.0141*** (0.0035)	-0.0119*** (0.0035)	-0.0144*** (0.0036)	-0.0126*** (0.0034)	-0.0134*** (0.0037)	-0.0114*** (0.0035)
Same industry	-0.0134 (0.0132)	-0.0135 (0.0133)	-0.0236* (0.0130)	-0.0103 (0.0135)	-0.0223* (0.0132)	-0.0116 (0.0137)
Same-VC-backed x Distance	0.0347** (0.0145)					
Same-VC-backed x Same industry		-0.0151 (0.0675)				
VC-dyad ties (sum) x Distance			0.0007* (0.0004)			
VC-dyad ties (sum) x Same industry				-0.0044*** (0.0016)		
VC-dyad ties (mean) x Distance					0.0507 (0.0367)	
VC-dyad ties (mean) x Same industry						-0.2415* (0.1468)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
N	4,781	4,781	4,781	4,781	4,781	4,781

VC-dyad ties and transaction and information costs

DV: Realized alliance	(1)	(2)	(3)	(4)	(5)	(6)
Same-VC-backed	-0.1357 (0.1047)	0.1179** (0.0458)				
VC-dyad ties (sum)			0.0028 (0.0037)	0.0105*** (0.0011)		
VC-dyad ties (mean)					0.0480 (0.2743)	0.5551*** (0.1198)
Total VC ties (sum)	0.0000 (0.0000)	0.0000 (0.0000)	-0.0000*** (0.0000)	-0.0001*** (0.0000)		
Total VC ties (mean)					-0.0073* (0.0042)	-0.0075* (0.0042)
VC similarity (sum)	0.0012*** (0.0002)	0.0013*** (0.0002)	0.0008*** (0.0002)	0.0008*** (0.0002)		
VC similarity (mean)					0.0758*** (0.0255)	0.0756*** (0.0255)
Both VC-backed	0.0577*** (0.0123)	0.0576*** (0.0123)	0.0342*** (0.0123)	0.0314** (0.0122)	0.0083 (0.0126)	0.0047 (0.0127)
Distance	-0.0141*** (0.0035)	-0.0119*** (0.0035)	-0.0144*** (0.0036)	-0.0126*** (0.0034)	-0.0134*** (0.0037)	-0.0114*** (0.0035)
Same industry	-0.0134 (0.0132)	-0.0135 (0.0133)	-0.0236* (0.0130)	-0.0103 (0.0135)	-0.0223* (0.0132)	-0.0116 (0.0137)
Same-VC-backed x Distance	0.0347** (0.0145)					
Same-VC-backed x Same industry		-0.0151 (0.0675)				
VC-dyad ties (sum) x Distance			0.0007* (0.0004)			
VC-dyad ties (sum) x Same industry				-0.0044*** (0.0016)		
VC-dyad ties (mean) x Distance					0.0507 (0.0367)	
VC-dyad ties (mean) x Same industry						-0.2415* (0.1468)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
N	4,781	4,781	4,781	4,781	4,781	4,781

VC-dyad ties and transaction and information costs

DV: Realized alliance	(1)	(2)	(3)	(4)	(5)	(6)
Same-VC-backed	-0.1357 (0.1047)	0.1179** (0.0458)				
VC-dyad ties (sum)			0.0028 (0.0037)	0.0105*** (0.0011)		
VC-dyad ties (mean)					0.0480 (0.2743)	0.5551*** (0.1198)
Total VC ties (sum)	0.0000 (0.0000)	0.0000 (0.0000)	-0.0000*** (0.0000)	-0.0001*** (0.0000)		
Total VC ties (mean)					-0.0073* (0.0042)	-0.0075* (0.0042)
VC similarity (sum)	0.0012*** (0.0002)	0.0013*** (0.0002)	0.0008*** (0.0002)	0.0008*** (0.0002)		
VC similarity (mean)					0.0758*** (0.0255)	0.0756*** (0.0255)
Both VC-backed	0.0577*** (0.0123)	0.0576*** (0.0123)	0.0342*** (0.0123)	0.0314** (0.0122)	0.0083 (0.0126)	0.0047 (0.0127)
Distance	-0.0141*** (0.0035)	-0.0119*** (0.0035)	-0.0144*** (0.0036)	-0.0126*** (0.0034)	-0.0134*** (0.0037)	-0.0114*** (0.0035)
Same industry	-0.0134 (0.0132)	-0.0135 (0.0133)	-0.0236* (0.0130)	-0.0103 (0.0135)	-0.0223* (0.0132)	-0.0116 (0.0137)
Same-VC-backed x Distance	0.0347** (0.0145)					
Same-VC-backed x Same industry		-0.0151 (0.0675)				
VC-dyad ties (sum) x Distance			0.0007* (0.0004)			
VC-dyad ties (sum) x Same industry				-0.0044*** (0.0016)		
VC-dyad ties (mean) x Distance					0.0507 (0.0367)	
VC-dyad ties (mean) x Same industry						-0.2415* (0.1468)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
N	4,781	4,781	4,781	4,781	4,781	4,781

VC-dyad ties and IPO exit

DV: IPO dummy	(1)	(2)	(3)	(4)	(5)	(6)
Both VC-backed	0.0839 (0.0704)	-0.1076 (0.1320)	0.0894 (0.0688)	0.0996 (0.0668)	0.0874 (0.0694)	0.0414 (0.0724)
Same-VC-backed (dummy)	0.1471** (0.0728)					
Connected-VC-backed (dummy)		0.2693** (0.1247)				
Same-VC-backed (sum)			0.0649*** (0.0203)			
VC-dyad ties (sum)				0.0004** (0.0002)		
Same-VC-backed (mean)					0.1142** (0.0545)	
VC-dyad ties (mean)						0.0017** (0.0008)
Patents (sum)	0.0019* (0.0011)	0.0019* (0.0010)	0.0022** (0.0011)	0.0018* (0.0011)	0.0020* (0.0011)	0.0014 (0.0012)
Foreign VCs (dummy)	0.2180** (0.1012)	0.2242** (0.0981)	0.2141** (0.1023)	0.2591** (0.1085)	0.2145** (0.1029)	0.2375** (0.1023)
Alliances count (sum)	-0.0797 (0.0622)	-0.0707 (0.0633)	-0.0989 (0.0621)	-0.1300* (0.0705)	-0.0457 (0.0631)	-0.0456 (0.0602)
N	202	202	202	202	202	202

VC-dyad ties and IPO exit

DV: IPO dummy	(1)	(2)	(3)	(4)	(5)	(6)
Both VC-backed	0.0839 (0.0704)	-0.1076 (0.1320)	0.0894 (0.0688)	0.0996 (0.0668)	0.0874 (0.0694)	0.0414 (0.0724)
Same-VC-backed (dummy)	0.1471** (0.0728)					
Connected-VC-backed (dummy)		0.2693** (0.1247)				
Same-VC-backed (sum)			0.0649*** (0.0203)			
VC-dyad ties (sum)				0.0004** (0.0002)		
Same-VC-backed (mean)					0.1142** (0.0545)	
VC-dyad ties (mean)						0.0017** (0.0008)
Patents (sum)	0.0019* (0.0011)	0.0019* (0.0010)	0.0022** (0.0011)	0.0018* (0.0011)	0.0020* (0.0011)	0.0014 (0.0012)
Foreign VCs (dummy)	0.2180** (0.1012)	0.2242** (0.0981)	0.2141** (0.1023)	0.2591** (0.1085)	0.2145** (0.1029)	0.2375** (0.1023)
Alliances count (sum)	-0.0797 (0.0622)	-0.0707 (0.0633)	-0.0989 (0.0621)	-0.1300* (0.0705)	-0.0457 (0.0631)	-0.0456 (0.0602)
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Same-VC-backed (dummy)	0.1471** (0.0728)					
Connected-VC-backed (dummy)		0.2693** (0.1247)				
Same-VC-backed (sum)			0.0649*** (0.0203)			
VC-dyad ties (sum)				0.0004** (0.0002)		
Same-VC-backed (mean)					0.1142** (0.0545)	
VC-dyad ties (mean)						0.0017** (0.0008)
Patents (sum)	0.0019* (0.0011)	0.0019* (0.0010)	0.0022** (0.0011)	0.0018* (0.0011)	0.0020* (0.0011)	0.0014 (0.0012)
Foreign VCs (dummy)	0.2180** (0.1012)	0.2242** (0.0981)	0.2141** (0.1023)	0.2591** (0.1085)	0.2145** (0.1029)	0.2375** (0.1023)
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N	202	202	202	202	202	202

VC-dyad ties and IPO exit

DV: IPO dummy	(1)	(2)	(3)	(4)	(5)	(6)
Both VC-backed	0.0839 (0.0704)	-0.1076 (0.1320)	0.0894 (0.0688)	0.0996 (0.0668)	0.0874 (0.0694)	0.0414 (0.0724)
Same-VC-backed (dummy)	0.1471** (0.0728)					
Connected-VC-backed (dummy)		0.2693** (0.1247)				
Same-VC-backed (sum)			0.0649*** (0.0203)			
VC-dyad ties (sum)				0.0004** (0.0002)		
Same-VC-backed (mean)					0.1142** (0.0545)	
VC-dyad ties (mean)						0.0017** (0.0008)
Patents (sum)	0.0019* (0.0011)	0.0019* (0.0010)	0.0022** (0.0011)	0.0018* (0.0011)	0.0020* (0.0011)	0.0014 (0.0012)
Foreign VCs (dummy)	0.2180** (0.1012)	0.2242** (0.0981)	0.2141** (0.1023)	0.2591** (0.1085)	0.2145** (0.1029)	0.2375** (0.1023)
Alliances count (sum)	-0.0797 (0.0622)	-0.0707 (0.0633)	-0.0989 (0.0621)	-0.1300* (0.0705)	-0.0457 (0.0631)	-0.0456 (0.0602)
N	202	202	202	202	202	202

Conclusion

- 1 VC ties are associated with better companies' access to strategic alliance partners from connected VCs' portfolios

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Conclusion

- 1 VC ties are associated with better companies' access to strategic alliance partners from connected VCs' portfolios
- 2 The “connected-VC-effect” dominates the “same-VC-effect”
- 3 Connected VCs tend to be particularly beneficial when transaction and information costs are large
- 4 VC-backed companies that pair in alliances with partners financed by connected VCs realize IPOs more often

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Backup

Panel A: Biotech companies

	Mean	Median	Min	Max	Std. dev.
Age	5.21	4.74	0.16	12.02	2.82
VC rounds	2.20	2.00	0.00	10.00	1.67
Patents	7.03	3.00	0.00	147.00	14.80
Investors count	4.40	3.00	1.00	21.00	3.57
Foreign VCs	0.32	0.29	0.00	1.00	0.26
VC experience	67.15	51.75	0.00	312.33	62.64
Total VC ties	255.11	203.40	0.00	1002.67	221.29
IPO dummy	0.24	0.00	0.00	1.00	-

Panel B: Strategic alliance partners

	Mean	Median	Min	Max	Std. dev.
Age	46.84	24.00	1.00	449.00	58.85
VC dummy	0.40	0.00	0.00	1.00	-

The following variables are calculated only for VC-backed strategic alliance partners

VC rounds	3.34	2.00	1.00	24.00	3.18
Investors count	6.12	5.00	1.00	40.00	5.93
Foreign VCs	0.48	0.44	0.04	1.00	0.27
VC experience	74.99	53.05	0.00	638.00	86.47
Total VC ties	235.67	196.58	0.00	911.67	204.38
Industries:					
Biotech	20.12%				
Pharma	22.13%				

Descriptive statistics

Total VC ties and alliance partner VC financing

	Panel A: RRR – Category 1: Non-VC (base)			Panel B: Average marginal effects			
	Cat.2 Both VC-backed	Cat.3 Same-VC- backed	Cat.4 Connected- VC-backed	Cat.1 Non-VC	Cat.2 Both VC-backed	Cat.3 Same-VC- backed	Cat.4 Connected- VC-backed
Total VC ties	0.8204* (0.0944)	2.8753*** (0.6170)	2.3768*** (0.3056)	-0.1007*** (0.0152)	-0.0387*** (0.0074)	0.0384*** (0.0117)	0.1011*** (0.0159)
VC similarity	1.0496*** (0.0085)	1.1056*** (0.0168)	1.0622*** (0.0078)	-1.0829*** (0.0699)	0.1926*** (0.0517)	0.3949*** (0.0872)	0.4954*** (0.0928)
Foreign VCs	1.0293*** (0.0067)	1.0433*** (0.0098)	1.0332*** (0.0063)	-0.0057*** (0.0008)	0.0013*** (0.0004)	0.0014*** (0.0005)	0.0030*** (0.0008)
Investors count	0.8125*** (0.0450)	1.1584*** (0.0479)	1.0721** (0.0296)	0.0002 (0.0045)	-0.0182*** (0.0041)	0.0079*** (0.0022)	0.0101*** (0.0036)
Alliances count	0.8823** (0.0519)	0.9625 (0.0502)	0.9957 (0.0314)	0.0077 (0.0051)	-0.0093** (0.0044)	-0.0015 (0.0030)	0.0031 (0.0044)
Distance	0.9304 (0.0620)	0.9490 (0.0850)	0.9054** (0.0455)	0.0147** (0.0075)	-0.0032 (0.0049)	0.0003 (0.0051)	-0.0118* (0.0070)
Patents	1.3086** (0.1898)	0.7908 (0.1173)	0.8497* (0.0830)	0.0047 (0.0145)	0.0304*** (0.0100)	-0.0111 (0.0082)	-0.0239* (0.0131)
N	683	683	683	683	683	683	683

Multinomial logistic regressions with realized alliances