

# Should Investors Care Where Private Equity Managers Went To School?

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2<sup>nd</sup> Annual Private Markets Research Conference  
Ecole Hôtelière de Lausanne (EHL),  
July 5-6, 2018, Lausanne, Switzerland

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Sources: <http://www.kinderhook.com/team/index.html>.

# Human Capital and Investment Performance

## Education as an ...

- ... important part of *human capital* that affects *performance* of corporate organizations (Hambrick and Mason (1984))
- ... objective metric to evaluate manager's abilities: easy to quantify, reliable to measure, and intuitive to interpret

## We investigate ...

- ... the relationship between the *educational background of management teams* and their performance in a high-skill industry: *buyout funds*
- ... three potential channels: (i) *institutional quality*, (ii) *individual performance*, and (iii) *academic variety*

# Contributions to the Literature I

- **role of team characteristics to explain performance differentials in high-skill PE industry**  
(Lopez-de Silanes et al. (2015), Cornelli et al. (2017))
  - ⇔ we focus on role of educational background of fund teams
- **use of industry-specific work experience as a signaling tool for investors**
  - post-hiring value creation from investment banking and management consulting (e.g., Acharya et al. (2013), Siming (2014))
  - ⇔ we identify individual performance within graduates of single institutions even without proprietary information (e.g., GPAs, SAT scores)

## Contributions to the Literature II

- **facets of academic variety consistent with resource-based view of the firm**
  - literature so far focused on institutional quality and type: mutual funds (e.g., Golec (1996), Chevalier and Ellison (1999), Gottesman and Morey (2006b)), hedge funds (e.g., Li et al. (2011)), venture capital (e.g., Dimov and Shepherd (2005), Zarutskie (2010))
  - ⇔ our study focuses on the breadth of the exposure and highlights the benefits of such variety in the educational background

## Preview of Main Results

- positive relationship between average **ranking of fund partners' universities** and **fund-level performance**:
  - ⇒ one standard deviation change in average ranking position increases the fund's TVPI by 6.6%
- **individual performance**: partners who graduate from a high-ranked institution and work for a high-profile firm show strong outperformance:
  - ⇒ one standard deviation increase estimated to positively impact the fund's TVPI by 6.6-9.2%
- **academic variety** within management team matters for performance:
  - ⇒ additional institution estimated at 2.8% of capital base (i.e., change in TVPI), or US\$ 22mn in additional distributions for average fund
  - ⇒ strongest contribution from high-ranked institutions

# Three Roles of Education

## (i) Institutional Quality

- systematic differences in demography and quality of education between management teams of different buyout funds
- talent is attracted by the reputation of an institution that selects based on admission policy which reinforces quality

**H1:** *Institutional quality and fund performance are positively related.*

- institutional quality: e.g., ranking position
- talent and teaching: e.g., SAT score, student/faculty
- research contribution: e.g., finance, economics, nobel prizes

$$\text{Performance}_i = \alpha + \beta \cdot \text{Quality Characteristic}_i + \gamma \cdot \text{Controls}_i + \lambda \cdot \text{Vintage}_i + \epsilon_i$$

# Three Roles of Education

## (ii) Individual Performance

- competitive hiring decisions of employers that have a reputation for attracting exceptional candidates to identify individual performance

**H2:** *The combination of high-quality education and functional experience, such as from top-tier investment banks and management consulting firms, leads to better performance.*

$$\begin{aligned}
 \text{Performance}_i = & \alpha + \beta_{12} \cdot (\text{Top-10 Edu \& Top-Firm Exp})_i \\
 & + \beta_{1X} \cdot (\text{Top-10 Edu \& Not Top-Firm Exp})_i \\
 & + \beta_{X2} \cdot (\text{Not Top-10 Edu \& Top-Firm Exp})_i \\
 & + \gamma \cdot \text{Controls}_i + \lambda \cdot \text{Vintage}_i + \epsilon_i
 \end{aligned}$$



# Three Roles of Education

## (iii) Academic Variety

⇒ higher heterogeneity in team demography could reflect on performance

- *positively* through larger knowledge and skill pool, and access to networks
- *negatively* from higher communication/alignment cost

**H3:** *Higher academic variety in teams lead to better performance.*

- # of different institutions, e.g., undergrad, business schools
- HHI to incorporate concentration among institutions / study fields
- share of partners in team that went to the same institution

$$\text{Performance}_i = \alpha + \beta \cdot \text{Academic Variety}_i + \gamma \cdot \text{Fund Attributes}_i + \lambda \cdot \text{Vintage}_i + \epsilon_i$$

# Sample Selection

	U.S. buyout	with team	...and TVPI	...and IRR
No of Funds	1833	1173	790	760
No of Firms (GPs)	853	595	390	365
No of Partners (fund pairs)	-	4053	3213	3115
No of Partners (individuals)	-	2768	2244	2160
Fund Size (US\$ million)	590 (1070)	766 (1247)	1010 (1425)	1035 (1442)
Fund Sequence (# of funds for GP)	3.58 (4.67)	3.83 (5.02)	4.47 (5.74)	4.52 (5.78)
First Fund (%)	0.31	0.28	0.22	0.21

- large data set spanning 1,173 buyout funds from the U.S. that have a management team tagged at the fund-level (rather than GP-level)
- captures significant share of fund population (total of 1,833 U.S. based funds in the PitchBook database for vintage years 1990-2010)
- funds with available team slightly larger and more mature on average, 790 funds with TVPI and 760 with IRR (complemented w/ Preqin)

# Educational Background of PE Managers

Academic Institution	N	%	Degree Type	N	%	Undergraduate Field	N	%
Harvard University	733	14.62	Undergraduate	2505	49.96	Economics	584	23.31
University of Pennsylvania	424	8.46	MBA	1572	31.35	Finance/Accounting	389	15.53
Stanford University	286	5.70	Graduate	298	5.94	Social/Arts	300	11.98
Northwestern University	151	3.01	JD	216	4.31	Business/Management	272	10.86
Columbia University	143	2.85	PhD	62	1.24	Engineering	217	8.66
University of Chicago	140	2.79	Other	24	0.48	Sciences	122	4.87
Yale University	114	2.27				Other	21	0.84
Dartmouth College	112	2.23						
University of Virginia	100	1.99						
Princeton University	89	1.78						
New York University	75	1.50						
University of Michigan	74	1.48						
Cornell University	70	1.40						
Duke University	69	1.38						
University of Texas	68	1.36						
Georgetown University	63	1.26						
University of Notre Dame	58	1.16						
UC Los Angeles	49	0.98						
University of Illinois	49	0.98						
Brown University	48	0.96						
Other	1928	38.45						
Missing	171	3.41	Missing	337	6.72	Missing	600	23.95
No of Degrees	5014							
No of Partners	2768							

# Fund Performance by University

Institution	TVPI			IRR		
	N	Mean	Median	N	Mean	Median
UC Los Angeles	63	1.88	1.83	64	17.0	14.0
Princeton University	105	1.87	1.84	102	15.0	14.0
Stanford University	353	1.86	1.72	355	14.4	13.1
Brown University	65	1.84	1.76	62	14.8	12.2
Harvard University	997	1.79	1.74	985	14.4	13.1
Georgetown University	78	1.77	1.65	77	14.6	12.9
Columbia University	172	1.76	1.72	163	14.2	12.4
Yale University	134	1.73	1.71	132	12.8	13.1
Duke University	78	1.72	1.72	75	14.5	13.7
Cornell University	86	1.72	1.61	89	11.2	10.2
University of Michigan	88	1.71	1.70	80	14.4	13.3
Northwestern University	157	1.71	1.58	143	13.3	12.1
University of Pennsylvania	509	1.70	1.67	506	13.3	12.1
University of Texas	87	1.70	1.61	85	12.3	12.5
University of Chicago	179	1.69	1.67	171	13.6	12.3
Boston College	52	1.69	1.73	49	15.0	14.5
University of Notre Dame	63	1.69	1.58	61	11.8	11.2
University of Virginia	106	1.68	1.61	96	12.9	12.6
Dartmouth College	143	1.68	1.60	135	13.8	11.8
Williams College	56	1.67	1.59	56	11.6	10.3
New York University	92	1.55	1.54	82	11.4	12.2
University of Illinois	57	1.55	1.54	54	13.1	11.8
Other	2003	1.64	1.62	1913	11.9	11.7
Observed Degrees	5723	1.64	1.63	5535	12.0	12.0
Missing Degrees	159	1.74	1.71	155	13.8	11.8
Unique Partners	2244			2160		
Unique Funds	790			760		

## (i) Institutional Quality

	<i>Dependent variable:</i>							
	TVPI				IRR			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Times Higher Edu.	-0.073** (0.036)				-0.012* (0.007)			
Shanghai ARWU		-0.059** (0.027)				-0.009* (0.005)		
U.S. News MBA			-0.084** (0.037)				-0.012* (0.007)	
Fin. Times MBA				-0.027 (0.034)				-0.007 (0.006)
Team Size	0.208*** (0.044)	0.216*** (0.045)	0.205*** (0.046)	0.196*** (0.046)	0.029*** (0.008)	0.030*** (0.008)	0.028*** (0.008)	0.027*** (0.008)
Fund Size	-0.111*** (0.031)	-0.111*** (0.032)	-0.121*** (0.035)	-0.112*** (0.034)	-0.015*** (0.005)	-0.015*** (0.005)	-0.014** (0.005)	-0.013** (0.005)
Fund Seq.	0.010 (0.041)	0.009 (0.041)	0.013 (0.045)	0.021 (0.045)	0.005 (0.008)	0.005 (0.008)	0.004 (0.008)	0.005 (0.008)
First Fund	0.042 (0.091)	0.039 (0.091)	0.016 (0.099)	0.019 (0.099)	0.014 (0.015)	0.014 (0.015)	0.013 (0.016)	0.013 (0.016)
F.E. Vintage	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	790	790	668	668	760	760	644	644
Adjusted R <sup>2</sup>	0.111	0.112	0.130	0.123	0.126	0.127	0.151	0.148

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01

## (i) Institutional Quality

	<i>Dependent variable:</i>							
	<i>TVPI</i>				<i>IRR</i>			
	<i>All degrees</i>		<i>MBA degrees</i>		<i>All degrees</i>		<i>MBA degrees</i>	
	<i>Coeff</i>	<i>SE</i>	<i>Coeff</i>	<i>SE</i>	<i>Coeff</i>	<i>SE</i>	<i>Coeff</i>	<i>SE</i>
Harvard University	0.191**	0.091	0.245**	0.096	0.028*	0.015	0.040**	0.017
University of Pennsylvania	-0.091	0.106	-0.209	0.147	-0.000	0.021	-0.027	0.024
Stanford University	0.101	0.169	0.267	0.201	-0.014	0.028	0.009	0.034
Northwestern University	-0.139	0.179	-0.309	0.261	-0.022	0.034	-0.070	0.048
Columbia University	-0.179	0.206	0.023	0.249	-0.030	0.026	-0.036	0.038
Chicago University	0.001	0.150	-0.064	0.149	0.004	0.022	-0.000	0.023
Yale University	-0.204	0.227	-0.324	0.735	-0.029	0.029	-0.171*	0.089
Dartmouth College	-0.091	0.197	-0.137	0.395	-0.018	0.038	-0.048	0.042
University of Virginia	0.214	0.431	0.636	0.505	-0.047	0.058	0.105	0.066
Princeton University	0.667**	0.323			0.070	0.053		
New York University	-0.862***	0.223	-0.679***	0.257	-0.132**	0.061	-0.060	0.047
University of Michigan	-0.192	0.203	-0.521	0.382	-0.002	0.042	-0.124*	0.065
Cornell University	0.116	0.165	-0.432	0.743	-0.036	0.030	-0.135	0.097
Duke University	0.015	0.257	0.396	0.256	0.041	0.033	0.049	0.046
University of Texas	-0.186	0.226	-0.340	0.301	-0.066*	0.038	-0.081***	0.026
Georgetown University	0.122	0.410	1.027*	0.599	0.057	0.072	0.132***	0.033
University of Notre Dame	-0.074	0.300	-4.331***	0.721	-0.061	0.057	-0.704***	0.103
UC Los Angeles	0.618*	0.360	0.606	0.523	0.067*	0.040	0.009	0.049
University of Illinois	-0.417	0.257	0.479**	0.224	-0.015	0.056	0.057	0.057
Brown University	0.583**	0.237			0.085**	0.040		
University of Oxford					0.466	0.407		
U of North Carolina					-0.117	0.531		

\* p<0.1; \*\* p<0.05; \*\*\* p<0.01

## (ii) Individual Performance

	<i>Dependent variable:</i>							
	TVPI				IRR			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ranking	THE	ARWU	NEWS	FT	THE	ARWU	NEWS	FT
Degrees	All	All	MBA	MBA	All	All	MBA	MBA
<i>Panel A: Intersection of top-education and -experience (%)</i>								
<b>Top-10 Edu   Top-Firm Exp</b>	<b>0.270**</b> <b>(0.116)</b>	<b>0.305***</b> <b>(0.116)</b>	<b>0.228*</b> <b>(0.118)</b>	<b>0.316***</b> <b>(0.118)</b>	<b>0.037*</b> <b>(0.020)</b>	<b>0.043**</b> <b>(0.020)</b>	<b>0.034*</b> <b>(0.019)</b>	<b>0.046**</b> <b>(0.019)</b>
Top-10 Edu   Not Top-Firm	0.048 (0.107)	0.007 (0.099)	0.061 (0.098)	0.068 (0.102)	-0.001 (0.017)	-0.009 (0.016)	-0.007 (0.017)	-0.001 (0.017)
Not Top-10   Top-Firm Exp	0.079 (0.140)	-0.027 (0.149)	0.126 (0.157)	0.025 (0.150)	0.009 (0.023)	-0.012 (0.025)	0.001 (0.027)	-0.006 (0.025)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F.E. Vintage	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	790	790	790	790	760	760	760	760
Adjusted R <sup>2</sup>	0.113	0.117	0.111	0.115	0.125	0.130	0.126	0.129
<i>Panel B: Separation of top-education and -experience (%)</i>								
Top-10 Edu	0.100 (0.085)	0.116 (0.081)	0.074 (0.085)	0.143 (0.088)	0.009 (0.014)	0.011 (0.014)	0.005 (0.015)	0.017 (0.015)
Top-Firm Exp	0.143 (0.096)	0.143 (0.094)	0.148 (0.094)	0.131 (0.095)	0.022 (0.016)	0.022 (0.016)	0.023 (0.016)	0.020 (0.016)
Observations	790	790	790	790	760	760	760	760
Adjusted R <sup>2</sup>	0.113	0.114	0.112	0.115	0.125	0.126	0.125	0.126

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01

### (iii) Academic Variety: Variety of Institutions and Degrees

	<i>Dependent variable:</i>							
	TVPI				IRR			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
No of undergrad unis	0.213** (0.083)				0.040*** (0.014)			
No of business schools	0.072 (0.081)				-0.006 (0.015)			
1-HHI undergrad unis		0.347** (0.135)				0.072*** (0.023)		
1-HHI business schools		0.080 (0.123)				-0.020 (0.021)		
1-HHI undegrad fields			0.327*** (0.102)				0.053*** (0.018)	
Share most freq. uni				-0.199* (0.108)				-0.034* (0.019)

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

- addition of not yet represented institution or through new partner estimated at 2.8% of capital base (i.e. change in TVPI), or US\$22 million in additional distribution for average fund with US\$766 million in capital (undergraduate level)



### (iii) Academic Variety: Sources of Institutional Variety

Ranking	<i>Dependent variable:</i>							
	TVPI				IRR			
	THE	ARWU	NEWS	FT	THE	ARWU	NEWS	FT
<b>No of Top 1-10</b>	<b>0.231***</b> (0.058)	<b>0.227***</b> (0.060)	<b>0.197***</b> (0.064)	<b>0.238***</b> (0.068)	<b>0.021**</b> (0.010)	<b>0.022**</b> (0.010)	<b>0.022**</b> (0.011)	<b>0.029***</b> (0.011)
<b>No of Top 11-25</b>	<b>0.128**</b> (0.065)	<b>0.150**</b> (0.059)	<b>0.139</b> (0.111)	<b>0.003</b> (0.079)	<b>0.034***</b> (0.012)	<b>0.034***</b> (0.012)	<b>0.006</b> (0.018)	<b>-0.008</b> (0.014)
No of Top 26-100/50	0.107 (0.065)	0.126** (0.063)	-0.189* (0.108)	0.100 (0.127)	0.015 (0.011)	0.026** (0.012)	-0.016 (0.026)	-0.0001 (0.019)
Residual Institutions	0.052 (0.050)	0.052 (0.053)	-0.005 (0.102)	0.072 (0.084)	0.001 (0.009)	-0.001 (0.009)	-0.005 (0.021)	0.005 (0.016)
Fund Attributes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F.E. Vintage	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	790	790	790	790	760	760	760	760

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

- effect concentrates in top-schools, source of variety seems to come from other high-ranked institution
- of particular interest as PE funds tend to hire primarily from top-ranked universities

# Conclusion

- management teams in private equity are relatively small, well aligned with principal's objectives, and highly educated
- this study provides comprehensive evidence on the relevance of the management team's educational background for fund performance

## ⇒ **empirical results ...**

... suggest that investors can use the educational role of the team during fund due diligence and that success in private equity is conditional on team resources

... extend similar efforts on the relevance of manager characteristics of mutual, hedge funds, and venture capital funds

**Thank you for your attention!**

## References

- Acharya, V.V., Gottschalg, O.F., Hahn, M., and Kehoe, C. (2013). Corporate Governance and Value Creation: Evidence from Private Equity. *Review of Financial Studies*, 26(2), 368-402.
- Chevalier, J., and Ellison, G. (1999). Are Some Mutual Fund Managers Better Than Others? Cross-Sectional Patterns in Behaviour and Performance. *Journal of Finance*, 54(3), 875-899.
- Cornelli, F., Simintzi, E., and Vig, V. (2017). Team Stability and Performance in Private Equity: Evidence from Private Equity. *Working Paper*.
- Dimov, D., and Shepherd, D.A. (2005). Human capital theory and venture capital firms: Exploring “home runs” and “strike outs”. *Journal of Business Venturing*, 20(1), 1-21.
- Golec, J. H. (1996). The effects of Mutual Fund Managers' Characteristics on Their Portfolio Performance, Risk and Fees. *Financial Services Review*, 5(2), 133-148.
- Gottesman, A.A., and Morey, M.R. (2006b). Manager education and mutual fund performance. *Journal of Empirical Finance*, 13(2), 145-182.
- Hambrick, D.C., and Mason, P.A. (1984). Upper Echelons The Organization as a Reflection of Its Top Managers, *Academy of Management Review* 9(2), 193-206.
- Li, H., Zhang, X., and Zhao, R. (2011). Investing in Talents: Manager Characteristics and Hedge Fund Performances. *Journal of Financial and Quantitative Analysis*, 46(1), 59-82.

# References

Lopez-de-Silanes, F. and Phalippou, L. and Gottschalg, O. F. (2015). Giants at the Gate Investment Returns and Diseconomies of Scale in Private Equity, *Journal of Financial and Quantitative Analysis* 50(3), 377-411.

Siming, L. (2014). Your former employees matter: Private equity firms and their financial advisors. *Review of Finance*, 18(1), 109-146.

Zarutskie, R. (2010). The role of top management team human capital in venture capital markets: Evidence from first-time funds. *Journal of Business Venturing*, 25(1), 155-172.