Do Buyouts Create Value? Measuring Value Added in Private Equity

Reiner Braun
Technical University Munich

Mark Jansen
University of Utah

Victor Lyonnet
University of Michigan

Constantine Yannelis
University of Cambridge

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Motivation

PE buyout funds outperform public markets on average

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Where does PE performance come from?

What Drives PE Returns?

"Some of the very best private equity people, in my experience, are people who start out as ***stock pickers*** *— people who really understood value, how to take a company's financials apart."*

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*"We don't just buy companies; we build them. Our goal is to transform businesses through **operational improvements**."*

Steve Schwarzman
CEO, Blackstone
2019

This Paper

PE Fund Performance

$$= \boxed{\text{Value-Added}} + \boxed{\text{Selection}} + \boxed{\text{Timing}}$$

We provide the first estimates of **relative value-added** across PE buyout funds, adapting the provider value-added methodology of Einav et al. (*Econometrica*, 2025).

Outline

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Data Overview

755 buyout funds, 7,384 individual investments

Source: Braun, Jenkinson & Stoff (2017) — deal-level cash flows

Fund characteristics

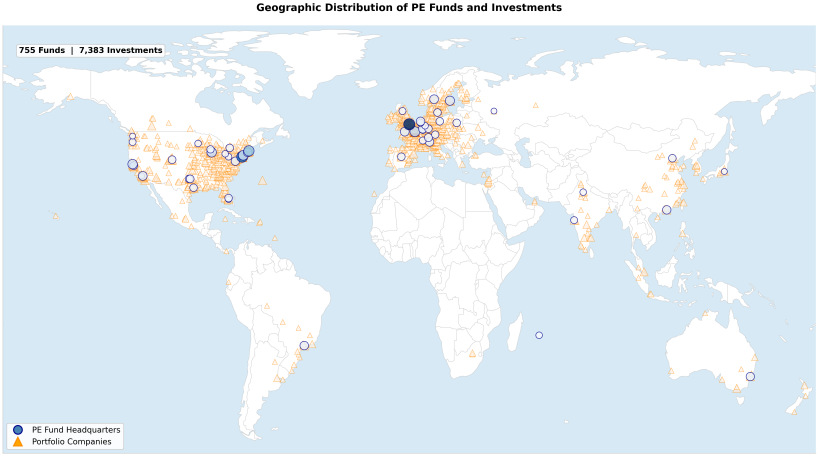
	Mean	Median
Fund size ($M)	1,024	365.2
Investments per fund	9.8	8
Fund generation	3.0	2

Deal characteristics

	Mean	Median
Deal size ($M)	59.84	20.99
Gross PME	2.08	1.32
Holding period (yrs)	4.4	4.0

- Median PME = 1.32: typical deal outperforms the S&P 500 by 32%
- Right-skewed: mean (2.08) $\gg$ median — big winners drive averages

Geographic Distribution of Funds and Investments



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Empirical Framework

$$PME_{ij}$$

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   - First stage: $\hat{p}_{ij} = f(\Delta d_{ij}, X_{ij})$ via logit; $\widehat{S}_{ij} = -\log(\hat{p}_{ij})$

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Residual variation at the fund level = Value-Added

Approximating Selection with Distance-Based Selection

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The solution:

- Funds exhibit geographic "home bias"
  → distance shifts *which* company is chosen
  → controls for selection correlated w/ $\hat{p}_{ij}$

Differential Distance

$$\Delta d_{ij} = d_{ij} - \min_{k \in C_{jt}} d_{jk}$$

d_{ij}	distance: fund j to co. i
C_{jt}	choice set: same-industry targets, 3-year window
Δd	excess distance vs. nearest

Details

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The assumption:

- Conditional independence: Δd_{ij} affects PME only through the control function $\widehat{S}_{ij}$

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Illustration: How Distance Shapes Selection

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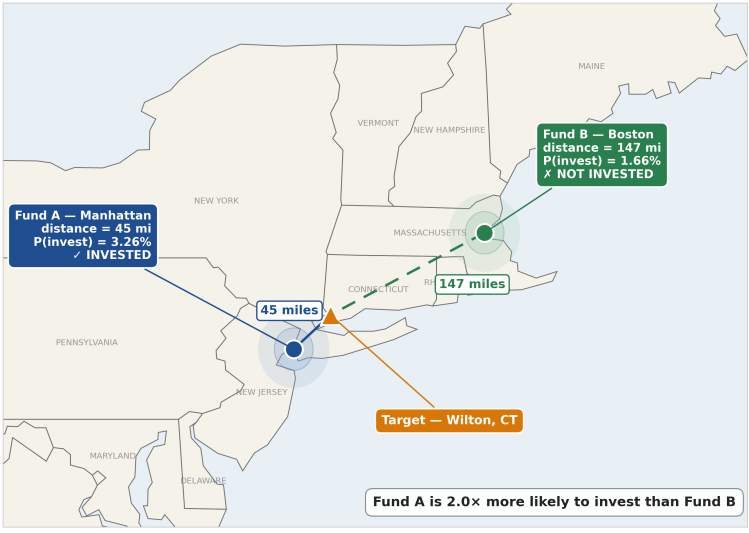
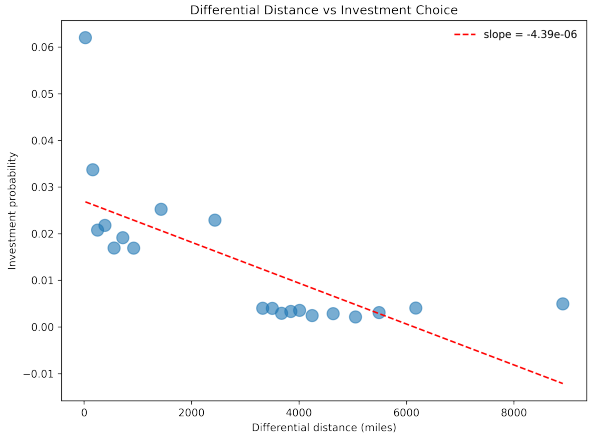


Effect of Differential Distance on Investment Decision

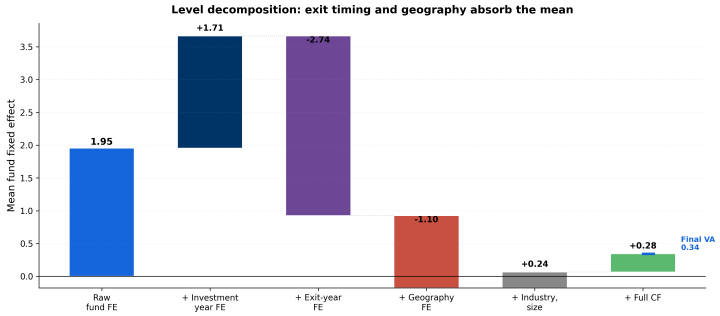


Strong instrument: $F = 639$. DD < 10 mi: 7.1% invest rate; DD $> 1{,}000$ mi: 0.7%.

▸ Stability

Outline

Where Does Average PE Performance Come From?



- **Entry-year FE** raises the mean by $+1.71$ PME (funds invest in unfavorable years)
- **Exit-year FE** and geography then absorb the level
- The **level** is calendar & geography-sensitive, but cross-fund Value-Added **dispersion** remains close to 0.85 PME across specifications

▸ Specification comparison

Distance-Based Selection is Homogeneous

Distance-based selection coefficient $\hat{\lambda}$:

- Not significant ($p = 0.39$)
- Distance-based selection does not appear to explain cross-fund differences in returns

Distance-Based Selection Evidence	
	Estimate
$\hat{\lambda}$ (selection)	-0.127
	(0.147)
SD(VA) w/o selection	0.859
SD(VA) w/ selection	0.845
Δ SD(VA)	**0.014**

Key: Adding the CF changes SD(VA) by only 0.014 — *negligible*.

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Why? Our interpretation:

- Deal quality is largely **observable**; similar due-diligence processes
- Homogeneous opportunity sets
- Contrast with VC: startups are opaque (Sorensen, 2007)

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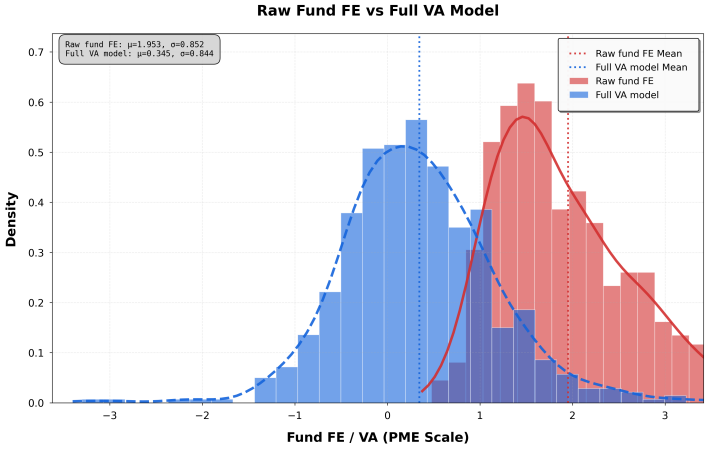
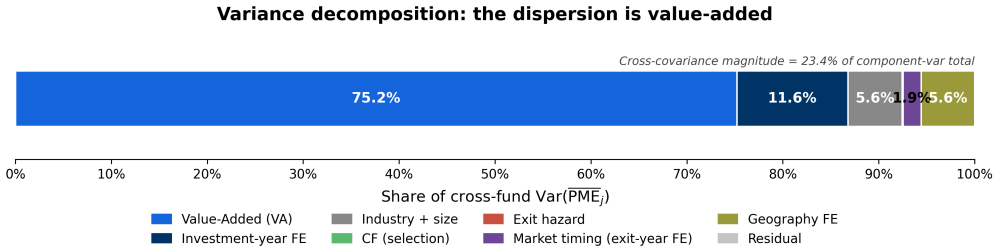
Value-Added Drives Nearly All Cross-Fund Variation



Wide dispersion: SD(VA) = 0.84, 10–90 spread ≈ 1.9

Where Does Cross-Fund Variation in PE Performance Come From?

Aggregate each component to the fund level; decompose $\mathrm{Var}(\overline{\mathrm{PME}}_j)$ across funds:



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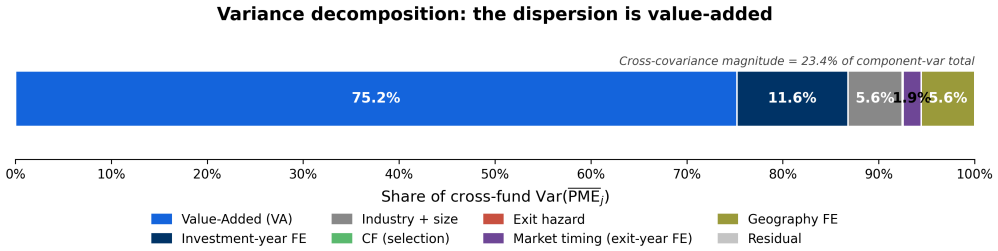

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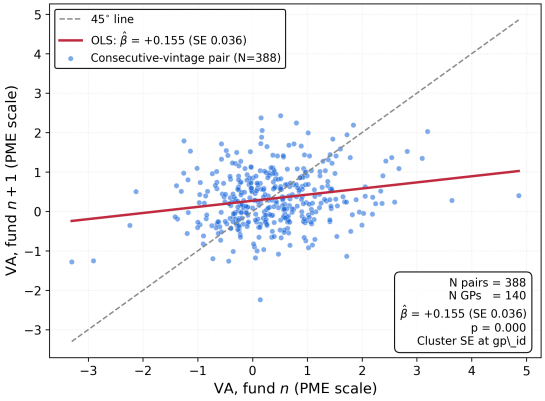
Cross-fund heterogeneity consistent w/ operational skill, not timing or selection

▸ Coefficient stability

GP-level VA Persistence

Validation: if VA reflects real skill, it should persist within GP across funds



VA is not just noise: a GP's prior-fund VA predicts its next-fund VA
(magnitude comparable to HJKS (2022) post-2000)

Value Creation vs. Value Destruction

Over/underperformance vs. S&P 500 $\neq$ value creation/destruction. Money multiple (MM) < 1 means the GP returned fewer dollars than invested — a nominal loss, independent of any benchmark.

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At the deal level:

- 28.8% of deals return MM < 1
- Bottom-VA funds: 39.1%; Top-VA: 22.8%

At the fund level (size-weighted):

- Only 4.3% of funds destroy value
- Top-VA quartile: **0%** destroy value

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VA quartile	Deals	Funds
Q1 (bottom VA)	39.1%	11.3%
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Portfolio diversification substantially attenuates deal-level loss risk at the fund level; what remains concentrates in low-VA funds.

Outline

What Does the Control Function Miss?

The CF absorbs: distance-based selection — and selection on unobservables that load on estimated choice probability

Two remaining concerns:

1. **Distance-based monitoring**
   - Does monitoring intensity vary with distance?
2. **Broader selection orthogonal to geography**
   - E.g., due-diligence quality, private-info selection

Concern 1: Distance-Based Monitoring

The CF handles selection. Monitoring is a separate concern.

Institutional argument: Buyout monitoring works through board control, debt covenants, 100% ownership, professional-management replacement — not weekly face time

Empirical confirmation:

- $\lambda \approx 0$ **despite** $F = 639$ — no distance-correlated return gradient (rules out selection *and* monitoring jointly).
- **No home premium**: VA *more* correlated with away performance ($r = 0.73$) than home ($r = 0.67$) — inconsistent with a distance-dependent monitoring advantage.

Even if monitoring intensity varies with distance, it does not generate cross-fund return differentials.

Concern 2: Bounding Broader Selection

Are there broad selection skills orthogonal to geography? Oster (2019) bound:

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	σ^{raw}	σ^{full}	$\sigma^{*}(\delta{=}1)$	$\sigma^{*}(\delta{=}2)$	δ^{*}
Oster default ($R_{\max} = 1.3R^{\mathrm{full}}$)	0.852	0.844	0.835	0.827	> 50
Aggressive ($R_{\max} = 2.0R^{\mathrm{full}}$)	0.852	0.844	0.816	0.786	> 15

- Even under aggressive $R_{\max}$, unobserved selection would need to be **more than** $15\times$ **stronger** than the distance-based piece to drive σ_{VA} to zero, **and orthogonal to all observables** (distance, entry & exit-year FEs, industry, geography, size)

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- Even under aggressive $R_{\max}$, unobserved selection would need to be **more than 15× stronger** than the distance-based piece to drive σ_{VA} to zero, **and orthogonal to all observables** (distance, entry & exit-year FEs, industry, geography, size)
- Even at $\delta = 1$, the bound leaves σ_{VA} close to the observed value

Outline

Wrapping Up

What we do:

- Adapt value-added methodology (Einav et al., 2025) to PE buyouts
- Decompose PE fund performance: value-added, distance-based selection, timing

What we find:

- The **level is** calendar-sensitive; the **dispersion is** value-added (SD $= 0.84$; value-added accounts for 75% of full-model cross-fund PME dispersion)
- Distance-based selection is largely homogeneous
- **Within-GP persistence**; comparable to HJKS (2022)
- Monitoring and broader selection are unlikely to change this picture

Appendix

Backup slides

Appendix: Stability Defense

Stability defense (not 2SLS): The CF is well-powered ($F = 639$), yet σ_{VA} moves by only 0.014 whether the CF is in or out of the model. Identification does not rest on a knife-edge restriction.

Stability condition: Conditional on the CF and controls, Δd has no residual effect on returns:

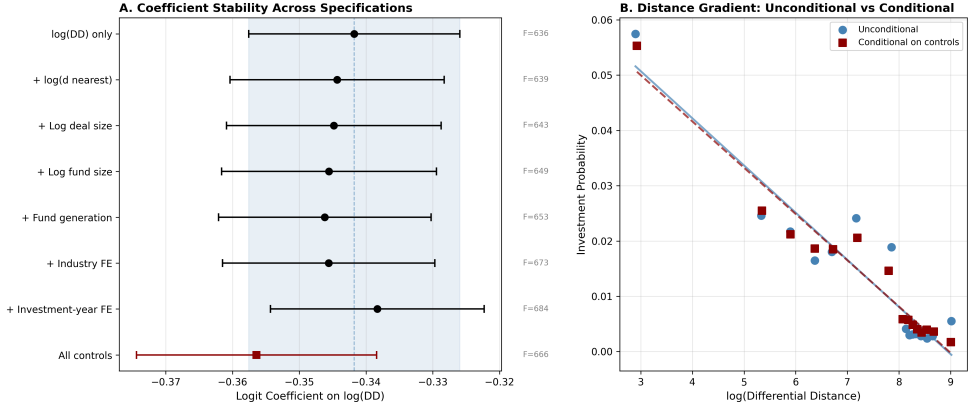
$$E[\varepsilon_{ij} \mid X, \Delta d, \widehat{S}] = E[\varepsilon_{ij} \mid X, \widehat{S}]$$

Why plausible:

- $\mathrm{corr}(\widehat{S}_{ij}, \log d_{ij}) = 0.986$ — CF absorbs nearly all distance variation.
- Direct test: Δd coefficient $= 0.28$ ($p = 0.30$) when added alongside CF.

CF captures jointly: (i) geographic-access selection (funds prefer nearby targets); (ii) distance-based monitoring (Bernstein, Giroud & Townsend, 2016). Not separately identified, but both absorbed.

Appendix: First-Stage Stability



Oster (2019) stability test: Coefficient on log(DD) is invariant to observable controls (range/SE < 1; all within baseline CI). F-statistic *increases* from 636 to 684 as controls are added. Residual distance variation is not correlated with observables — consistent with CF stability.

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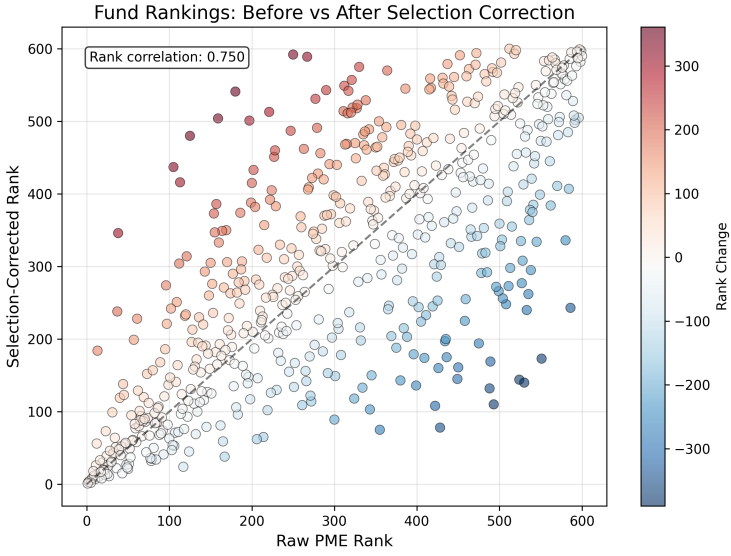
Appendix: Mini Specification Comparison

Specification	Mean Relative VA	SD(VA)	R^2
(1) Fund FE only	**1.95**	0.85	0.133
(1a) + Deal investment-year FE only	**3.67**	0.85	0.144
(1b) + Industry FE only	1.30	0.86	0.135
(1c) + Log deal size only	2.42	0.84	0.136
(2) + Entry-year, industry, size	**3.66**	0.86	0.151
(3) + Distance-based selection	3.49	0.86	0.151
(4) + Exit hazard	3.45	0.85	0.151
(5) + Exit-year FE (timing)	0.91	0.84	0.161
(6) Preferred: + geography FE	**0.34**	0.84	0.185
(7) Realized deals only	−0.73	1.03	0.196

- This is a specification comparison, not an order-invariant attribution of the level.
- Mean fund FE is calendar/geography-sensitive; SD(VA) remains about 0.84–0.86 across specs.

Back to level

Appendix: Fund Rankings Stability



Appendix: VA Quartile Transitions within GP

HJKS (2022, Table 3 Panel A) reproduced on our $N = 388$ within-GP pairs, using VA quartiles (skill, CF-corrected) rather than raw PME.

	Next-fund VA quartile				
Prior-fund VA quartile	Q1 (top)	Q2	Q3	Q4 (bot)	N
Q1 (top)	32.0%	23.7%	25.8%	18.6%	97
Q2	26.8%	26.8%	28.9%	17.5%	97
Q3	21.6%	27.8%	24.7%	25.8%	97
Q4 (bot)	19.6%	21.6%	20.6%	38.1%	97
N (pairs)					388

Compared with HJKS 2022 buyout PME persistence (Burgiss, $N = 484$):
Top $\rightarrow$ above median: **57.7%** vs HJKS **57.3%**; Bottom $\rightarrow$ below median: **61.9%** vs HJKS **64.5%**.
Top $\rightarrow$ Top: 27.8% vs 34.8%; Bottom $\rightarrow$ Bottom: 35.1% vs 39.2%.

At the median-split level, VA persistence reproduces HJKS's PME persistence almost exactly; strict-quartile persistence is modestly weaker, consistent with CF correction smoothing the tails.

Back