Internet Appendix for "Cross-Border LBOs, Human Capital, and Proximity: Value Addition through Monitoring in Private Equity Investments

Table A1: Robustness checks -Alternate specifications- This table has three panels and each recreates a portion of the main results of Tables 2, 6, and 7 respectively, but under three different scenarios: first, dropping all main control variables and only using the fixed effects as controls; second, using Industry-year fixed effects in lieu of separate industry and year fixed effects; and third, interacting the main variable of interest with a dummy variable for observations initiated after 2005 in order to see if the documented effects change over time.

Tables A2-A4: Results of block bootstrap analysis- all regressions are clustered at the country level. Given that our number of clusters (28) is less than the optimal number, as an additional robustness check the main tables (Table 2, Panel A, Table 6 and Table 7, Panel A) are recreated here with block bootstrapped standard errors.

Table A1: Robustness tests: Alternative specifications

Panel A recreates the results of Table 2, Panel A, Column (1), but under three different scenarios: Column (1) drops the main control variables; Column (2) uses Industry-year fixed effects instead of industry and year fixed effects; Column (3) interacts the main variable of interest with a dummy variable for observations initiated after 2005. Panel B recreates the results of Table 6, Column (1), but under three different scenarios: Column (1) drops the main control variables; Column (2) uses Industry-year fixed effects instead of industry and year fixed effects; Column (3) interacts the main variable of interest with a dummy variable for observations initiated after 2005. Panel C recreates the results of Table 7 Panel A, Columns (1) & (2), but under three different scenarios: Columns (1) & (4) drop the main control variables; Columns (2) & (5) use Industry-year fixed effects instead of industry and year fixed effects; Columns (3) & (6) interact the main variable of interest with a dummy variable for observations initiated after 2005. Variables are defined in the original table the regression are based off of. All regressions are estimated with a constant term, and country of target firm fixed effects, year of investment fixed effects, and two-digit SIC industry code fixed effects (Column (2) of each panel and Column (5) or Panel C use industry-year fixed effects instead of industry and year fixed effects). Heteroskedasticity corrected robust standard errors, which are clustered at the country level, are in brackets. ***, **, and * denote statistical significance at the 1 %, 5 %, and 10% levels, respectively.

Panel A	(1)	(2)	(3)
	IPO_OR_MA	IPO_OR_MA	IPO_OR_MA
US_BUYER	0.187	0.376**	0.374**
	[0.120]	[0.163]	[0.173]
POST_2005			-1.929***
			[0.150]
US_BUYER*POST_2005			-0.064
			[0.241]
log(AVG_PE_EXP)		0.080***	0.065**
		[0.029]	[0.027]
log(DEAL_AMOUNT)		0.046**	0.045*
		[0.019]	[0.024]
NUMBER_OF_BUYERS		0.055	0.044
		[0.089]	[0.078]
LOCAL_PE ACTIVITY		0.000	0.000
		[0.000]	[0.000]
log(GDP)		-1.091	-1.928
		[1.274]	[1.416]
log(MARKET_CAP)		0.029	0.016
		[0.239]	[0.195]
BUYER_COUNTRY_PE_ACTIVITY		-0.000*	-0.000
		[0.000]	[0.000]
BUYER_ COUNTRY_log(GDP)		-0.070	-0.082
		[0.101]	[0.103]
BUYER_ COUNTRY_log(MARKET_CAP)		0.077	0.080
		[0.107]	[0.100]
Target country FE	Y	Y	Y
Year FE	Y	N	Y
Industry FE	Y	N	Y
Industry-Year FE	N	Y	N

Observations	8,486	7,231	8,348
Pseudo R-sq	0.0797	0.0973	0.0807

Panel B	(1)	(2)	(3)
	US_BUYER	US_BUYER	US_BUYER
POST_OPEN_SKY	0.562***	0.616***	0.535***
	[0.174]	[0.167]	[0.191]
POST_2005			-0.638*
			[0.347]
POST_OPEN_SKY* POST_2005			-0.026
			[0.193]
log(DEAL_AMOUNT)		0.334***	0.321***
		[0.055]	[0.052]
NUMBER_OF_BUYERS		0.498***	0.477***
		[0.108]	[0.099]
LOCAL_PE ACTIVITY		-0.000	0.000
		[0.000]	[0.000]
log(GDP)		2.783	2.846
		[2.104]	[2.206]
log(MARKET_CAP)		0.025	-0.208
		[0.346]	[0.323]
Target country FE	Y	Y	Y
Year FE	Y	N	Y
Industry FE	Y	N	Y
Industry year FE	N	Y	N
Observations	8,468	7,048	8,351
Pseudo R-sq	0.0943	0.157	0.118

Panel C	(1)	(2)	(3)	(4)	(5)	(6)
	Full Sample			US buyer sample		
	IPO_OR_ MA	IPO_OR_ MA	IPO_OR_ MA	IPO_OR_ MA	IPO_OR_ MA	IPO_OR_ MA
POST_OPEN_SKY	0.234*	0.335***	0.185	0.738***	0.583	0.907***
	[0.135]	[0.128]	[0.132]	[0.233]	[0.501]	[0.291]
POST_2005			-2.255***			-1.643
			[0.203]			[1.512]
POST_2005* POST_OPEN_SKY			0.226			-0.396
			[0.138]			[0.389]
log(AVG_PE_EXP)		0.068**	0.054**		0.020	0.072
		[0.028]	[0.026]		[0.143]	[0.091]
log(DEAL_AMOUNT)		0.048**	0.048**		-0.175	-0.101
		[0.020]	[0.024]		[0.126]	[0.110]
NUMBER_OF_BUYERS		0.079	0.066		0.079	0.268
		[0.093]	[0.082]		[0.322]	[0.209]
LOCAL_PE ACTIVITY		-0.000	-0.000		0.002	-0.000
		[0.000]	[0.000]		[0.001]	[0.001]
log(GDP)		-1.600	-2.250		-2.324	-0.548
		[1.461]	[1.461]		[3.381]	[3.588]
log(MARKET_CAP)		0.070	0.022		-0.059	-0.360
		[0.232]	[0.200]		[0.810]	[0.595]
BUYER_COUNTRY_PE_ACTIVITY		-0.000	-0.000		-0.001***	-0.000
		[0.000]	[0.000]		[0.000]	[0.000]
BUYER_ COUNTRY_log(GDP)		-0.045	-0.056		-1.463	-1.832
		[0.099]	[0.102]		[1.642]	[1.439]
BUYER_ COUNTRY_log(MARKET_CAP)		0.074	0.079		2.359	2.043
		[0.109]	[0.107]		[1.620]	[1.394]
Target country FE	Y	Y	Y	Y	Y	Y
Year FE	Y	N	Y	Y	N	Y
Industry FE	Y	N	Y	Y	N	Y
Industry year FE	N	Y	N	N	Y	N
Observations	8,486	7,231	8,348	1,011	617	1,003
Pseudo R-sq	0.0796	0.0976	0.0809	0.141	0.194	0.156

Table A2: The Relation between U.S. PE Investment and Successful Exit Outcomes: Block Bootstrap Analysis

This table reports the results of logit regressions. The dependent variable is IPO_OR_MA, which is a dummy variable which equals one if the firm was able to successfully exit the investment through a trade sale or an IPO. The independent variables are: US_BUYER is a dummy variable which equals one if one of the investing PE firms is located in the United States. INTL_BUYER which is a dummy variable that is one if at least one of the investing PE firms is not located in the same country of the target firm and none of the investing PE firms is from the United States; log(AVG_PE_EXP), which is the natural log of the average number of PE transactions that an investing PE firm has participated in over the last five years; log(DEAL_AMOUNT), which is the natural log of the deal value when available and the predicted value from a regression of deal value on fixed effects for country, investment year and target industry SIC code (2 digit level) otherwise; NUMBER_OF_BUYERS, which is the total number of PE buyers participating in the transaction; LOCAL_PE ACTIVITY, which is the number of PE transactions that have taken place in the target country over the last five years; log(GDP), which is the natural log of the target country's real GDP in the investment year; and log(MARKET_CAP), which is the natural log of the target country's total real market capitalization in the investment year; Buyer country: PE activity, log(GDP) and log(MARKET_CAP), these variables are identically to their target country counter parts but are for the PE buyer country, if more than one buyer participated in a deal then an average is taken over all buyers. All regressions are estimated with a constant term, and country of target firm fixed effects, year of investment fixed effects, and two-digit SIC industry code fixed effects. Block bootstrapped standard errors, in country level blocks, are in brackets. ***, **, and * denote statistical significance at the 1 %, 5 %, and 10% levels, respectively.

	(1)	(2)	(3)
	IPO_OR_MA	IPO_OR_MA	IPO_OR_MA
US_BUYER	0.404***		0.434***
	[0.134]		[0.130]
INTL_BUYER		-0.008	0.051
		[0.064]	[0.060]
log(AVG_PE_EXP)	0.055**	0.040*	0.052**
	[0.025]	[0.022]	[0.025]
log(DEAL_AMOUNT)	0.036***	0.039***	0.034***
	[0.012]	[0.013]	[0.013]
NUMBER_OF_BUYERS	0.009	0.035	0.005
	[0.045]	[0.050]	[0.046]
LOCAL_PE ACTIVITY	-0.000*	-0.000**	-0.000
	[0.000]	[0.000]	[0.000]
log(GDP)	0.052	0.042	0.045
	[0.107]	[0.111]	[0.109]
log(MARKET_CAP)	0.005	0.004	0.011
	[0.106]	[0.108]	[0.107]
BUYER_COUNTRY_PE_ACTIVITY	-0.000	0.000	-0.000
	[0.000]	[0.000]	[0.000]
BUYER_ COUNTRY_log(GDP)	-0.071	-0.046	-0.060
	[0.106]	[0.113]	[0.111]
BUYER_ COUNTRY_log(MARKET_CAP)	0.085	0.079	0.081
	[0.114]	[0.123]	[0.118]
Target country FE	Y	Y	Y
Year FE	Y	Y	Y
Industry FE	Y	Y	Y
Observations	8,348	8,348	8,348
Pseudo R-sq	0.0667	0.0660	0.0668
US_BUYER - INTL_BUYER			0.383***

Table A3: The Relationship between OSA Signing and the Likelihood of U.S. Cross: Border PE Investments-Block Bootstrap Analysis

This table reports the results of logit regressions. The dependent variable in Columns (1), (2), (3), (5), and (6) is US_BUYER, which is a dummy variable which equals one if one of the investing PE firms is located in the United States. The dependent variable in Column (4) is INTL_BUYER, which is a dummy variable that is one if at least one of the investing PE firms is not located in the same country of the target firm and none of the investing PE firms is from the United States. The independent variables are: POST_OPEN_SKY, which is a dummy variable which equals one for all PE deals announced after the date on which the country of the target firm signs an open sky agreement with the United States; POST_OPEN_SKY(-1)#1-5, which are dummy variables which equal one for all PE deals that are announced in the 1-5 years prior to the date in which the country of the target firm signs an open sky agreement with the United States; POST_OPEN_SKY (ACTUAL-5), which is a dummy variable which equals one for all PE deals initiated after a date that is five years prior to the actual date on which the country of the target firm signs an open sky agreement with the United States; POST_OPEN_SKY(ACTUAL+5), which is a dummy variable which equals one for all PE deals initiated after a date that is five years after until the actual date on which the country of the target firm signs an open sky agreement with the United States; log(DEAL_AMOUNT), which is the natural log of the deal value when available and the predicted value from a regression of deal value on fixed effects for country, investment year and target industry SIC code (2 digit level) otherwise; NUMBER_OF_BUYERS, which is the total number of PE buyers participating in the PE transaction; LOCAL_PE ACTIVITY, which is the number of PE transactions that have taken place in the target country over the last five years; log(GDP), which is the natural log of the target country's real GDP in the investment year; and log(MARKET_CAP), which is the natural log of the target country's total real market capitalization in the investment year. All regressions are estimated with a constant term, and country of target firm fixed effects, year of investment fixed effects, and two-digit SIC industry code fixed effects. Block bootstrapped standard errors, in country level blocks, are in brackets. ***, **, and * denote statistical significance at the 1 %, 5 %, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	US_BUYER	US_BUYER	US_BUYER	US_BUYER	INTL_BUYER	US_BUYER	US_BUYER
PRE_OPEN_SKY(-5)		-0.374	-0.375				
		[0.387]	[0.354]				
PRE_OPEN_SKY(-4)		-0.472	-0.458				
		[0.536]	[0.523]				
PRE_OPEN_SKY(-3)		-0.066	-0.033				
		[0.439]	[0.456]				
PRE_OPEN_SKY(-2)		0.288	0.348				
		[0.385]	[0.355]				
PRE_OPEN_SKY(-1)		0.042	0.087	0.073			
		[0.341]	[0.313]	[0.132]			
POST_OPEN_SKY	0.479***	0.484		0.507***	0.236		
	[0.105]	[0.379]		[0.130]	[0.152]		
POST_OPEN_SKY(0)			0.224				
			[0.363]				
POST_OPEN_SKY(1)			0.624*				
			[0.359]				
POST_OPEN_SKY(2)			0.957**				
			[0.381]				
POST_OPEN_SKY(3)			0.809**				
			[0.318]				
POST_OPEN_SKY(4)			0.603				
			[0.430]				
POST_OPEN_SKY(5+)			0.616				
			[0.453]				
POST_OPEN_SKY (ACTUAL -5)						-0.145	
						[0.485]	
POST_OPEN_SKY (ACTUAL+5)							-0.353*
							[0.187]
log(DEAL_AMOUNT)	0.323***	0.323***	0.325***	0.322***	0.137***	0.326***	0.325***

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	[0.029]	[0.030]	[0.031]	[0.029]	[0.037]	[0.029]	[0.029]
NUMBER_OF_BUYERS	0.475***	0.475***	0.478***	0.475***	0.296***	0.476***	0.475***
	[0.063]	[0.058]	[0.058]	[0.063]	[0.047]	[0.062]	[0.062]
LOCAL_PE ACTIVITY	-0.000	0.000	0.000	0.000	-0.000	-0.000	0.000
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
log(GDP)	2.310	1.844	2.425	2.256	5.344***	2.776	2.741
	[2.336]	[2.466]	[2.497]	[2.353]	[1.701]	[3.166]	[2.579]
log(MARKET_CAP)	-0.433	-0.419*	-0.520*	-0.427	-0.640**	-0.490	-0.466
	[0.313]	[0.255]	[0.269]	[0.312]	[0.288]	[0.340]	[0.329]
Target country FE	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y	Y	Y
Observations	8,351	8,351	8,351	8,351	8,388	8,351	8,351
Pseudo R-sq	0.119	0.120	0.122	0.119	0.135	0.117	0.117
POST_OPEN_SKY- PRE_OPEN_SKY(-5)		0.857***					
POST_OPEN_SKY- PRE_OPEN_SKY(-4)		0.956***					
POST_OPEN_SKY- PRE_OPEN_SKY(-3)		0.549***					
POST_OPEN_SKY- PRE_OPEN_SKY(-2)		0.196*					
POST_OPEN_SKY- PRE_OPEN_SKY(-1)		0.441***		0.433***			
POST_OPEN_SKY(1)- AVG_PRE_OPEN_SKY			0.710***				
POST_OPEN_SKY(2)- AVG_PRE_OPEN_SKY			1.043***				
POST_OPEN_SKY(3)- AVG_PRE_OPEN_SKY			0.895***				
POST_OPEN_SKY(4)- AVG_PRE_OPEN_SKY			0.689**				
POST_OPEN_SKY(5)- AVG_PRE_OPEN_SKY			0.702*				

Table A4: The Relationship between OSA Signing and the Likelihood of Successful Exit of U.S. Cross-Border PE Investments: Block Bootstrap Analysis

This table reports the results of logit regressions. The dependent variable is IPO_OR_MA, which is a dummy variable which equals one if the firm was able to successfully exit the investment through a trade sale or an IPO. Columns (1 & 4) report the regression results for the entire sample. Column (2) reports the regression result for the sample of firms that have at least one U.S. PE investor backing them. Column (3) reports the regression result for the sample of firms that have no U.S. PE investors backing them. The independent variables are: POST_OPEN_SKY, which is a dummy variable which equals one for all deals initiated after the date on which the country of the target firm signs an open sky agreement with the United States; log(PRIVATE_PLANE_SEATS), which is the natural logarithm of the average number of total seats aboard private plans owned by the investing PE firms; log(PRIVATE_PLANE_SEATS)* POST_OPEN_SKY, which is the interaction of the variables log(PRIVATE_PLANE_SEATS) and POST_OPEN_SKY; log(AVG_PE_EXP), which is the natural log of the average number of PE transactions that an investing PE firm has participated in over the last five years; log(DEAL_AMOUNT), which is the natural log of the deal value when available and the predicted value from a regression of deal value on fixed effects for country, investment year and target industry SIC code (2 digit level) otherwise; NUMBER_OF_BUYERS, which is the total number of PE buyers participating in the PE transaction; LOCAL_PE ACTIVITY, which is the number of PE transactions that have taken place in the target country over the last five years; log(GDP), which is the natural log of the target country's real GDP in the investment year; and log(MARKET_CAP), which is the natural log of the target country's total real market capitalization in the investment year. All regressions are estimated with a constant term, and country of target firm fixed effects, year of investment fixed effects, and two-digit SIC industry code fixed effects. Block bootstrapped standard errors, in country level blocks, are in brackets. ***, **, and * denote statistical significance at the 1 %, 5 %, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	IPO_OR_MA (Full sample)	IPO_OR_MA (US_BUYER sample)	IPO_OR_MA (Non-US_BUYER sample)	IPO_OR_MA (US_BUYER sample)
POST_OPEN_SKY	0.218**	0.801***	0.173	0.882***
	[0.095]	[0.112]	[0.108]	[0.124]
log(PRIVATE_PLANE_SEATS) * POST_OPEN_SKY				0.378***
				[0.053]
log(PRIVATE_PLANE_SEATS)				-1.065***
				[0.054]
log(AVG_PE_EXP)	0.054**	0.065***	0.075***	0.061***
	[0.025]	[0.020]	[0.013]	[0.019]
log(DEAL_AMOUNT)	0.049***	-0.100***	0.054***	-0.093***
	[0.014]	[0.036]	[0.009]	[0.035]
NUMBER_OF_BUYERS	0.067	0.231***	0.003	0.235***
	[0.057]	[0.079]	[0.042]	[0.090]
LOCAL_PE ACTIVITY	-0.000	-0.001	0.000	-0.001
	[0.000]	[0.001]	[0.001]	[0.001]
log(GDP)	-3.053***	-1.339	-3.314**	-0.916
	[1.072]	[2.457]	[1.524]	[2.849]
log(MARKET_CAP)	-0.140	-0.564	-0.107	-0.649
	[0.225]	[0.469]	[0.247]	[0.409]
BUYER_COUNTRY_PE_ACTIVITY	0.000	-0.000***	-0.000	-0.000***
	[0.000]	[0.000]	[0.000]	[0.000]
BUYER_ COUNTRY_log(GDP)	-0.050	-0.966	-0.069	-1.244**
	[0.092]	[0.622]	[0.098]	[0.537]
BUYER_ COUNTRY_log(MARKET_CAP)	0.072	1.191*	0.071	1.439***
	[0.113]	[0.623]	[0.117]	[0.550]
Target country FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y
Observations	8,348	1,003	7,255	1,003
Pseudo R-sq	0.0806	0.156	0.0800	0.161