Corporate Finance Policies and Social Networks

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Online Appendix

December 2015

This online appendix presents additional tables mentioned, but not reported, in the paper.

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1. Additional Summary Statistics

Table OA.I: Correlation Table

The table shows the correlations between the social network variables and all the variables used in the paper. Degree is the number of valued links for each company divided by the number of companies in the network. Please refer to the appendix for the detailed definition of the variables.

	Degree				
	SNI	**CE**	**PE**	**ED**	**OA**
Degree SNI	1.0000				
Degree CE	0.8810	1.0000			
Degree PE	0.8912	0.8809	1.0000		
Degree ED	0.7997	0.6486	0.6398	1.0000	
Degree OA	0.9624	0.7920	0.8015	0.6653	1.0000
Bond Dummy	0.4418	0.4079	0.4153	0.3358	0.4208
Cash Flow	-0.0429	-0.0467	-0.0439	-0.0456	-0.0348
Cash Flow Volatility	0.3196	0.2889	0.3491	0.2529	0.2861
Cash Ratio	-0.1518	-0.1617	-0.1353	-0.0835	-0.1541
Dividend Dummy	0.3268	0.3205	0.2948	0.2380	0.3172
Firm Age	0.4342	0.4131	0.4241	0.3487	0.4012
Interest Coverage Ratio	-0.0697	-0.0495	-0.0590	-0.0470	-0.0720
Investment Ratio	-0.0701	-0.0634	-0.0599	-0.0471	-0.0720
N. Exec. & Direc.	0.6439	0.5837	0.5961	0.5240	0.6073
Number of Employees	0.3079	0.3173	0.3266	0.2045	0.2846
Leverage	0.1001	0.1167	0.1129	0.0278	0.1025
Return on Assets	0.0271	0.0236	0.0160	0.0147	0.0308
R&D Ratio	-0.0381	-0.0480	-0.0402	0.0239	-0.0522
Sales	0.4054	0.3813	0.4302	0.2988	0.3730
SG&A Ratio	-0.0453	-0.0511	-0.0484	-0.0220	-0.0461
Stock Return	-0.0744	-0.0669	-0.0908	-0.0533	-0.0656
Stock Return Volatility	-0.2361	-0.1955	-0.2232	-0.1869	-0.2280
Tobin's Q	-0.0204	-0.0142	-0.0338	0.0004	-0.0227
Total Assets	0.3748	0.3536	0.4011	0.2888	0.3384
Tangibility	0.0545	0.0450	0.0187	0.0275	0.0692

Table OA.II: Top and Bottom 10 Firms and Industries by SNI

The table presents the names of the top and bottom 10 firms and industries (using Fama French 49 Industry classification system) sorted by the average Strength SNI across all the years each firm is in the sample.

	Top 10 Firms		**Bottom 10 Firms**
1.	Pfizer Inc	1.	Affinion Group Holdings Inc.
2.	Verizon Communications Inc.	2.	Stanley Inc.
3.	Exxon Mobil Corp.	3.	Computer Programs & Systems
4.	Marathon Oil Corp	4.	Clearwater Paper Corp.
5.	Conocophillis	5.	IPC The Hospitalist Co Inc.
6.	AMR Corp.	6.	Lender Processing Services
7.	Rohm and Haas Co.	7.	John Bean Technologies
8.	JPMorgan Chase & Co.	8.	UCBH Holdings Inc.
9.	Georgia-Pacific Corp.	9.	Independent Bank Corp.
10.	Aetna Inc.	10.	Carefusion Corp.

	Top 10 Industries		**Bottom 10 Industries**
1.	Aircraft	1.	Fabricated Products
2.	Printing and Publishing	2.	Agriculture
3.	Tobacco Products	3.	Electronic Equipment
4.	Beer & Liquor	4.	Computer Software
5.	Real Estate	5.	Apparel
6.	Shipbuilding & Railroad Equipment	6.	Healthcare
7.	Chemicals	7.	Textiles
8.	Utilities	8.	Measuring and Control Equipment
9.	Business Supplies	9.	Medical Equipment
10.	Candy & Soda	10.	Personal Services

2. Changes in Investments

In the main text of the paper, we showed how social ties between firms influence the way they invest in capital expenditures: Firm pairs that are socially connected seem to have similar levels of capital expenditure, after accounting for firm's characteristics. However, social ties should also influence the way firms change their capital expenditures over time. Two companies that are more socially connected should be able to exchange information and, therefore, to change their investment policy over time in a more similar fashion. In this section we show that changes in capital investments are also affected by its social peers.

First, we run the same first-stage regression as in the Pair Model, where we regress the investment ratio of a firm over the most common drivers of investment decision. The residual $\varepsilon_{i,t}$ represents the excess, or idiosyncratic, component of the policy of company i at time t, relative to the expected level of investment according to the standard model.

For each pair of companies i and j, we define the Investment Change Dissimilarity as the absolute value of the first difference over time of the Investment Similarity.

$$\text{Investment Change Dissimilarity} = |\Delta\Delta\varepsilon_{i,j,t}| = abs((\varepsilon_{i,t} - \varepsilon_{j,t}) - (\varepsilon_{i,t-1} - \varepsilon_{j,t-1})) \tag{1}$$

The new measure is a proxy for how (dis)similarly the investment policy between two firms change over time. We then use this measure as a dependent variable in a second-stage gravity model:

$$ln(1 + |\Delta\Delta\varepsilon_{i,j,t}|) = \gamma_0 + \gamma_1 ln(1 + S_{i,j,t-1}) + \gamma_2 ln(1 + X_{Ci,j,t-1}) + \delta_{i,j,t} \tag{2}$$

The control variables are the same as in the Pair model, i.e. geography, industry, board size and age controls.

In column (1) of table OA.III we find that two companies that are more connected with each other change their investment policies more similarly over time than two companies that are not as socially connected. Column (2) shows that even after controlling for possible heteroscedasticity in industry, geography, year and board size and age, the SNI coefficient is negative and statistically significant. In Column (3), we account for the possible alternative explanation that the results are driven by specific management styles or preferences. The specification in column (4) adds pair dummies. The coefficient on the Strength of SNI in this last specification is still negative, but it loses its statistical significance. This is most likely due to a power issue, considering that the specification with pair dummies tests whether changes in social ties between a firm pair influence the way these firms change their changes in the similarity of their investment policies over time.

Furthermore, following section 2.2.4 in the main paper, we use deaths of directors and executives to address endogeneity concerns. Consistent with earlier findings, Table OA.IV shows that firm pairs in which an individual who connects the two firms dies, tend to change investment policies in a divergent way, relative to firm pairs in which the deceased individual does not connect the two companies.

Table OA.III: Social Ties and Similarity in Changes of Capital Investment

Dependent Variable: Investment Change Dissimilarity. The table shows the results of the second stage of the Pair Model. Refer to the text for the description of the models and the appendix for the detailed definition of the variables. Strength SNI is the number of social ties between firm pairs. N. Exec & Direc. is the sum of all directors on the board and key executives for each company pair. Age Exec. & Direc. is the average age of all directors on the board and key executives for each company pair. Same Industry Dummy is a variable equal to 1 if the two firms are in the same FF49 industry. Same Region is a dummy variable equal to 1 if the two firms are in the same BEA region. Abs. Diff. Total Assets (Age Exec. & Direc. or N. Exec. & Direc.) is the absolute difference between Total Assets (Age Exec. & Direc. or N. Exec. & Direc.) of the two firms. ED (PE) Style is equal to one if at least two individuals in a firm-pair went to the same school (worked for the same past employer) at any point in time. All dependent and independent variables, excluding dummies, are logged. All independent variables are lagged one year. Reported are the OLS coefficients and the t-statistics in parentheses. Standard errors are corrected for clustering of the error term at both firms level using the double-clustering algorithm from Petersen (2009). *, **, indicates significance at the 10%, 5% and 1% level, respectively. Constant included.

	(1)	(2)	(3)	(4)
Strength SNI	-0.05283***	-0.00545**	-0.00508**	-0.00292
	(-15.43)	(-2.07)	(-2.04)	(-1.61)
N. Exec. & Direc.		-0.21541***	-0.21652***	0.00152
		(-11.66)	(-11.65)	(0.05)
Age Exec. & Direc.		-0.51364***	-0.51268***	-0.17925
		(-8.02)	(-7.99)	(-1.58)
Same Industry		-0.00109	-0.00103	-0.00755
		(-0.48)	(-0.46)	(-1.54)
Same Region		0.00164	0.00160	
		(1.01)	(0.98)	
Abs. Diff. Total Assets		-0.00271***	-0.00274***	-0.00231**
		(-4.50)	(-4.53)	(-1.97)
Abs. Diff. Age Exec. & Direc.		0.01505***	0.01504***	0.00159
		(6.68)	(6.67)	(0.59)
Abs. Diff. N. Exec. & Direc.		0.01497***	0.01498***	-0.00146
		(6.78)	(6.77)	(-0.68)
PE Style			-0.00366*	-0.00343
			(-1.90)	(-1.60)
ED Style			0.00323	-0.00300
			(0.83)	(-0.86)
Year FE	No	Yes	Yes	Yes
Pair FE	No	No	No	Yes
R^2	0.010	0.070	0.070	0.486
N. Obs.	5,592,221	5,592,221	5,592,221	5,592,221

Table OA.IV: Changes in Capital Investment: Diff-in-Diff

Dependent Variable: Investment Change Dissimilarity. In Panel A, the sample is restricted to only firm-pairs where a director or top manager dies during the sample period. In Panel B, the full unrestricted sample is used. After Death Dummy is a dummy variable that equals 1 in the period after the decease of a director or executive, and 0 before. Connected is a dummy variable that equals 1 if the deceased director or executive was socially connecting the two companies. N. Exec & Direc. is the sum of all directors on the board and key executives for each company pair. Age Exec. & Direc. is the average age of all directors on the board and key executives for each company pair. Same Industry Dummy is a variable equal to 1 if the two firms are in the same FF49 industry. Same Region is a dummy variable equal to 1 if the two firms are in the same BEA region. Abs. Diff. Total Assets (Age Exec. & Direc. or N. Exec. & Direc.) is the absolute difference between Total Assets (Age Exec. & Direc. or N. Exec. & Direc.) of the two firms. ED (PE) Style is equal to one if at least two individuals in a firm-pair went to the same school (worked for the same past employer) at any point in time. All dependent and independent variables, excluding dummies, are logged. All independent variables are lagged one year. Reported are the OLS coefficients and the t-statistics in parentheses. Standard errors are corrected for clustering of the error term at both firms level using the double-clustering algorithm from Petersen (2009). *, **, indicates significance at the 10%, 5% and 1% level, respectively. Constant included.

	Panel A: Restricted Sample		**Panel B: Full Sample**	
	(1)	(2)	(3)	(4)
After Death Dummy	-0.01373**	-0.01349**	-0.01352**	-0.01406**
	(-2.04)	(-2.02)	(-1.96)	(-2.08)
After Death * Connected	0.02152***	0.02050***	0.02288***	0.02176***
	(3.93)	(3.72)	(4.04)	(3.85)
N. Exec. & Direc.		0.03817		-0.00075
		(1.02)		(-0.03)
Age Exec. & Direc.		-0.17114		-0.18678*
		(-1.31)		(-1.65)
Same Industry		-0.00395		-0.00760
		(-0.55)		(-1.56)
Abs. Diff. Total Assets		-0.00238*		-0.00227*
		(-1.74)		(-1.94)
Abs. Diff. Age Exec. & Direc.		0.00255		0.00152
		(0.80)		(0.57)
Abs. Diff. N. Exec. & Direc.		-0.00041		-0.00140
		(-0.15)		(-0.65)
PE Style		-0.00578*		-0.00483**
		(-1.93)		(-2.19)
ED Style		-0.00883*		-0.00310
		(-1.88)		(-0.89)
Year FE	Yes	Yes	Yes	Yes
Pair FE	Yes	Yes	Yes	Yes
R^2	0.497	0.497	0.486	0.487
N. Obs.	1,890,197	1,890,197	5,592,221	5,592,221

3. Social Ties effects by Role - Directors Vs. Executives

In section 2.2.5 of the main paper, we break down the main results by social network types (CE, PE, ED, OA). In this section, we present the results when we study the effect on investment decisions of social ties of executives and directors on the board separately.

In columns (1) and (2) of Table OA.V, we look at social ties only among board members, and in columns (3) and (4) only among executives. In the cross-sectional specifications (columns 1 and 3) we find that the social networks of both executives and directors influence investment decisions. The SNI coefficient for executives is six times as large, and thus executives social ties seem to be more important in determining capital investment policies than board members' social ties. This is not surprising, given that executives are the one who make the initial decision to invest, and the board of directors usually only approves such investments. Unfortunately when we add pair fixed effects, the SNI coefficient for executives loses statistical significance. The lack of significance of the SNI coefficient in the pair-fixed effect specification could be due to statistical power issues: the within-pair variation of the SNI index is much smaller for executives than for directors, limiting the statistical power of the test with pair fixed effects. A one-way variance decomposition analysis (ANOVA) of the SNI index shows that the within-pair variance for directors is equal to 0.0345, almost ten time as large as the within-pair variance of SNI for executives (0.0045). In addition, on average directors work for 1.62 firms at any point in time, noticeably higher than executives on the board (1.28 firms) and executives not on on the board (1.04 firms). Directors are thus more likely to sit on multiple boards, and thus be socially connected through their professional networks. We thus conclude that social ties are important both for executives and directors, even though we lose statistical power for the executive social ties when we add pair fixed effects.

Table OA.V: Social Ties Effects by Role - Directors Vs Executives

Dependent Variable: Investment Dissimilarity. The table shows the results of the second stage of the Pair Model. Refer to the text for the description of the models and the appendix for the detailed definition of the variables. Strength SNI - Board (Executives) are the total number of social ties in the SNI network that exist between board members (key executives) in the two companies. N. Directors (Exec.) is the sum of all board directors (executives) for each company pair. Age Directors (Executives) is the average age of all board directors (executives) for each company pair. Same Industry Dummy is a variable equal to 1 if the two firms are in the same FF49 industry. Same Region is a dummy variable equal to 1 if the two firms are in the same BEA region. Abs. Diff. Total Assets (Age Exec. & Direc. or N. Exec. & Direc.) is the absolute difference between Total Assets (Age Direc. (Exec.) or N. Direc. (Exec.)) of the two firms. ED (PE) Style is equal to one if at least two individuals in a firm-pair went to the same school (worked for the same past employer) at any point in time. All dependent and independent variables, excluding dummies, are logged. All independent variables are lagged one year. Reported are OLS coefficients and the t-statistics in parentheses, corrected for clustering of the error term at both firms level using the double-clustering algorithm from Petersen (2009). *, **, indicates significance at the 10%, 5% and 1% level, respectively. Constant included.

	Directors		Executives	
	(1)	(2)	(3)	(4)
Strength SNI Dir. (Exec.)	-0.00523***	-0.00355**	-0.03095***	-0.00172
	(-3.04)	(-2.33)	(-10.14)	(-1.10)
N. Directors (Exec.)	-0.17322***	-0.05615***	-0.06521***	-0.01119
	(-13.12)	(-2.86)	(-7.26)	(-0.78)
Age Directors (Exec.)	-0.37808***	-0.23160***	-0.36987***	-0.13771***
	(-7.80)	(-2.64)	(-11.13)	(-2.73)
Same Industry	-0.00109	-0.00453*	0.00159	-0.00465*
	(-0.54)	(-1.89)	(0.74)	(-1.95)
Same Region	0.00249**		0.00277**	
	(2.08)		(2.03)	
Abs. Diff. Total Assets	-0.00120**	-0.00171	-0.00536***	-0.00212
	(-2.01)	(-0.86)	(-9.15)	(-1.08)
Abs. Diff. Age Directors (Exec.)	0.00894***	-0.00038	0.00758***	0.00212
	(4.38)	(-0.21)	(4.35)	(1.28)
Abs. Diff. N. Directors (Exec.)	0.01852***	0.00486**	0.01783***	0.00326
	(8.69)	(2.44)	(9.02)	(1.19)
PE Style	-0.00275	-0.00264	-0.00640*	-0.00079
	(-1.52)	(-1.48)	(-1.66)	(-0.28)
ED Style	-0.00210	-0.00015	0.00580*	0.00141
	(-0.71)	(-0.05)	(1.88)	(0.76)
Year FE	Yes	Yes	Yes	Yes
Pair FE	No	Yes	No	Yes
R^2	0.057	0.442	0.044	0.441
N. Obs.	6,897,241	6,897,241	6,879,395	6,879,395

4. Robustness Checks of Pair Model

Table OA.VI: Pair Model with Quantile Regression

Dependent Variable: Investment Dissimilarity. The table shows the results of the second stage of the Pair Model using quantile regressions at the 20%, 40%, 60% and 80% percentile. Refer to the text for the description of the models and the appendix for the detailed definition of the variables. Strength SNI is the number of social ties between firm pairs. N. Exec & Direc. is the sum of all directors on the board and key executives for each company pair. Age Exec. & Direc. is the average age of all directors on the board and key executives for each company pair. Same Industry Dummy is a variable equal to 1 if the two firms are in the same FF49 industry. Same Region is a dummy variable equal to 1 if the two firms are in the same BEA region. Abs. Diff. Total Assets (Age Exec. & Direc. or N. Exec. & Direc.) is the absolute difference between Total Assets (Age Exec. & Direc. or N. Exec. & Direc.) of the two firms. ED (PE) Style is equal to one if at least two individuals in a firm-pair went to the same school (worked for the same past employer) at any point in time. All dependent and independent variables, excluding dummies, are logged. All independent variables are lagged one year. *, **, indicates significance at the 10%, 5% and 1% level, respectively. Constant included.

	(20%)	(40%)	(60%)	(80%)
	(1)	(2)	(3)	(4)
Strength SNI (Not Norm.)	-0.00150***	-0.00272***	-0.00352***	-0.00362***
	(-11.85)	(-16.05)	(-16.51)	(-11.23)
N. Exec. & Direc.	-0.05428***	-0.10776***	-0.16574***	-0.25105***
	(-196.62)	(-291.49)	(-356.00)	(-356.31)
Age Exec. & Direc.	-0.12393***	-0.24393***	-0.37795***	-0.57086***
	(-146.30)	(-215.07)	(-264.59)	(-264.08)
Same Industry	-0.00205***	-0.00389***	-0.00418***	-0.00214***
	(-10.27)	(-14.55)	(-12.42)	(-4.20)
Same Region	-0.00041***	-0.00060***	-0.00063***	0.00045
	(-3.62)	(-3.98)	(-3.32)	(1.58)
Abs. Diff. Total Assets	0.00010***	0.00011***	-0.00009**	-0.00102***
	(3.81)	(3.30)	(-2.18)	(-15.51)
Abs. Diff. Age Exec. & Direc.	0.00241***	0.00486***	0.00780***	0.01182***
	(39.62)	(59.67)	(76.03)	(76.15)
Abs. Diff. N. Exec. & Direc.	0.00635***	0.01188***	0.01657***	0.02069***
	(98.22)	(137.13)	(151.84)	(125.29)
PE Style	-0.00018	-0.00062**	-0.00134***	-0.00084
	(-0.78)	(-1.98)	(-3.42)	(-1.42)
ED Style	0.00054***	0.00122***	0.00223***	0.00534***
	(4.15)	(6.99)	(10.13)	(16.06)
Year FE	Yes	Yes	Yes	Yes
N. Obs.	6,897,241	6,897,241	6,897,241	6,897,241

Table OA.VII: Social Ties and Similarity in Capital Investment - Normalized SNI

Dependent Variable: Investment Dissimilarity. The table shows the results of the second stage of the Pair Model. Refer to the text for the description of the models and the appendix for the detailed definition of the variables. Columns (1) to (4) include all observations. Columns (5) and (6) include only observations for pairs in the same FF49 industry. Columns (7) and (8) include only observations for pairs in the same BEA region. Strength SNI is the number of social ties between firm pairs, normalized by the product of the number of executives and directors in each firm. N. Exec & Direc. is the sum of all directors on the board and key executives for each company pair. Age Exec. & Direc. is the average age of all directors on the board and key executives for each company pair. Same Industry Dummy is a variable equal to 1 if the two firms are in the same FF49 industry. Same Region is a dummy variable equal to 1 if the two firms are in the same BEA region. Abs. Diff. Total Assets (Age Exec. & Direc. or N. Exec. & Direc.) is the absolute difference between Total Assets (Age Exec. & Direc. or N. Exec. & Direc.) of the two firms. ED (PE) Style is equal to one if at least two individuals in a firm-pair went to the same school (worked for the same past employer) at any point in time. All dependent and independent variables, excluding dummies, are logged. All independent variables are lagged one year. Reported are the OLS coefficients and the t-statistics in parentheses. Standard errors are corrected for clustering of the error term at both firms level using the double-clustering algorithm from Petersen (2009). *, **, indicates significance at the 10%, 5% and 1% level, respectively. Constant included.

	Full Sample				Only Pairs in the Same Industry		Only Pairs in the Same Region	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Strength SNI - Normalized	-2.27037***	-0.31799*	-0.35385**	-0.51388***	-0.30744	-0.40854*	-0.35269**	-0.45152**
	(-10.70)	(-1.90)	(-2.17)	(-3.85)	(-1.44)	(-1.74)	(-2.05)	(-2.48)
N. Exec. & Direc.		-0.18812***	-0.18973***	-0.04905**	-0.22451***	-0.05921*	-0.21476***	-0.05672**
		(-13.56)	(-13.45)	(-2.15)	(-12.80)	(-1.79)	(-13.21)	(-2.07)
Age Exec. & Direc.		-0.42120***	-0.42008***	-0.25296***	-0.52078***	-0.37696***	-0.51357***	-0.28451***
		(-8.06)	(-8.04)	(-2.85)	(-8.64)	(-2.97)	(-8.23)	(-2.71)
Same Industry		-0.00055	-0.00054	-0.00453*			0.00663**	-0.00124
		(-0.28)	(-0.27)	(-1.89)			(2.04)	(-0.34)
Same Region		0.00224*	0.00213*		0.01077***			
		(1.84)	(1.75)		(3.46)			
Abs. Diff. Total Assets		-0.00024	-0.00029	-0.00181	-0.00172	-0.00157	-0.00041	-0.00180
		(-0.39)	(-0.46)	(-0.91)	(-1.56)	(-0.46)	(-0.52)	(-0.68)
Abs. Diff. Age Exec. & Direc.		0.01117***	0.01117***	0.00222	0.01363***	0.00225	0.01099***	0.00134
		(5.31)	(5.30)	(1.16)	(6.20)	(0.99)	(4.76)	(0.63)
Abs. Diff. N. Exec. & Direc.		0.01652***	0.01656***	0.00398**	0.01701***	0.00624***	0.01577***	0.00312*
		(9.46)	(9.44)	(2.26)	(7.19)	(2.92)	(8.32)	(1.69)
PE Style			-0.00094	-0.00185	0.00526	0.00117	0.00322	-0.00203
			(-0.50)	(-1.04)	(1.37)	(0.25)	(1.17)	(-0.82)
ED Style			0.00392	-0.00095	0.01815***	-0.00432	0.01143***	-0.00019
			(1.39)	(-0.32)	(4.57)	(-1.00)	(3.28)	(-0.05)
Year FE	No	Yes	Yes	Yes				
Pair FE	No	No	No	Yes				
R^2	0.003	0.064	0.064	0.441	0.099	0.458	0.082	0.457
N. Obs.	6,897,241	6,897,241	6,897,241	6,897,241	286,985	286,985	1,030,715	1,030,715

Table OA.VIII: Pair Model with Bootstrapping

Dependent Variable: Investment Dissimilarity. The table shows the results of the second stage of the Pair Model. Refer to the text for the description of the models and the appendix for the detailed definition of the variables. Strength SNI is the number of social ties between firm pairs. N. Exec & Direc. is the sum of all directors on the board and key executives for each company pair. Age Exec. & Direc. is the average age of all directors on the board and key executives for each company pair. Same Industry Dummy is a variable equal to 1 if the two firms are in the same FF49 industry. Same Region is a dummy variable equal to 1 if the two firms are in the same BEA region. Abs. Diff. Total Assets (Age Exec. & Direc. or N. Exec. & Direc.) is the absolute difference between Total Assets (Age Exec. & Direc. or N. Exec. & Direc.) of the two firms. ED (PE) Style is equal to one if at least two individuals in a firm-pair went to the same school (worked for the same past employer) at any point in time. All dependent and independent variables, excluding dummies, are logged. All independent variables are lagged one year. Reported are the OLS coefficients and the t-statistics in parentheses. Standard errors are bootstrapped with 50 repetitions. *, **, indicates significance at the 10%, 5% and 1% level, respectively. Constant included.

	(1)	(2)	(3)	(4)
Strength SNI	-0.04377***	-0.00337***	-0.00370***	-0.00377***
	(-321.13)	(-19.48)	(-16.89)	(-12.52)
N. Exec. & Direc.		-0.18686***	-0.18828***	-0.04718***
		(-389.03)	(-341.50)	(-49.30)
Age Exec. & Direc.		-0.42103***	-0.41990***	-0.25371***
		(-263.48)	(-261.27)	(-69.04)
Same Industry		-0.00057	-0.00056*	-0.00451**
		(-1.57)	(-1.90)	(-2.25)
Same Region		0.00221***	0.00209***	
		(12.54)	(11.93)	
Abs. Diff. Total Assets		-0.00024***	-0.00028***	-0.00182***
		(-5.25)	(-6.72)	(-14.81)
Abs. Diff. Age Exec. & Direc.		0.01117***	0.01117***	0.00223***
		(122.57)	(123.52)	(15.25)
Abs. Diff. N. Exec. & Direc.		0.01647***	0.01649***	0.00394***
		(150.32)	(136.98)	(28.66)
PE Style			-0.00114***	-0.00286***
			(-3.27)	(-5.81)
ED Style			0.00383***	-0.00116***
			(19.21)	(-2.73)
Year FE	No	Yes	Yes	Yes
Pair FE	No	No	No	Yes
R^2	0.009	0.064	0.064	0.441
N. Obs.	6,897,241	6,897,241	6,897,241	6,897,241

Table OA.IX: Pair Model with Pair Clustering

Dependent Variable: Investment Dissimilarity. The table shows the results of the second stage of the Pair Model. Refer to the text for the description of the models and the appendix for the detailed definition of the variables. Strength SNI is the number of social ties between firm pairs. N. Exec & Direc. is the sum of all directors on the board and key executives for each company pair. Age Exec. & Direc. is the average age of all directors on the board and key executives for each company pair. Same Industry Dummy is a variable equal to 1 if the two firms are in the same FF49 industry. Same Region is a dummy variable equal to 1 if the two firms are in the same BEA region. Abs. Diff. Total Assets (Age Exec. & Direc. or N. Exec. & Direc.) is the absolute difference between Total Assets (Age Exec. & Direc. or N. Exec. & Direc.) of the two firms. ED (PE) Style is equal to one if at least two individuals in a firm-pair went to the same school (worked for the same past employer) at any point in time. All dependent and independent variables, excluding dummies, are logged. All independent variables are lagged one year. Reported are the OLS coefficients and the t-statistics in parentheses. Standard errors are clustered at the pair level. *, **, indicates significance at the 10%, 5% and 1% level, respectively. Constant included.

	(1)	(2)	(3)	(4)
Strength SNI	-0.04377***	-0.00337***	-0.00370***	-0.00377***
	(-196.26)	(-14.89)	(-14.52)	(-9.69)
N. Exec. & Direc.		-0.18686***	-0.18828***	-0.04718***
		(-275.69)	(-273.11)	(-37.53)
Age Exec. & Direc.		-0.42103***	-0.41990***	-0.25371***
		(-190.94)	(-190.43)	(-54.89)
Same Industry		-0.00057	-0.00056	-0.00451**
		(-1.20)	(-1.17)	(-2.22)
Same Region		0.00221***	0.00209***	
		(8.02)	(7.60)	
Abs. Diff. Total Assets		-0.00024***	-0.00028***	-0.00182***
		(-4.21)	(-4.93)	(-11.49)
Abs. Diff. Age Exec. & Direc.		0.01117***	0.01117***	0.00223***
		(81.79)	(81.78)	(12.40)
Abs. Diff. N. Exec. & Direc.		0.01647***	0.01649***	0.00394***
		(117.26)	(117.41)	(22.68)
PE Style			-0.00114***	-0.00286***
			(-2.60)	(-4.74)
ED Style			0.00383***	-0.00116***
			(12.97)	(-2.79)
Year FE	No	Yes	Yes	Yes
Pair FE	No	No	No	Yes
R^2	0.009	0.064	0.064	0.441
N. Obs.	6,897,241	6,897,241	6,897,241	6,897,241

References

Petersen, M. A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. *Review of Financial Studies 22*, 435–480.