Online Appendix for "Overlapping Ownership Along the Supply Chain"

This Online Appendix includes supplemental results and robustness tests discussed in the main text.

Drivers of Ownership Overlap

Table A1 uses the full set of controls to predict contemporaneous overlapping ownership. OIO is higher when the pair has greater institutional ownership, when relationship tenure is greater, when the customer has lower market share, when the supplier is larger, or when either firm is less profitable.

Falsification Test with Non-Overlapping Ownership

Table A2 reports regressions identical to the baseline specification in Table 2 of the main text, except measures of OVERLAP are replaced with NON_OVERLAP, computed based on institutional owners without overlapping ownership in both firms. In columns 1, 2, and 5, NON_OVERLAP is constructed to parallel OVERLAP_VALUE:

$$\frac{\Sigma_{k'}(V_{s,k'} + V_{c,k'})}{V_s + V_c}, \tag{A1}$$

across k' institutional investors, denoting investors who are not overlapping owners, where V denotes the value of either the customer or supplier, calculated as number of shares×share price. This measure parallels the construction of OVERLAP_VALUE.

Similarly, in columns 3, 4, and 6 NON_OVERLAP is constructed to parallel OVERLAP_PRODUCT:

$$\Big(\frac{\Sigma_{k'} H_{c,k'}}{H_c} \times \frac{\Sigma_{k'} H_{s,k'}}{H_s}\Big), \tag{A2}$$

across k' institutional investors, where H represents shares outstanding for each firm (subscripted with s and c). Results indicate a positive effect (only statistically significant in the value specifications) of NON_OVERLAP on the probability of the relationship ending. This result is consistent with *the absence* of overlapping ownership encouraging firm-level maximization at the expense of strong supply chain relationships and joint value maximization.

Relationship Sales

Table A3 reports regressions where the dependent variable is the ratio of pair-level sales to supplier assets on OVERLAP and the full set of controls. I do not rely on this dependent variable in primary analysis because the magnitude of transaction size is largely determined by operational factors outside of the supply chain relationship. However, coefficients on OVERLAP are always positive and sometimes (at least marginally) statistically significant, supporting the conjecture that OIO encourages more economic activity between the partners.

Ownership Overlap Robustness

Table A4 reports robustness tests for the baseline results in Table 2 of the main text. Columns 1 and 2 compute OVERLAP only across owners holding at least 1% of each firms shares. Columns 3 and 4 further restrict the owners in the OVERLAP measures to hold at least 1% of both firms and at least 5% of one firm. In Columns 5 and 6, OVERLAP is computed only across owners for which the customer-supplier stake, jointly, comprises at least 1% of the owner's reported stock holding value. In Columns 7 and 8, only long-term (five quarters, the median, or longer) are included in the OVERLAP measure. Finally, in Columns 9 and 10, OVERLAP is computed excluding the "Big 3" of BlackRock, State Street, and Vanguard. Results are consistent with baseline findings in each test.

Institutional Mergers Robustness

Tables A5 and A6 report robustness tests for Table 5 of the main text. Table A5 considers contemporaneous industry ownership effects arising from the merger that could conflate the supply chain OIO effects. Columns 1 and 2 control for industry blockholdings. For these tests, I form a variable, SC_IND_BLOCK, constructed parallel to the criteria for a customer-supplier pair's inclusion in the experiment: Particularly, if a merger participant holds a 1% or 5% stake in the customer (supplier), I set SC_IND_BLOCK equal to one if the other merger participant holds a stake meeting the same threshold in one of the customer's (supplier's) industry peers. In Column 1 I control for the interaction of POST and SC_IND_BLOCK. The interaction term is statistically insignificant and does not meaningfully affect the magnitude of the TREATED×POST coefficient. Column 2 removes all observations with an SC_IND_BLOCK. This modestly reduces the sample size, but the TREATED×POST coefficient remains strong, with a magnitude similar to the main result in Table 5. Columns 3 and 4 consider whether a large increase in the blockholding of the supplier or customer could conflate the results. Column 3 controls for the interaction of POST and SC_BLOCK, an indicator

equal to one if a 5% or 1% threshold stake in the customer (supplier) by one merger party is matched by a parallel stake in that same firm and matching the same threshold by the other merger party. Column 4 removes all cases with an SC_BLOCK. While the interaction term in Column 3 indicates a higher probability of RELATIONSHIP_END after a merger when a firm block exists, controlling for this effect does not influence the TREATED×POST coefficient in either Column 3 or 4.

The reason for the *increase* in the probability of RELATIONSHIP_END when a firm block is formed seems initially unclear, given that stable supply chain relationships are expected to be valuable to the firm. Untabulated tests examining S_BLOCK and C_BLOCK individually reveal that cases of S_BLOCK are sufficiently rare that the SC_BLOCK effect is driven by the more common C_BLOCK. While beyond the scope of this paper, the adverse effect of a customer ownership block could be driven by shifts in customer bargaining power. Particularly, large shifts in ownership structure can affect customer bargaining power, with adverse supplier effects: suppliers suffer financially after downstream mergers (Fee and Thomas (2004)), and after a customer goes through a leveraged buy-out (Brown, Fee, and Thomas (2009)). Given these extant findings that customer ownership changes cause bargaining power shifts at their suppliers' detriment, it is plausible that the added presence of a significant institutional investor would have a parallel effect, potentially explaining the higher probability of relationship termination.

Table A6 reports additional robustness tests for Table 5 of the main text. Column 1 uses ex ante OVERLAP_PRODUCT (and JOINT_INST_PRODUCT instead of ex ante OVERLAP_VALUE (and JOINT_INST_VALUE), while Column 2 relaxes the restriction that both firms have a 1% 13F shareholder. Column 3 limits the sample to years before the financial crisis (before 2007), and Column 4 relaxes the restriction that customer-supplier pairs' first transaction year was prior to the merger announcement year. Each robustness test shows consistent results, with treated pairs less likely to terminate the relationship after the merger event.

OIO Imbalances and Firm Value Effects

Table A7 supplements the firm value results from Table 6 by exploring whether value effects accrue asymmetrically across the supply chain partners depending on the relative economic stakes of the overlapping owners. To examine this, Panel A splits the sample of firms with positive OIO based on whether the overlapping owners, in aggregate, have more portfolio value tied to the supplier's shares or the customer's shares. The dependent variable is either the supplier's Q or the customer's Q. When overlapping owners have a greater financial stake in the supplier ("Supplier-Heavy" in Columns 1 and 2), OVERLAP has a positive (though statistically insignificant) effect on supplier valuation, while the effect on the customer's

valuation switches to negative. On the other hand, when more of the overlapping owners' portfolio is tied to the customer vs. the supplier ("Customer-Heavy" in Columns 3 and 4), OVERLAP has essentially zero effect on supplier value (statistically insignificant and close to zero) with an a economically strong positive effect (just under marginal statistical significance) for the customer.

The sample is split in Panel A according to absolute portfolio dollar values. Because suppliers tend to be noticeably smaller and younger than their major customers, the "Supplier-Heavy" sample in Panel A is small. Panel B reports results splitting the sample instead based on whether the financial stakes in the supplier by overlapping owners are higher on a relative basis. Specifically, in Columns 1 and 2, the Supplier-Heavy group includes observations where the ratio of overlapping owners' portfolio value in supplier shares to overlapping owners' portfolio value in customer shares is above the 75th percentile, while the Customer-Heavy subsample includes observations below the 75th percentile. Results are parallel to those in Panel A: when overlapping owners' financial incentives are relatively more skewed to favor the supplier, we observe a positive (albeit statistically insignificant) effect of OIO on supplier's value, but when the customer is a much higher proportion of their financial stake, only the customer's value increases with OIO.

Importantly, joint value maximization does not hinge on higher value for both firms. While the results in Table A7 are far from definitive, they are consistent with an alignment between the financial incentives of the owners and the ultimate recipient of the relationship value created.

Relationship Formation

Throughout the main text, the primary dependent variable measures relationship survival. In this section, I examine whether overlapping ownership influences relationship formation. As discussed below, results are consistent with a positive effect on relationship formation. While the consistency between these results and relationship survival results is encouraging, I maintain focus in the main text on survival of observed relationships rather than the likelihood of a potential pair forming a relationship for two primary reasons. First, economically, for overlapping owners to encourage the formation of a relationship would likely require more hands-on intervention by the institutions versus the internalization effect discussed in the main text. The potential for creating value from a supply chain partnership exists primarily in industries characterized by relationship-specific investments and input specificity. In these industries, "goodness of fit" between a customer and supplier – depending on specific production needs, innovative capabilities, and production capacity – are likely primary considerations in choosing a supply chain partner. For OIO to influence relationship formation would likely require direct intervention, but institutional investors will not frequently have the granular knowledge to evaluate vertical goodness of fit between their portfolio holdings.

Conversely, in an existing supply chain relationship, as the partnership develops and the firms must trust each other in order to invest in the relationship, overlapping ownership should cause the firms to internalize the effects of their actions on their partners, resulting in greater trust and collaboration.

The second reason to maintain focus on survival rather than formation is the empirical discretion required to form a set of "potential partners." The empiricist must rely on coarse pairings to form a set of potential partners, and, related to the discussion above, some pairs included as potential partners would inevitably not be feasible matches.

Notwithstanding these concerns, I empirically examine whether OIO encourages relationship formation with two parallel tests: For each observed relationship formation, I form "Pseudo Pairs" using the actual supplier (customer) matched with Compustat firms in the same year from the same downstream (upstream) industry (4-digit SIC codes) as the observed partner's industry. Because observed relationship formations are disclosed under regulations of major customers and thus tend to involve customers that are relatively larger than the supplier, I keep pseudo-partners closest to the actual partner in total assets in the formation year, using matched-sample of five pairs (one "True Pair" and four "Pseudo Pairs"). Because this analysis focuses on relationship formation, and some customer-supplier relationships are reported prior to the availability of institutional ownership data, the sample of True Pairs is smaller than the number of customer-suppliers in the tests examining RELATIONSHIP_END in the main text.

Table A8 reports summary statistics comparing first in Panel A the True Pairs with the Pseudo Pairs from both the supplier-matched and customer-matched tests over the observed tenure of the True Pairs. OIO measures are notably higher for the True Pairs vs. the Pseudo Pairs: True Pairs have an average OVERLAP_VALUE (OVERLAP_PRODUCT) of 0.155 (0.063) compared to 0.106-0.118 (0.028-0.037) for the Pseudo Pairs. Differences across all OIO measures are statistically strong across the samples at the 1% significance level. Second, Panel B compares OIO for True Pairs in the five years leading up to their relationship formation year to the five years after (or until the end of their observed relationship tenure). After relationship formation, OVERLAP_VALUE increases by over 40% and OVERLAP_PRODUCT increases by over 60%. Some of this increase, certainly, is due to increasing institutional ownership over time, as well as greater institutional ownership as the firms age, but still suggests a sizable increase in overlapping ownership after relationship formation.

If OIO strengthens customer-supplier relationships, we would expect OIO to increase after relationship formation. Table A9 examines changes in OIO around relationship formation for True vs. Pseudo Pairs in a multivariate framework. Columns 1 and 2 use the supplier-matched tests, while Columns 3 and 4 use the customer-matched tests. The dependent variable is OVERLAP_VALUE in Columns 1 and 3 and OVERLAP_PRODUCT in Columns 2 and 4. TRUE indicates the a True Pair, while POST indicates a

year after relationship formation . Across all specifications, the coefficient on *Post*× *True* is positive and statistically significant, indicating 2-3% more combined value held by overlapping owners for True Pairs after relationship formation.

Next, to examine whether OIO influences the establishment of relationships, in a stacked sample approach, I follow the True and Pseudo Pairs for five years leading up to the True Pair's formation year (four years prior plus the formation year). I define as the dependent variable REL_FORM, an indicator equal to one for the True Pair in the formation year and zero otherwise. Results from regressions of REL_FORM on OVERLAP are reported in Table A10. Columns 1 and 2 report results from the matches based on True Suppliers, while Columns 3 and 4 report results from matches with True Customers. Results consistently confirm that higher OVERLAP predicts REL_FORM. In terms of economic magnitude, using the Column 1 coefficient paired with the standard deviation reported in Table 1,[1] a shift from one standard deviation below the mean of OVERLAP_VALUE to one standard deviation above the mean corresponds to a 2.90% higher likelihood of a relationship starting. Overall, results are consistent with parallel effects of OIO effects on both the establishment and survival of relationships.

References

Brown, D. T., Fee, C. E., & Thomas, S. E. (2009). Financial leverage and bargaining power with suppliers: Evidence from leveraged buyouts. Journal of Corporate Finance, 15(2), 196-211.

Fee, C. E., & Thomas, S. (2004). Sources of gains in horizontal mergers: evidence from customer, supplier, and rival firms. Journal of financial Economics, 74(3), 423-460.

[1]The in-sample standard deviation for this test is nearly identical, at 0.156.

Table A1. Drivers of Overlapping Institutional Ownership

Regressions of ownership overlap on customer and supplier characteristics. Columns 1 and 2 use OVERLAP_VALUE (proportion of total market value of the supplier and the customer held by overlapping shareholders) to measure shareholder overlap, while columns 3 and 4 use OVERLAP_PRODUCT (proportion of supplier's shares outstanding held by overlapping shareholders × the proportion of customer's shares outstanding held by overlapping shareholders). OIO measures are not lagged in this specification. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. t-statistics are shown in parentheses, computed from standard errors double-clustered by customer and supplier.

Dependent Variable: OIO				
	1	2	3	4
SALES_DEP	-0.007	-0.011**	0.005	0.002
	(-1.27)	(-2.33)	(1.35)	(0.64)
REL_LENGTH	0.004***	0.004***	0.001	0.001*
	(2.79)	(3.77)	(1.21)	(1.65)
JOINT_INST_OWN	0.107***	0.097***	0.184***	0.172***
	(5.78)	(5.30)	(15.98)	(18.42)
SUPPLIER_HHI	0.005	0.049**	0.011	0.022*
	(0.26)	(2.54)	(0.97)	(1.69)
CUSTOMER_HHI	0.007	0.026	-0.005	-0.009
	(0.14)	(0.80)	(-0.25)	(-0.53)
SUPPLIER_MKT_SHARE	0.001	0.056	0.011	0.042
	(0.02)	(1.32)	(0.51)	(1.52)
CUSTOMER_MKT_SHARE	-0.029	-0.072**	-0.019	-0.033*
	(-0.95)	(-2.04)	(-1.04)	(-1.81)
SUPPLIER_SIZE	0.042***	0.039***	0.015***	0.015***
	(20.09)	(16.94)	(9.71)	(8.67)
CUSTOMER_SIZE	0.001	0.002	0.004**	0.006***
	(0.17)	(0.73)	(2.12)	(4.09)
SUPPLIER_PROFIT	-0.048***	-0.045***	-0.021***	-0.020***
	(-10.60)	(-9.44)	(-6.67)	(-5.96)
CUSTOMER_PROFIT	-0.049***	-0.038**	-0.020**	-0.011
	(-2.58)	(-2.20)	(-2.09)	(-1.16)
Overlap measure	Value	Value	Product	Product
Supplier FEs	Yes	Yes	Yes	Yes
Customer FEs	Yes	Yes	Yes	Yes
Year FEs	Yes		Yes	
Supplier Ind×year FEs		Yes		Yes
Customer Ind×year FEs		Yes		Yes
R^2	0.857	0.870	0.843	0.855
Observations	28,868	28,263	28,868	28,263

Table A2. Falsification Test with Non-OIO

Falsification tests reporting results of regressions of RELATIONSHIP_END on non-overlapping ownership. Columns 1-4 use linear probability models, while columns 5-6 are Cox proportional hazards models. In Columns 1, 2 and 5, NON_OVERLAP is measured as the proportion of joint market value of the customer and supplier held in the portfolios of institutional owners who are not overlapping owners. In Columns 3, 4, and 6, NON_OVERLAP is measured as the product of the proportion of supplier's and customer's shares,respectively, held by institutional owners who are not overlapping owners. All overlap measures are lagged one year. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. t-statistics are shown in parentheses, computed from standard errors double-clustered by customer and supplier in the LPM models or clustered by customer-supplier pair in hazards specifications.

	Linear Probability Models				Hazards Models	
	1	2	3	4	5	6
NON_OVERLAP	0.128***	0.120***	0.080	0.105	0.506***	0.611
	(2.85)	(2.63)	(0.89)	(1.06)	(2.64)	(1.48)
JOINT_INST_OWN	-0.035	-0.035	-0.043	-0.028	-0.074	-0.160
	(-0.80)	(-0.81)	(-1.27)	(-0.77)	(-0.42)	(-1.10)
Overlap measure	Value	Value	Product	Product	Value	Product
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Supplier FEs	Yes	Yes	Yes	Yes		
Customer FEs	Yes	Yes	Yes	Yes		
Year FEs	Yes		Yes			
Supplier Ind×Year FEs		Yes		Yes		
Customer Ind×Year FEs		Yes		Yes		
Supplier Ind Strata					Yes	Yes
Customer Ind Strata					Yes	Yes
R^2	0.189	0.199	0.188	0.199		
Observations	28,868	28,263	28,868	28,263	29,843	29,843

Table A3. Relationship Sales

Regressions of relationship sales scaled by supplier assets on ownership overlap. Columns 1 and 2 use OVERLAP_VALUE (proportion of total market value of the supplier and the customer held by overlapping shareholders) to measure owner overlap, while columns 3, and 4 use OVERLAP_PRODUCT (proportion of supplier's shares outstanding held by overlapping shareholders × the proportion of customer's shares outstanding held by overlapping shareholders). All overlap measures are lagged one year. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. t-statistics are shown in parentheses, computed from standard errors double-clustered by customer and supplier.

Dependent Variable: Relationship Sales

	1	2	3	4
OVERLAP	0.057	0.047	0.167**	0.124*
	(1.62)	(1.44)	(2.34)	(1.90)
Overlap measure	Value	Value	Product	Product
Controls	Yes	Yes	Yes	Yes
Supplier FEs	Yes	Yes	Yes	Yes
Customer FEs	Yes	Yes	Yes	Yes
Year FEs	Yes		Yes	
Supplier Ind×year FEs		Yes		Yes
Customer Ind×year FEs		Yes		Yes
R^2	0.635	0.639	0.636	0.639
Observations	23,393	22,751	23,393	22,751

Table A4. Ownership Overlap Robustness

Regressions of RELATIONSHIP_END on owner overlap. In Columns 1 and 2, OVERLAP is computed across institutional owners holding at least 1% of the outstanding shares of each firm. In Columns 3 and 4, OVERLAP is computed across institutional owners holding at least 1% of the outstanding shares of each firm and at least 5% of one of the firms. In Columns 5 and 6, OVERLAP is computed across all institutional owners for whom the overlapping ownership comprises at least 1% of their portfolio. In Columns 7 and 8, OVERLAP is computed only across overlapping ownership stakes with above-median duration (owner has held overlapping stakes for more than 5 quarters). In Columns 9 and 10, OVERLAP is computed excluding the "Big 3" - BlackRock, State Street, and Vanguard. All overlap measures are lagged one year. The JOINT_INST_OWN control is adjusted to align with the OVERLAP measure modification. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. t-statistics are shown in parentheses, computed from standard errors double-clustered by customer and supplier.

	1	2	3	4	5	6	7	8	9	10
OVERLAP	-0.126*	-0.560**	-0.162*	-1.234**	-0.113**	-0.176**	-0.118**	-0.273***	-0.105**	-0.176*
	(-1.76)	(-2.07)	(-1.91)	(-2.27)	(-2.50)	(-2.28)	(-2.49)	(-2.59)	(-1.99)	(-1.84)
Overlap measure	Value	Product	Value	Product	Value	Product	Value	Product	Value	Product
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Supplier FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Customer FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Supplier Ind×year FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Customer Ind×year FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.199	0.199	0.199	0.199	0.199	0.199	0.199	0.199	0.199	0.199
Observations	28,263	28,263	28,263	28,263	28,263	28,263	28,263	28,263	28,263	28,263

Table A5. Institution Mergers Robustness - Contemporaneous Block Effects
Robustness for the institution mergers experiment, controlling for simultaneous blockholding effects. The dependent variable is RELATIONSHIP_END, an indicator for the vertical relationship ending in the observation year. Columns 1 and 2 address whether industry blockholdings created by the merger affect RELATIONSHIP_END. In Column 1, SC_IND_BLOCK is equal to one if the customer (supplier) merger party stakes defining treatment or control are matched by a same-industry stake of that threshold by the other merger participant. Column 2 removes all observations with an SC_IND_BLOCK. Columns 3 and 4 address whether firm blockholdings created by the merger affect RELATIONSHIP_END. In Column 3, SC_BLOCK is equal to one if the customer (supplier) merger participant stake defining treatment or control are matched by a stake of the same threshold in the customer (supplier) by the other merger participant. Column 4 removes all observations with an SC_BLOCK. All columns include supplier, customer, event, and year fixed effects and controls. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. t-statistics are shown in parentheses and computed from standard errors clustered by merger event.

Dependent Variable: Relationship End

	Industry Blocks		*Firm Blocks*	
	1	2	3	4
TREATED×POST	-0.058**	-0.070**	-0.055**	-0.060**
	(-2.67)	(-3.01)	(-2.41)	(-2.10)
TREATED	0.031	0.373	0.007	0.013
	(0.69)	(1.56)	(0.17)	(0.32)
POST	-0.019	-0.015	-0.019	-0.018
	(-1.34)	(-1.06)	(-0.30)	(-0.47)
POST×SC_IND_BLOCK	0.007			
	(0.49)			
SC_IND_BLOCK	-0.062**			
	(-2.44)			
POST×SC_BLOCK			0.071***	
			(3.49)	
SC_BLOCK			-0.101*	
			(-1.85)	
Overlap measure	Value	Value	Value	Value
Controls	Yes	Yes	Yes	Yes
Supplier FEs	Yes	Yes	Yes	Yes
Customer FEs	Yes	Yes	Yes	Yes
Event FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
R^2	0.214	0.210	0.214	0.212
Observations	5,196	4,009	5,196	5,090

Table A6. Institution Mergers Robustness - Sample Construction
Robustness for the institution mergers experiment. The dependent variable is RELATIONSHIP_END, an indicator for the vertical relationship ending in the observation year. Column 1 controls for OVERLAP_PRODUCT instead of OVERLAP_VALUE as in Table 5. Column 2 relaxes the requirement that both firms have a 1% 13F shareholder. Column 3 limits the sample to years preceding the financial crisis (before 2007). Column 4 relaxes the requirement that relationship began prior to the announcement year. All columns include supplier, customer, event, and year fixed effects and controls. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. t-statistics are shown in parentheses and computed from standard errors clustered by merger event.

Dependent Variable: Relationship End

	1	2	3	4
TREATED×POST	-0.055**	-0.058**	-0.056**	-0.049***
	(-2.32)	(-2.42)	(-2.62)	(-2.70)
TREATED	0.019	0.009	0.046	0.026
	(0.44)	(0.21)	(1.07)	(0.80)
POST	-0.018	-0.019	-0.026	-0.007
	(-1.38)	(-1.52)	(-1.14)	(-0.61)
PRE_MERGER_OVERLAP	-0.311	-0.055	0.056	-0.015
	(-1.34)	(-0.39)	(0.29)	(-0.13)
Overlap measure	Product	Value	Value	Value
Controls	Yes	Yes	Yes	Yes
Supplier FEs	Yes	Yes	Yes	Yes
Customer FEs	Yes	Yes	Yes	Yes
Event FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
R^2	0.214	0.218	0.218	0.227
Observations	5,196	5,302	3,530	5,977

Table A7. OIO Imbalances and Firm Valuation

Regressions of supplier (Columns 1 and 3) or customer (Columns 2 and 4) Q on OVERLAP. In Panel A (B), Columns 1 and 2 report results where overlapping owners hold a higher absolute (relative) value stake in the supplier, while in Columns 3 and 4, the stake in the customer is higher. Panel A splits the sample by absolute dollar value, while Panel B splits the sample on the 75th percentile of the supplier value stake relative to customer value stake. t-statistics are shown in parentheses and computed from standard errors clustered by supplier (Columns 1 and 3) or customer (Columns 2 and 4) . *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Imbalances Based on Absolute Dollar Values

	Supplier-Heavy		Customer-Heavy	
Dep. Var.:	S Q	C Q	S Q	C Q
OVERLAP	0.248	-0.089	0.011	0.327
	(0.20)	(-0.24)	(0.05)	(1.64)
Overlap measure	Value	Value	Value	Value
Controls	Yes	Yes	Yes	Yes
Supplier FEs	Yes	Yes	Yes	Yes
Customer FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
R^2	0.713	0.689	0.606	0.787
Observations	1,198	1,198	25,853	25,853

Panel B: Imbalances Based on Relative Values

	Supplier-Heavy		Customer-Heavy	
Dep. Var.:	S Q	C Q	S Q	C Q
OVERLAP	0.417	0.454**	-0.408	0.328
	(1.00)	(1.96)	(-1.61)	(1.44)
Overlap measure	Value	Value	Value	Value
Controls	Yes	Yes	Yes	Yes
Supplier FEs	Yes	Yes	Yes	Yes
Customer FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
R^2	0.678	0.702	0.611	0.803
Observations	6,322	6,315	20,270	20,337

Table A8. Summary Statistics - Matched Pseudo Pairs

Customer and supplier firm data come from the Compustat Segment file. The sample period is 1981-2009. Observations are at the customer-supplier-year level. "True Pairs" are observed customer-supplier relationships, while "Pseudo Pairs" are formed by matching observed suppliers (customers) with four other upstream (downstream) firms in the same 4-digit SIC code and most similar to the actual partner's size. Pseudo Pairs are tracked over the same years as their matched True Pair. OVERLAP_VALUE is the proportion of total market value held by overlapping 13F investors, while OVERLAP_PRODUCT is the product of the proportion of supplier shares held by overlapping shareholders and the proportion of customer shares held by overlapping shareholders. Panel A compares OIO for True vs. Pseudo Pairs over the True Pair's relationship tenure. Panel B compares OIO for True Pairs in the five years prior to their *Relationship Formation* to the OIO in the (up to) five years after their *Relationship Formation* or until the end of the observed relationship tenure (whichever comes first).

Panel A: OIO for True vs. Pseudo Pairs Over Relationship Tenure

	True Pairs		Supplier-Matched Pseudo Pairs			Customer-Matched Pseudo Pairs		
Variable	N	Mean	N	Mean	Difference (True-Pseudo)	N	Mean	Difference (True-Pseudo)
OVERLAP_VALUE	18,864	0.155	43,907	0.118	0.037***	37,573	0.106	0.049***
OVERLAP_PRODUCT	18,864	0.063	43,907	0.028	0.035***	37,573	0.037	0.027***

Panel B: OIO for True Pairs Before and After Relationship Formation

	Post-Formation		Pre-Formation		Difference
Variable	N	Mean	N	Mean	(Post-Pre)
OVERLAP_VALUE	9,831	0.155	20,122	0.109	0.045***
OVERLAP_PRODUCT	9,831	0.062	20,122	0.037	0.024***

Table A9. OIO After Relationship Formation

Regressions estimating changes in OVERLAP measures after formation year for TRUE and *Pseudo* pairs in a difference in difference framework. In Columns 1 and 2, true suppliers are matched to pseudo customers in the year of a true relationship formation, while in Columns 3 and 4, true suppliers are matched to pseudo suppliers in the year of a true relationship formation. TRUE indicates the firm is the actual partner, while POST indicates a year after the formation year. POSTTRUE compares OIO after the formation year for the true pair vs. the pseudo pairs. The sample period excludes the formation year. Controls include JOINT_INST_OWN, as well as HHI, MKT_SHARE, SIZE, and PROFIT of both partners. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. t-statistics are shown in parentheses, computed from standard errors double-clustered by customer and supplier.

	True Suppliers		True Customers	
Overlap measure.:	VALUE	PRODUCT	VALUE	PRODUCT
POST×TRUE	0.028***	0.011***	0.020***	0.005**
	(5.37)	(4.54)	(5.55)	(2.41)
TRUE	0.002	0.022***	0.028***	0.024***
	(0.32)	(11.86)	(4.54)	(16.24)
POST	-0.006**	-0.003***	-0.002	0.001
	(-2.38)	(-2.50)	(-1.31)	(0.88)
Controls	Yes	Yes	Yes	Yes
Start-Group FE	Yes	Yes	Yes	Yes
Customer FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
R^2	0.727	0.677	0.750	0.701
Observations	170,528	170,528	169,539	169,539

Table A10. Relationship Formation

Linear probability models where the dependent variable is *Relationship Formation*, an indicator equal to one when the year is a True Pair in the first observed year of their customer-supplier relationship, and equal to zero otherwise. The sample includes True Pairs and matched Pseudo Pairs in the five years leading up to the relationship formation year (four years prior plus formation year). Controls include JOINT_INST_OWN, as well as HHI, MKT_SHARE, SIZE, and PROFIT of both partners. Columns 1 and 2 use OVERLAP_VALUE (proportion of total market value of the supplier and the customer held by overlapping shareholders) to measure owner overlap, while Columns 3 and 4 use OVERLAP_PRODUCT (proportion of supplier's shares outstanding held by overlapping shareholders × the proportion of customer's shares outstanding held by overlapping shareholders). All overlap measures are lagged one year. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. t-statistics are shown in parentheses, computed from standard errors double-clustered by customer and supplier.

	True Suppliers		True Customers	
	1	2	3	4
OVERLAP	0.094***	0.587***	0.077***	0.646***
	(5.06)	(10.13)	(3.24)	(10.71)
Overlap measure	Value	Product	Value	Product
Controls	Yes	Yes	Yes	Yes
Pair-Group FE	Yes	Yes	Yes	Yes
Partner FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
R^2	0.219	0.165	0.049	0.048
Observations	71,860	71,860	67,488	67,488