

Online Appendix
for
“Information Flows among Rivals and Corporate Investment”¹

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Overview

- A.1: Acquiring the EDGAR Data and Identification of EDGAR Users
- A.2: Summary of the U.S. Government Budget Crisis Beginning in 2011
- A.3: Illustrative Grid of Intra- versus Inter-Industry Information Flows
- A.4: Full Correlation Table
- A.5: Robustness of Table 2: Poisson Specification
- A.6: Robustness of Table 2: S&P 500
- A.7: Robustness of Table 7: Alternative Scalars
- A.8: Full Tabulation of Table 3
- A.9: Full Tabulation of Table 4
- A.10: Full Tabulation of Table 5
- A.11: Full Tabulation of Table 6
- A.12: Full Tabulation of Table 7
- A.13: Full Tabulation of Table 8

¹ Citation format: Bernard, Blackburne, and Thornock, 2019. Online Appendix for “Information Flows among Rivals and Corporate Investment”

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A.1 Acquiring the EDGAR Data and Identification of EDGAR Users

Compiling the Verified Sample

We first acquire raw EDGAR server log data from the Securities and Exchange Commission (SEC) via a Freedom of Information Act Request. These data, which cover 2004 through 2011, show the date and time of each web user’s click on firms’ SEC filings posted on the EDGAR website, along with the user’s (partially anonymized) IP address and the CIK of the firm whose filings are accessed.² Given the immense size of the data, we employ the following steps to compile the data into a workable dataset. The SEC provides the data in SAS dataset format, with one dataset per day. We create a SAS program that loops through the datasets, combining them into a single dataset. As it loops, it only retains downloads (that is, search activity) that our programs designate to be human search activity (i.e., not robot or webcrawler downloads). Consistent with Drake et al. (2016), we identify webcrawler requests as those coming from any IP address that makes more than five requests per minute or more than 1,000 requests per day and remove server log entries that reference an “index” or that reference a request for an image to avoid double counting of the filing request. In addition, consistent with Lee et al. (2015), we identify an IP address as an automated webcrawler if it requests filings from more than 50 unique CIKs in one day.

To link the EDGAR files to Compustat, we use the given CIK from the EDGAR log files (for the searched-for firm) and match it to its GVKEY using the WRDS SEC Analytics CIK-GVKEY link table. To accurately identify the owner of each IP address in the EDGAR log files, we employ a separate, proprietary database that we call the WHOIS database. The WHOIS database is created using a proprietary command line query program (API) to extract IP addresses from the American Registry for Internet Numbers (ARIN). The ARIN maintains public record of the name of the current owner of each registered Internet IP address.³ We run the API in February 2014, implying the ownership data based on the WHOIS data are valid as of that date. Because the WHOIS database does not have a common firm identifier, such as a CIK, we gather each of the company names in the WHOIS database and match them (by hand) to a CIK as reported by the SEC. As a result, in initially preparing the WHOIS data, we retain IP addresses that have at least 1,000 searches during the sample period; this design choice is necessary to make the hand-matching feasible. We then use the CIK identified by this matching procedure and match it to its GVKEY using the WRDS SEC Analytics CIK-GVKEY link table. These steps provide an initial set of searching firms.

The initial set of searching firms cover search from 2004–2011. After our original data collection, the SEC made the EDGAR log data (along with updates for more recent years) available publicly.⁴ To update the data for more recent years, we append additional EDGAR data to the set of firms originally identified (for years 2004–2011), which extends the sample period for these firms through 2015.⁵ Therefore our sample period covers 2004–2015 for a set of firms originally identified through 2011.

After completing this process, we verify the periods of IP address ownership using ARIN’s WHOWAS database.⁶ For each IP address identified based on the WHOIS data, we email ARIN to obtain the full time-series of ownership. We eliminate observations of firm-years if the IP address was not held by the firm identified based on the WHOIS data during the year. This process ensures there is no misattribution of IP addresses to firms in the sample.

Compiling the Predicted Sample

The predicted sample exploits the propensity for firms to disproportionately search for their own filings. We begin with a large sample of EDGAR search data that is roughly linked to search by corporations (based on whether the ARIN IP ownership data show names including phrases such as “Inc.” or “Corp.”) and remove any searches likely to be automated. After matching Compustat GVKEYs to all filings, using the GVKEY-CIK linking tables from the WRDS SEC Analytics Suite, we then calculate the total number of downloads for searched-for firm (j) filings by searching IP address (i) for any given calendar year. Next we run the following regression:

$$\text{Downloads}_{i,j,t} = \beta_{j,t,0} + \beta_{j,t,1}\text{Size}_{j,t} + \beta_{j,t,2}\text{Market to Book}_{j,t} + \beta_{j,t,3}\text{Leverage}_{j,t} + \beta_{j,t,4}\text{Employees}_{j,t}$$

We sort the residuals from the preceding regression by GVKEY and year and assign that GVKEY to the IP address with the largest residual for that year. To verify the validity of this process, we test the IP-GVKEY-year match on the sample of verified IP-GVKEY pairs. This approach yields the correct IP-GVKEY-year match 60% of the time.

² Data for 2003 are also available, but coverage is extremely limited.

³ For example, as of May 8, 2019, the IP address 192.44.91.111 is owned by Procter and Gamble. See <http://whois.arin.net/rest/net/NET-192-44-91-0-1/pft>.

⁴ See <http://www.sec.gov/foia/docs/foia-logs.htm>.

⁵ Though the SEC provides more recent data, we end our sample in 2015, due to the need for other test variables.

⁶ See <https://www.arin.net/resources/whowas/>.

A.2 Summary of the U.S. Government Budget Crisis Beginning in 2011 (see Table 3)

In November 2010, the Republican Party won an additional 64 seats in the U.S. House of Representatives, ensuring that party control would shift when the new Congress was sworn in during January 2011. A number of Republican candidates came to office on promises to slash government spending, including spending in the defense sector. Due partly to disagreement over spending levels, Congress failed to pass a budget for fiscal year 2011 and ultimately funded all discretionary spending through a series of continuing resolutions, which authorize only temporary funding for federal agencies to avert a government shutdown.⁷

During this period, the federal government also approached its statutory debt limit, and the Republican Party used the threat of default on U.S. debt as leverage in its budget negotiations. The Republican counterproposals to President Obama's 2012 budget would have resulted in \$1.7 trillion dollars in cuts to baseline spending over 10 years. Debate over the debt ceiling continued through the spring and early summer, leading the U.S. Treasury to use stopgap "extraordinary measures" to satisfy its obligations and Standard & Poor's to issue a negative outlook on U.S. debt. On July 31, two days before the Treasury estimated the government's borrowing capacity would be exhausted, President Obama and the Republican House leadership agreed on terms and passed the Budget Control Act ("BCA") of 2011. The White House Office of Management and Budget estimated in its mid-session review that the effect of the BCA would be to reduce discretionary spending over the next 10 years by over \$800 billion.⁸ In addition, the BCA included a sequestration provision that committed Congress to enact across-the-board reductions in spending of \$1.2 trillion over the 10-year period if it could not reduce the deficit by an equal amount using other means by early 2013.

The passage of the BCA did not end concerns over government spending—Standard & Poor's downgraded the country's long-term credit rating on August 5, only several days after BCA was passed. Throughout 2012 and into early 2013, the prospect of severe spending cuts continued to weigh. Pentagon officials described the sequestration provisions of the BCA alternately as "a doomsday mechanism" and "a goofy meat ax". The deputy assistant secretary of defense for manufacturing policy said, "[i]t truly will emasculate the industrial base."⁹ Sequestration cuts first began to take effect in March 2013.

⁷ Continuing resolutions create substantial uncertainty for officials in government agencies, because the eventual appropriated amount may be less than the amount authorized. If a government official were to enter into a contract under a continuing resolution but appropriated funds were subsequently reduced, then the official would risk violating the Anti-Deficiency Act, which carries criminal penalties. As a result, officials tend to scale back on entering into contracts while operating under a continuing resolution.

⁸ Office of Management and Budget. Mid-Session Review, Budget of the United States Government, Fiscal Year 2012. Washington: U.S. GPO, 2011.

⁹ See https://www.washingtonpost.com/lifestyle/style/panetta-and-other-pentagon-officials-are-mad-about-metaphors/2012/02/15/gIQAuJP9TR_story.html?utm_term=.844258908196.

A.3 Illustrative Grid of Intra- versus Inter-Industry Information Flows

	Oil and Gas	Business Equipment	Automobiles and Trucks	Printing and Publishing	Chemical Products
Oil and Gas	39.98	3.06	0.52	0.53	2.21
Business Equipment	2.20	38.18	1.00	0.39	0.84
Automobiles and Trucks	1.17	5.92	26.11	0.36	1.64
Printing and Publishing	2.05	6.69	2.50	8.25	2.36
Chemical Products	5.59	5.36	1.65	1.36	32.74

This table presents, for five selected industries, the average percentage of total annual search activity by firms in industry i for the filings of firms in industry j posted on the SEC's EDGAR database. These percentages exclude search by a firm for its own filings. Each row corresponds to a searching industry; each column corresponds to the searched industry. Industries are defined using the Fama-French 30 industry classification scheme.

A.4 Full Correlation Table

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
(1) <i>Information Acquisition</i> _{<i>i,j,t</i>}	1.00	-0.02	0.00	0.00	0.05	0.02	0.08	0.18	0.05	-0.09	0.01	0.00	-0.07	0.03	0.02	0.04	0.03	-0.01	0.06	0.17	0.07	0.06	-0.02	0.13	0.09	0.10	-0.03
(2) <i>Encroachment</i> _{<i>i,j,t to t+1</i>}	-0.01	1.00	0.00	0.01	-0.02	0.04	-0.30	0.01	0.00	0.01	-0.01	0.01	-0.06	0.05	-0.03	-0.01	0.04	-0.01	-0.01	-0.01	0.00	0.03	0.00	0.02	-0.06	0.01	-0.01
(3) <i>ΔCapex Similarity</i> _{<i>i,j,t+1</i>}	-0.01	0.00	1.00	0.01	0.00	-0.02	-0.01	-0.01	0.00	0.00	0.01	-0.01	0.01	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.01	-0.01	0.07	-0.03	0.04	0.00	-0.02
(4) <i>ΔR&D Similarity</i> _{<i>i,j,t+1</i>}	0.00	0.02	0.00	1.00	0.00	0.01	0.00	-0.00	0.00	-0.00	-0.06	-0.02	0.00	-0.00	0.02	0.00	0.01	-0.00	0.00	0.02	0.00	0.00	-0.04	0.01	-0.00	0.00	-0.01
(5) <i>Acquisition</i> _{<i>i,j,t+1</i>}	0.03	0.00	0.00	0.00	1.00	0.05	0.01	0.01	0.00	-0.01	0.00	0.00	-0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(6) <i>Private Acquisition</i> _{<i>i,j,t+1</i>}	0.02	0.05	-0.02	0.01	0.02	1.00	0.06	-0.01	0.02	-0.01	0.00	0.04	0.03	0.02	0.14	-0.05	0.11	0.02	0.05	-0.05	-0.04	-0.03	0.02	-0.05	-0.01	-0.01	0.02
(7) <i>Product Similarity</i> _{<i>i,j,t</i>}	0.08	-0.16	0.00	0.01	0.01	0.07	1.00	0.03	0.03	-0.01	-0.07	-0.06	0.26	-0.17	0.12	-0.09	-0.09	0.02	0.00	0.08	-0.07	-0.03	0.01	-0.07	-0.01	-0.05	0.00
(8) <i>Return Corr</i> _{<i>i,j,t</i>}	0.22	-0.02	0.00	-0.02	0.01	-0.01	0.03	1.00	0.08	-0.05	-0.13	-0.12	-0.12	-0.11	0.25	0.07	0.17	-0.05	0.22	0.53	0.13	0.24	-0.05	0.35	0.22	0.06	-0.13
(9) <i>Same Auditor</i> _{<i>i,j,t</i>}	0.07	0.00	0.00	0.00	0.00	0.02	0.03	0.09	1.00	-0.01	0.03	0.04	0.00	-0.02	-0.03	0.01	-0.01	0.02	-0.01	0.06	0.02	0.00	0.01	0.05	0.05	0.01	-0.01
(10) <i>Log(Distance)</i> _{<i>i,j,t</i>}	-0.10	0.01	0.00	-0.00	0.00	-0.01	-0.03	-0.07	0.01	1.00	-0.02	-0.02	-0.01	0.00	-0.02	-0.02	0.00	-0.01	-0.01	-0.01	-0.02	0.00	-0.01	0.00	-0.02	-0.02	-0.01
(11) <i>Market-to-Book Ratio</i> _{<i>i,t</i>}	0.04	-0.01	-0.02	0.01	0.00	0.03	-0.18	-0.11	0.04	0.05	1.00	0.32	0.11	0.08	-0.28	-0.08	-0.06	0.14	-0.17	-0.25	-0.05	-0.23	0.10	-0.09	0.04	0.00	0.11
(12) <i>Market-to-Book Ratio</i> _{<i>j,t</i>}	0.06	0.00	-0.02	0.01	0.00	0.05	-0.15	-0.04	0.06	0.03	0.47	1.00	0.12	0.07	-0.26	-0.06	-0.14	0.08	-0.13	-0.35	-0.07	-0.33	0.19	-0.14	0.05	-0.01	0.25
(13) <i>Product Market Fluidity</i> _{<i>i,t</i>}	-0.09	0.02	0.00	-0.00	-0.01	0.04	0.27	-0.09	-0.01	0.00	-0.03	0.00	1.00	-0.23	0.08	0.04	-0.25	0.11	-0.03	-0.08	0.00	-0.26	0.08	-0.14	-0.04	-0.07	0.11
(14) <i>TNIC HHI</i> _{<i>i,t</i>}	0.00	0.04	0.00	0.02	0.01	0.02	-0.16	-0.13	-0.03	0.04	0.18	0.14	-0.21	1.00	-0.19	-0.04	0.00	0.00	-0.14	-0.11	-0.09	0.02	-0.02	-0.05	-0.04	0.12	0.01
(15) <i>Size</i> _{<i>i,t</i>}	0.02	-0.01	0.01	0.00	0.00	0.14	0.11	0.25	-0.03	-0.08	-0.33	-0.30	0.09	-0.20	1.00	0.13	0.34	-0.07	0.55	0.32	0.05	0.17	-0.06	0.08	0.04	-0.02	-0.10
(16) <i>Leverage</i> _{<i>i,t</i>}	0.07	-0.03	0.01	0.00	0.00	-0.01	-0.07	0.10	0.03	-0.08	-0.12	-0.07	0.05	-0.10	0.26	1.00	-0.08	0.02	0.09	0.09	0.26	0.02	0.00	0.09	0.06	0.02	-0.02
(17) <i>ROA</i> _{<i>i,t</i>}	0.06	-0.01	-0.02	-0.02	0.00	0.10	-0.20	0.15	0.00	-0.03	0.36	0.08	-0.26	0.03	0.16	-0.05	1.00	0.06	0.18	0.16	0.03	0.22	-0.04	0.08	-0.01	0.02	-0.11
(18) <i>Sales Growth</i> _{<i>i,t</i>}	-0.01	0.02	0.01	0.01	0.00	0.05	-0.02	-0.02	0.02	0.02	0.26	0.15	0.04	0.03	-0.07	-0.03	0.25	1.00	-0.13	-0.08	-0.01	-0.06	0.07	-0.04	0.01	-0.01	0.04
(19) <i>Firm Age</i> _{<i>i,t</i>}	0.08	-0.03	-0.01	0.01	0.00	0.03	-0.01	0.23	-0.02	-0.07	-0.17	-0.14	-0.04	-0.18	0.57	0.21	0.15	-0.20	1.00	0.20	0.08	0.09	-0.04	0.23	0.07	0.01	-0.05
(20) <i>Size</i> _{<i>j,t</i>}	0.21	-0.02	0.00	-0.01	0.00	-0.05	0.09	0.53	0.06	-0.06	-0.30	-0.29	-0.06	-0.17	0.32	0.16	0.04	-0.09	0.21	1.00	0.22	0.46	-0.10	0.41	0.39	0.21	-0.26
(21) <i>Leverage</i> _{<i>j,t</i>}	0.11	-0.01	0.01	0.00	0.00	-0.03	-0.01	0.17	0.03	-0.06	-0.13	-0.16	0.02	-0.15	0.14	0.28	0.05	-0.02	0.14	0.38	1.00	-0.06	0.01	0.10	0.17	0.02	0.03
(22) <i>ROA</i> _{<i>j,t</i>}	0.12	-0.01	-0.02	-0.05	0.00	-0.03	-0.13	0.28	0.02	-0.05	-0.02	0.18	-0.27	-0.02	0.03	0.06	0.19	0.05	0.06	0.34	-0.01	1.00	-0.06	0.17	0.01	0.06	-0.53
(23) <i>Sales Growth</i> _{<i>j,t</i>}	0.00	0.01	0.04	-0.01	0.00	0.04	-0.03	0.00	0.01	0.00	0.13	0.27	0.01	0.00	-0.06	0.00	0.08	0.23	-0.05	-0.04	-0.02	0.20	1.00	-0.12	0.06	-0.02	0.04
(24) <i>Firm Age</i> _{<i>j,t</i>}	0.15	-0.02	-0.03	-0.01	0.00	-0.05	-0.06	0.35	0.04	-0.03	-0.07	-0.10	-0.14	-0.07	0.07	0.09	0.07	-0.06	0.17	0.38	0.14	0.23	-0.19	1.00	0.19	0.16	-0.05
(25) <i>Log(Filings)</i> _{<i>j,t</i>}	0.13	-0.06	0.04	0.02	0.00	0.00	-0.01	0.21	0.05	-0.02	0.05	0.11	-0.03	-0.07	0.04	0.09	0.03	0.03	0.06	0.36	0.21	0.05	0.10	0.15	1.00	0.11	-0.02
(26) <i>Leader</i> _{<i>j,t</i>}	0.11	-0.01	-0.01	0.00	0.00	-0.01	-0.06	0.07	0.01	-0.01	0.02	0.03	-0.07	0.08	-0.02	0.02	0.03	0.00	0.01	0.18	0.04	0.10	-0.01	0.12	0.10	1.00	-0.02
(27) <i>Distress</i> _{<i>j,t</i>}	-0.03	0.00	-0.01	0.03	0.00	0.02	0.00	-0.13	-0.01	0.01	0.11	0.15	0.10	0.03	-0.09	-0.04	-0.04	0.02	-0.06	-0.21	-0.02	-0.21	-0.02	-0.04	-0.02	-0.02	1.00

This table presents correlations for the primary dependent variables throughout the paper and the regressors used in the baseline analysis in Table 2. Spearman's rank correlations are reported below the diagonal and Pearson correlations above the diagonal. Data are restricted to each searching firm's TNIC3 industry, based on the Hoberg and Phillips (2016) text-based network industry classification schema. See Appendix A for variable definitions.

A.5 Robustness of Table 2: Poisson Specification

This table examines the robustness of Table 2 using Poisson estimation instead of negative binomial estimation. Specifically, it presents the results of Poisson regressions of the total number of firm j filings downloaded from the SEC's EDGAR database by firm i during year t ($Information\ Acquisition_{i,j,t}$) on firm-pair characteristics, searching firm i characteristics, and searched-for firm j characteristics. Columns 1, 3, and 5 present the coefficients from estimating the model, while columns 2, 4, and 6 present the estimated incidence rate ratios. Data are restricted to each searching firm's TNIC3 industry, based on the Hoberg and Phillips (2016) text-based network industry classification schema. All continuous variables are winsorized at the first and 99th percentiles. We normalize all nonbinary independent variables to have a mean of zero and standard deviation of one and cluster standard errors by firm-pair. See Appendix A for variable definitions. The sample period covers 2004-2015. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

VARIABLES	(1) Coeff	(2) IRR	(3) Coeff	(4) IRR	(5) Coeff	(6) IRR
<i>Market-to-Book Ratio</i> _{i,t}	0.152*** (0.013)	1.165	0.123*** (0.014)	1.130	0.051*** (0.016)	1.053
<i>Market-to-Book Ratio</i> _{j,t}	0.256*** (0.012)	1.292	0.215*** (0.012)	1.239	-0.009 (0.018)	0.991
<i>Product Similarity</i> _{i,j,t}	0.410*** (0.013)	1.507	0.415*** (0.013)	1.514	0.017 (0.016)	1.017
<i>Return Corr</i> _{i,j,t}	0.450*** (0.014)	1.568	0.465*** (0.016)	1.593	0.025 (0.015)	1.025
<i>Same Auditor</i> _{i,j,t}	0.267*** (0.031)	1.306	0.262*** (0.032)	1.300	0.159*** (0.048)	1.172
<i>Log(Distance)</i> _{i,j,t}	-0.249*** (0.011)	0.780	-0.238*** (0.011)	0.789	0.021 (0.026)	1.021
<i>Product Market Fluidity</i> _{i,t}	-0.283*** (0.016)	0.754	-0.292*** (0.017)	0.747	-0.038** (0.019)	0.962
<i>TNIC HHI</i> _{i,t}	0.163*** (0.012)	1.177	0.165*** (0.012)	1.179	-0.036*** (0.012)	0.965
<i>Size</i> _{i,t}	-0.274*** (0.020)	0.761	-0.268*** (0.020)	0.765	-0.143** (0.069)	0.867
<i>Leverage</i> _{i,t}	0.120*** (0.014)	1.128	0.124*** (0.014)	1.132	0.031 (0.022)	1.031
<i>ROA</i> _{i,t}	0.054*** (0.014)	1.055	0.039*** (0.015)	1.039	0.001 (0.013)	1.001
<i>Sales Growth</i> _{i,t}	0.020** (0.010)	1.020	0.048*** (0.010)	1.049	0.011 (0.008)	1.011
<i>Firm Age</i> _{i,t}	0.181*** (0.019)	1.198	0.161*** (0.019)	1.175	2.268** (0.911)	9.663
<i>Size</i> _{j,t}	0.506*** (0.022)	1.658	0.413*** (0.022)	1.512	0.361*** (0.064)	1.435
<i>Leverage</i> _{j,t}	0.143*** (0.014)	1.154	0.138*** (0.014)	1.148	-0.031 (0.020)	0.969
<i>ROA</i> _{j,t}	0.056*** (0.020)	1.057	0.083*** (0.020)	1.087	-0.064*** (0.020)	0.938
<i>Sales Growth</i> _{j,t}	-0.040*** (0.013)	0.960	-0.030** (0.012)	0.971	-0.011 (0.011)	0.989
<i>Firm Age</i> _{j,t}	0.065*** (0.015)	1.068	0.054*** (0.015)	1.055	-0.058 (0.361)	0.943
<i>Log(Filings)</i> _{j,t}	0.019 (0.012)	1.019	0.153*** (0.015)	1.166	0.041*** (0.014)	1.042
<i>Leader</i> _{j,t}	0.296*** (0.059)	1.345	0.317*** (0.060)	1.373	0.035 (0.046)	1.036
<i>Distress</i> _{j,t}	-0.172 (0.122)	0.842	-0.077 (0.121)	0.926	-0.109 (0.161)	0.897
Observations	252,370		252,370		74,917	
Firm-Pair Effects	No		No		Yes	
Year FE	No		Yes		Yes	

A.6 Robustness of Table 2: S&P 500

This table examines the robustness of Table 2, limiting observations to S&P 500 constituents in the verified sample. Specifically, it presents the results of negative binomial regressions of the total number of firm j filings downloaded from the SEC's EDGAR database by firm i during year t ($Information\ Acquisition_{i,j,t}$) on firm-pair characteristics, searching firm i characteristics, and searched-for firm j characteristics. Columns 1 and 3 present the coefficients from estimating the model, while columns 2 and 4 present the estimated incidence rate ratios. The coefficients, standard errors, and incidence rate ratios in columns 5 and 6 are estimated using the fixed effects negative binomial model of Hausman et al. (1984). Data are restricted to each searching firm's TNIC3 industry, based on the Hoberg and Phillips (2016) text-based network industry classification schema. All continuous variables are winsorized at the first and 99th percentiles. We normalize all nonbinary independent variables to have a mean of zero and standard deviation of one and cluster standard errors by firm-pair. See Appendix A for variable definitions. The sample period covers 2004-2015. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

VARIABLES	(1) Coeff	(2) IRR	(3) Coeff	(4) IRR	(5) Coeff	(6) IRR
<i>Market-to-Book Ratio</i> _{i,t}	-0.014 (0.031)	0.986	0.015 (0.032)	1.015	0.058*** (0.016)	1.060
<i>Market-to-Book Ratio</i> _{j,t}	0.311*** (0.027)	1.365	0.291*** (0.027)	1.337	0.048*** (0.013)	1.049
<i>Product Similarity</i> _{i,j,t}	0.170*** (0.028)	1.185	0.180*** (0.029)	1.197	0.075*** (0.014)	1.078
<i>Return Corr</i> _{i,j,t}	0.402*** (0.029)	1.495	0.415*** (0.033)	1.515	0.047*** (0.016)	1.048
<i>Same Auditor</i> _{i,j,t}	0.198*** (0.057)	1.218	0.157*** (0.056)	1.170	0.114*** (0.029)	1.121
<i>Log(Distance)</i> _{i,j,t}	-0.209*** (0.019)	0.811	-0.199*** (0.020)	0.819	-0.091*** (0.012)	0.913
<i>Product Market Fluidity</i> _{i,t}	-0.192*** (0.024)	0.825	-0.202*** (0.028)	0.817	-0.070*** (0.015)	0.932
<i>TNIC HHI</i> _{i,t}	0.198*** (0.025)	1.219	0.193*** (0.025)	1.213	0.076*** (0.012)	1.079
<i>Size</i> _{i,t}	-0.612*** (0.041)	0.543	-0.591*** (0.043)	0.554	-0.266*** (0.024)	0.767
<i>Leverage</i> _{i,t}	0.073*** (0.028)	1.075	0.090*** (0.029)	1.095	0.119*** (0.017)	1.127
<i>ROA</i> _{i,t}	0.105*** (0.023)	1.110	0.087*** (0.022)	1.091	0.036*** (0.011)	1.036
<i>Sales Growth</i> _{i,t}	0.009 (0.019)	1.009	0.075*** (0.022)	1.078	0.019* (0.011)	1.019
<i>Firm Age</i> _{i,t}	0.114*** (0.032)	1.121	0.109*** (0.032)	1.116	0.161*** (0.017)	1.175
<i>Size</i> _{j,t}	0.710*** (0.049)	2.035	0.632*** (0.049)	1.882	0.370*** (0.022)	1.447
<i>Leverage</i> _{j,t}	0.190*** (0.029)	1.209	0.185*** (0.031)	1.204	0.014 (0.014)	1.014
<i>ROA</i> _{j,t}	-0.136*** (0.035)	0.873	-0.142*** (0.036)	0.867	-0.061*** (0.015)	0.941
<i>Sales Growth</i> _{j,t}	-0.044* (0.019)	0.957	-0.040** (0.019)	0.961	-0.013 (0.011)	0.987
<i>Firm Age</i> _{j,t}	0.086*** (0.026)	1.090	0.087*** (0.026)	1.091	0.015 (0.015)	1.015
<i>Log(filings)</i> _{j,t}	0.192*** (0.027)	1.212	0.312*** (0.030)	1.366	0.060*** (0.013)	1.062
<i>Leader</i> _{j,t}	0.190* (0.105)	1.209	0.232** (0.107)	1.261	-0.006 (0.053)	0.994
<i>Distress</i> _{j,t}	-0.614*** (0.195)	0.541	-0.593*** (0.201)	0.553	-0.199 (0.140)	0.819
Observations	102,507		102,507		33,397	
Firm-Pair Effects	No		No		Yes	
Year FE	No		Yes		Yes	

A.7 Robustness of Table 7: Alternative Scalars.

This table examines the robustness of Table 7, using lagged total assets as an alternative scalar for investment similarities. Specifically, this table presents the results from regressions of changes in investment similarities between i,j firm-pairs ($\Delta Capex Similarity_{i,j,t+1}$ or $\Delta R\&D Similarity_{i,j,t+1}$) on information flows between the rival-pair (*Information Acquisition* $_{i,j,t}$), measured as the total number of firm j filings downloaded from the SEC's EDGAR database by firm i during year t . To capture changes in investment similarities, we examine firm-pair level changes in capital expenditures and changes in research and development expenses, each scaled by lagged assets. In this table, $\Delta Capex Similarity_{i,j,t+1}$ is defined as $-1 * (|Capex/Assets_{i,t+1} - Capex/Assets_{j,t+1}| - |Capex/Assets_{i,t} - Capex/Assets_{j,t}|)$, where $Capex/Assets_{i,t}$ equals firm i 's net capital expenditures in year t scaled by lagged total assets, $(capxv_{i,t} - sppe_{i,t})/at_{i,t-1}$. In this table, $\Delta R\&D Similarity_{i,j,t+1}$ is defined as $-1 * (|R\&D_{i,t+1} - R\&D_{j,t+1}| - |R\&D_{i,t} - R\&D_{j,t}|)$, where $R\&D_{i,t}$ equals firm i 's research and development expenses in year t scaled by lagged total assets, $xrd_{i,t}/at_{i,t-1}$. Missing values of $xrd_{i,t}$ are set to the industry-year mean, where industry is measured at the 2-digit SIC code level, following Koh and Reeb (2015). Panel A presents the results of OLS regressions examining factors associated with the change in similarity between firm i and firm j 's capital expenditures and between firm i and firm j 's research and development expenses. Panel B examines cross-sectional variation in the associations between information acquisition and investment similarities based on the product similarity of firms i and j . To isolate information flows among i,j rival-pairs, observations must fall within firm i 's product space (text-based industry classifications, as in Hoberg and Phillips, 2016). All continuous variables are winsorized at the first and 99th percentiles. We normalize all nonbinary independent variables to have a mean of zero and standard deviation of one. Standard errors are clustered by firm-pair. See Appendix A for full variable definitions. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

Panel A: Pairwise information flows and pairwise investment similarity

VARIABLES	(1) $\Delta Capex Similarity_{i,j,t+1}$	(2) $\Delta R\&D Similarity_{i,j,t+1}$
<i>Information Acquisition</i> $_{i,j,t}$	0.003 (0.003)	0.005** (0.002)
<i>Product Similarity</i> $_{i,j,t}$	0.013** (0.005)	0.002 (0.004)
<i>Return Corr</i> $_{i,j,t}$	0.019*** (0.006)	-0.046*** (0.005)
<i>Same Auditor</i> $_{i,j,t}$	-0.001 (0.013)	-0.066*** (0.013)
<i>Log(Distance)</i> $_{i,j,t}$	0.042** (0.018)	0.017 (0.014)
<i>Product Market Fluidity</i> $_{i,t}$	0.016*** (0.005)	-0.030*** (0.005)
<i>TNIC HHI</i> $_{i,t}$	0.011** (0.004)	-0.009** (0.004)
<i>Size</i> $_{i,t}$	0.074*** (0.020)	0.088*** (0.023)
<i>Market-to-Book Ratio</i> $_{i,t}$	-0.076*** (0.006)	-0.116*** (0.010)
<i>Leverage</i> $_{i,t}$	0.003 (0.007)	-0.052*** (0.008)
<i>Log(Cash)</i> $_{i,t}$	-0.402*** (0.044)	-1.262*** (0.079)
<i>ROA</i> $_{i,t}$	0.015*** (0.004)	0.011* (0.007)
<i>Sales Growth</i> $_{i,t}$	-0.007** (0.003)	-0.008** (0.003)
<i>Size</i> $_{j,t}$	0.538*** (0.027)	0.358*** (0.023)
<i>Market-to-Book Ratio</i> $_{j,t}$	-0.053*** (0.006)	-0.075*** (0.008)
<i>Leverage</i> $_{j,t}$	0.015 (0.009)	-0.051*** (0.009)
<i>Log(Cash)</i> $_{j,t}$	-0.094*** (0.036)	0.297*** (0.048)
<i>ROA</i> $_{j,t}$	-0.007 (0.007)	0.098*** (0.008)
<i>Sales Growth</i> $_{j,t}$	0.063***	0.004

<i>Log(Filings)_{j,t}</i>	(0.005) 0.022***	(0.005) 0.040***
<i>Leader_{j,t}</i>	(0.005) -0.013 (0.027)	(0.005) -0.048 (0.033)
Observations	219,211	219,902
R-squared	0.301	0.360
Firm-Pair FE	Yes	Yes
Year FE	Yes	Yes

Panel B: Pairwise information flows and pairwise investment similarity—product similarity heterogeneity

VARIABLES	(1) $\Delta Capex Similarity_{i,j,t+1}$	(2) $\Delta R\&D Similarity_{i,j,t+1}$
<i>Information Acquisition</i> _{<i>i,j,t</i>}	0.005 (0.003)	0.007*** (0.003)
<i>Information Acquisition</i> _{<i>i,j,t</i>} × <i>Product Similarity</i> _{<i>i,j,t</i>}	-0.005* (0.003)	-0.006*** (0.002)
<i>Product Similarity</i> _{<i>i,j,t</i>}	0.013** (0.005)	0.003 (0.004)
<i>Return Corr</i> _{<i>i,j,t</i>}	0.019*** (0.006)	-0.046*** (0.005)
<i>Same Auditor</i> _{<i>i,j,t</i>}	-0.000 (0.013)	-0.066*** (0.013)
<i>Log(Distance)</i> _{<i>i,j,t</i>}	0.042** (0.018)	0.017 (0.014)
<i>Product Market Fluidity</i> _{<i>i,t</i>}	0.016*** (0.005)	-0.030*** (0.005)
<i>TNIC HHI</i> _{<i>i,t</i>}	0.011** (0.004)	-0.009** (0.004)
<i>Size</i> _{<i>i,t</i>}	0.074*** (0.020)	0.088*** (0.023)
<i>Market-to-Book Ratio</i> _{<i>i,t</i>}	-0.076*** (0.006)	-0.116*** (0.010)
<i>Leverage</i> _{<i>i,t</i>}	0.003 (0.007)	-0.052*** (0.008)
<i>Log(Cash)</i> _{<i>i,t</i>}	-0.401*** (0.044)	-1.262*** (0.079)
<i>ROA</i> _{<i>i,t</i>}	0.015*** (0.004)	0.011* (0.007)
<i>Sales Growth</i> _{<i>i,t</i>}	-0.007** (0.003)	-0.008** (0.003)
<i>Size</i> _{<i>j,t</i>}	0.538*** (0.027)	0.359*** (0.023)
<i>Market-to-Book Ratio</i> _{<i>j,t</i>}	-0.053*** (0.006)	-0.075*** (0.008)
<i>Leverage</i> _{<i>j,t</i>}	0.015 (0.009)	-0.051*** (0.009)
<i>Log(Cash)</i> _{<i>j,t</i>}	-0.094*** (0.036)	0.296*** (0.048)
<i>ROA</i> _{<i>j,t</i>}	-0.007 (0.007)	0.098*** (0.008)
<i>Sales Growth</i> _{<i>j,t</i>}	0.063*** (0.005)	0.004 (0.005)
<i>Log(Filings)</i> _{<i>j,t</i>}	0.022*** (0.005)	0.040*** (0.005)
<i>Leader</i> _{<i>j,t</i>}	-0.013 (0.027)	-0.049 (0.033)
Observations	219,211	219,902
R-squared	0.301	0.360
Firm-Pair FE	Yes	Yes
Year FE	Yes	Yes

A.8 Full Tabulation of Table 3

Information flows among rivals and shocks to investment opportunities—the U.S. federal government budget crisis

This table presents the full tabulation of results from estimating difference-in-difference regressions of the total number of firm j filings downloaded from the SEC's EDGAR database by firm i during year t ($Information\ Acquisition_{i,j,t}$) on a shock to investment opportunities for government contractors during a governmental budget crisis ($BCA_t \times High\ Contract_i$). We use unexpected reductions in U.S. government spending in 2011-2013 due to the passage of the Budget Control Act of 2011 as a shock to investment opportunities, via a reduction in product demand for government contractors. We identify firms that are subject to the shock as those firms for which U.S. government contracts accounted for 5% or more of total revenue in 2010 ($High\ Contract_i = 1$). We then create an indicator variable for the calendar years 2011-2013 ($BCA_t = 1$) and interact it with $High\ Contract_i$. Column 1 presents the coefficients from estimating the model, while column 2 presents the estimated incidence rate ratios. Data are restricted to each searching firm's TNIC3 industry, based on the Hoberg and Phillips (2016) text-based network industry classification schema. The model includes firm-pair characteristics, searching firm i characteristics, and searched-for firm j characteristics and uses the fixed effects negative binomial regression model of Hausman et al. (1984). All continuous variables are winsorized at the first and 99th percentiles. We normalize all nonbinary independent variables to have a mean of zero and standard deviation of one and cluster standard errors by firm-pair. See Appendix A for variable definitions. The sample period covers 2008-2013. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

VARIABLES	(1) Coeff	(2) IRR
$BCA_t \times High\ Contract_i$	-0.888*** (0.098)	0.412
$High\ Contract_i$	0.389*** (0.101)	1.475
$Product\ Similarity_{i,j,t}$	0.162*** (0.013)	1.175
$Return\ Corr_{i,j,t}$	0.082*** (0.015)	1.085
$Same\ Auditor_{i,j,t}$	0.062** (0.029)	1.064
$Log(Distance)_{i,j,t}$	-0.047*** (0.011)	0.954
$Market-to-Book\ Ratio_{i,t}$	-0.008 (0.013)	0.992
$Market-to-Book\ Ratio_{j,t}$	0.013 (0.014)	1.013
$Product\ Market\ Fluidity_{i,t}$	-0.149*** (0.014)	0.861
$TNIC\ HHI_{i,t}$	0.034*** (0.010)	1.034
$Size_{i,t}$	-0.245*** (0.022)	0.782
$Leverage_{i,t}$	0.078*** (0.014)	1.081
$ROA_{i,t}$	0.023* (0.013)	1.023
$Sales\ Growth_{i,t}$	0.013 (0.008)	1.013
$Firm\ Age_{i,t}$	0.147*** (0.016)	1.158
$Size_{j,t}$	0.283*** (0.021)	1.327
$Leverage_{j,t}$	0.004 (0.014)	1.004
$ROA_{j,t}$	-0.002 (0.017)	0.998
$Sales\ Growth_{j,t}$	-0.021** (0.009)	0.979
$Firm\ Age_{j,t}$	-0.024 (0.014)	0.977
$Log(Filings)_{j,t}$	0.037***	1.038

<i>Leader_{j,t}</i>	(0.012) 0.115**	1.122
<i>Distress_{j,t}</i>	(0.053) 0.113	1.120
	(0.124)	
Observations	37,543	
Firm-Pair FE	Yes	
Year FE	Yes	

A.9 Full Tabulation of Table 4

Information flows among rivals and shocks to investment opportunities—industry-level import tariff cuts

This table presents the full tabulation of results from estimating regressions of the total number of firm j filings downloaded from the SEC's EDGAR database by firm i during year t ($Information\ Acquisition_{i,j,t}$) on a shock to investment opportunities based on tariff cuts ($Tariff\ Cut_{i,t}$). We use plausibly exogenous changes in tariff rates as a shock to investment opportunities, via an increase in foreign competition. The indicator variable, $Tariff\ Cut_{i,t}$, is constructed as follows: we first collect product-level import data from the United States International Trade Commission (USITC) for the period 2004-2014 at the four-digit SIC industry level, similar to that compiled for earlier periods by Feenstra (1996) and Feenstra et al. (2002). We then calculate the ad valorem tariff rates for each industry-year as the duties collected by U.S. Customs divided by the free-on-board value of imports. We follow Fresard (2010) and measure unexpected tariff cuts as a negative change in tariff rates that is at least three times the median change and not followed by an equivalent increase in the following two years. Column 1 presents the coefficients from estimating the model, while column 2 presents the estimated incidence rate ratios. Data are restricted to each searching firm's TNIC3 industry, based on the Hoberg and Phillips (2016) text-based network industry classification schema. As in prior studies, these data are limited to manufacturing firms (four-digit SIC codes between 2000 and 3999). The model includes firm-pair characteristics, searching firm i characteristics, and searched-for firm j characteristics and uses the fixed effects negative binomial regression model of Hausman et al. (1984). All continuous variables are winsorized at the first and 99th percentiles. We normalize all nonbinary independent variables to have a mean of zero and standard deviation of one. Standard errors are clustered by firm-pair. See Appendix A for variable definitions. The sample period covers 2004-2014. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

VARIABLES	(1) Coeff	(2) IRR
<i>Tariff Cut</i> _{i,t}	-0.139*** (0.038)	0.870
<i>Product Similarity</i> _{i,j,t}	0.174*** (0.016)	1.190
<i>Return Corr</i> _{i,j,t}	0.056*** (0.017)	1.058
<i>Same Auditor</i> _{i,j,t}	0.085** (0.036)	1.089
<i>Log(Distance)</i> _{i,j,t}	-0.158*** (0.015)	0.854
<i>Market-to-Book Ratio</i> _{i,t}	0.106*** (0.015)	1.112
<i>Market-to-Book Ratio</i> _{j,t}	0.019 (0.017)	1.019
<i>Product Market Fluidity</i> _{i,t}	-0.147*** (0.020)	0.863
<i>TNIC HHI</i> _{i,t}	0.042*** (0.014)	1.043
<i>Size</i> _{i,t}	-0.114*** (0.028)	0.892
<i>Leverage</i> _{i,t}	0.074*** (0.020)	1.077
<i>ROA</i> _{i,t}	0.044** (0.019)	1.045
<i>Sales Growth</i> _{i,t}	0.018 (0.011)	1.018
<i>Firm Age</i> _{i,t}	0.132*** (0.022)	1.141
<i>Size</i> _{j,t}	0.422*** (0.027)	1.525
<i>Leverage</i> _{j,t}	-0.007 (0.016)	0.993
<i>ROA</i> _{j,t}	-0.048* (0.025)	0.953
<i>Sales Growth</i> _{j,t}	-0.017 (0.013)	0.984
<i>Firm Age</i> _{j,t}	0.036** (0.018)	1.037

<i>Log(Filings)_{j,t}</i>	0.031** (0.015)	1.031
<i>Leader_{j,t}</i>	-0.029 (0.070)	0.971
<i>Distress_{j,t}</i>	0.087 (0.094)	1.091
Observations	24,425	24,425
Firm-Pair Effects	Yes	
Year FE	Yes	

A.10 Full Tabulation of Table 5

The predictive ability of pairwise information flows for future acquisitions

This table presents the full tabulation of results from regressions of future M&A activity between i,j firm-pairs ($Acquisition_{i,j,t+1}$) on information flows between the rival-pair ($Information\ Acquisition_{i,j,t}$), measured as the total number of firm j filings downloaded from the SEC's EDGAR database by firm i during year t . Panel A presents the results of logit models examining factors associated with future acquisitions of public firms j by firms i . The dependent variable is an indicator variable set to one if firm i acquires public firm j in year $t+1$. Panel B examines cross-sectional variation in the associations between information acquisition and future acquisitions based on the product similarity of firms i and j . To isolate information flows among rival firms, observations must fall within acquiring firm i 's product space (text-based industry classifications, as in Hoberg and Phillips, 2016). All continuous variables are winsorized at the first and 99th percentiles. In both panels, we normalize all nonbinary independent variables to have a mean of zero and standard deviation of one. Standard errors are clustered by firm-pair. See Appendix A for variable definitions. The sample period covers 2004-2015. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

Panel A: Information flows between the rival-pair and subsequent pairwise acquisitions

VARIABLES	(1) $Acquisition_{i,j,t+1}$		(2) $Acquisition_{i,j,t+1}$		(3) $Acquisition_{i,j,t+1}$	
	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio
$Information\ Acquisition_{i,j,t}$	0.479*** (0.028)	1.614	0.441*** (0.043)	1.554	0.463*** (0.045)	1.589
$Product\ Similarity_{i,j,t}$			0.555*** (0.099)	1.742	0.544*** (0.100)	1.724
$Return\ Corr_{i,j,t}$			0.163 (0.116)	1.177	0.303** (0.122)	1.354
$Log(Distance)_{i,j,t}$			-0.059 (0.083)	0.942	-0.056 (0.084)	0.946
$Product\ Market\ Fluidity_{i,t}$			-0.152 (0.129)	0.859	-0.166 (0.134)	0.847
$TNIC\ HHI_{i,t}$			0.347*** (0.068)	1.415	0.336*** (0.070)	1.399
$Total\ Product\ Similarity_{i,t}$			-0.663*** (0.218)	0.515	-0.622*** (0.198)	0.537
$Size_{i,t}$			1.006*** (0.126)	2.734	0.992*** (0.132)	2.696
$Log(Cash_{i,t})$			0.282* (0.145)	1.326	0.326** (0.151)	1.385
$Market-to-Book\ Ratio_{i,t}$			-0.166 (0.121)	0.847	-0.237* (0.139)	0.789
$Leverage_{i,t}$			-0.213** (0.108)	0.808	-0.174 (0.110)	0.840
$ROA_{i,t}$			0.074 (0.167)	1.077	0.084 (0.172)	1.087
$PPE_{i,t}$			-0.229 (0.719)	0.795	-0.398 (0.733)	0.672
$Firm\ Age_{i,t}$			-0.129 (0.106)	0.879	-0.126 (0.107)	0.882
$Size_{j,t}$			-0.743*** (0.136)	0.476	-0.779*** (0.150)	0.459
$Log(Cash_{j,t})$			-0.039 (0.122)	0.962	-0.015 (0.126)	0.985
$Market-to-Book\ Ratio_{j,t}$			-0.035 (0.105)	0.965	-0.045 (0.112)	0.956
$Leverage_{j,t}$			0.183** (0.086)	1.201	0.185** (0.089)	1.204
$ROA_{j,t}$			0.049 (0.101)	1.050	0.027 (0.102)	1.027
$PPE_{j,t}$			-1.130* (0.676)	0.323	-1.105 (0.682)	0.331
$Firm\ Age_{j,t}$			-0.115 (0.117)	0.891	-0.079 (0.116)	0.924

<i>Blockholder</i> _{<i>j,t</i>}		1.693***	5.435	1.633***	5.121
		(0.496)		(0.501)	
<i>Industry M&A</i> _{<i>j,t-1</i>}		0.399	1.490	0.373	1.452
		(0.355)		(0.355)	
Observations	252,370	252,370		252,370	
Firm-Pair FE	No	No		No	
Year FE	No	No		Yes	

Panel B: Information flows and subsequent pairwise acquisitions—product similarity heterogeneity

VARIABLES	(1)		(2)	
	<i>Acquisition_{i,j,t+1}</i>		<i>Acquisition_{i,j,t+1}</i>	
	Coeff	Odds Ratio	Coeff	Odds Ratio
<i>Information Acquisition_{i,j,t}</i>	0.468*** (0.040)	1.598	0.492*** (0.042)	1.635
<i>Information Acquisition_{i,j,t} × Product Similarity_{i,j,t}</i>	-0.063** (0.027)	0.939	-0.066** (0.027)	0.936
<i>Product Similarity_{i,j,t}</i>	0.757*** (0.112)	2.131	0.756*** (0.112)	2.129
<i>Return Corr_{i,j,t}</i>	0.158 (0.114)	1.171	0.301** (0.120)	1.351
<i>Log(Distance)_{i,j,t}</i>	-0.062 (0.082)	0.940	-0.057 (0.083)	0.945
<i>Product Market Fluidity_{i,t}</i>	-0.141 (0.129)	0.868	-0.155 (0.134)	0.856
<i>TNIC HHI_{i,t}</i>	0.338*** (0.069)	1.403	0.328*** (0.070)	1.388
<i>Total Product Similarity_{i,t}</i>	-0.808*** (0.239)	0.446	-0.768*** (0.215)	0.464
<i>Size_{i,t}</i>	1.011*** (0.124)	2.748	1.000*** (0.130)	2.718
<i>Log(Cash_{i,t})</i>	0.294** (0.144)	1.341	0.339** (0.149)	1.404
<i>Market-to-Book Ratio_{i,t}</i>	-0.162 (0.123)	0.850	-0.230 (0.140)	0.794
<i>Leverage_{i,t}</i>	-0.196* (0.106)	0.822	-0.157 (0.108)	0.855
<i>ROA_{i,t}</i>	0.077 (0.166)	1.080	0.089 (0.174)	1.093
<i>PPE_{i,t}</i>	-0.180 (0.716)	0.836	-0.350 (0.731)	0.705
<i>Firm Age_{i,t}</i>	-0.130 (0.105)	0.878	-0.129 (0.106)	0.879
<i>Size_{j,t}</i>	-0.762*** (0.135)	0.467	-0.804*** (0.149)	0.448
<i>Log(Cash_{j,t})</i>	-0.042 (0.121)	0.959	-0.021 (0.125)	0.980
<i>Market-to-Book Ratio_{j,t}</i>	-0.045 (0.107)	0.956	-0.054 (0.114)	0.947
<i>Leverage_{j,t}</i>	0.180** (0.086)	1.197	0.182** (0.087)	1.199
<i>ROA_{j,t}</i>	0.049 (0.101)	1.050	0.028 (0.101)	1.028
<i>PPE_{j,t}</i>	-1.114* (0.674)	0.328	-1.081 (0.681)	0.339
<i>Firm Age_{j,t}</i>	-0.118 (0.116)	0.889	-0.076 (0.115)	0.927
<i>Blockholder_{j,t}</i>	1.694*** (0.496)	5.442	1.626*** (0.501)	5.083
<i>Industry M&A_{j,t-1}</i>	0.461 (0.362)	1.586	0.450 (0.363)	1.568
Observations	252,370		252,370	
Firm-Pair FE	No		No	
Year FE	No		Yes	

A.11 Full Tabulation of Table 6

The predictive ability of public firm information flows for future acquisitions of private targets

This table presents the full tabulation of results from regressions of future private-firm acquisitions ($Private\ Acquisition_{i,j,t+1}$) on public rival-pair information flows ($Information\ Acquisition_{i,j,t}$), measured as the total number of firm j filings downloaded from the SEC's EDGAR database by firm i during year t . Panel A presents the results of logit models examining factors associated with future acquisitions of private firms by firms i , where the acquired firm has the same two-digit SIC code as firm j . The dependent variable is an indicator variable set to one if firm i acquires a private firm in the same two-digit SIC code as firm j in year $t+1$. Panel B examines cross-sectional variation in the associations between information acquisition and future acquisitions of private firms based on whether the acquired firm is in the same four-digit SIC code as both firms i and j . To isolate information flows among i,j rival-pairs, observations must fall within acquiring firm i 's product space (text-based industry classifications, as in Hoberg and Phillips, 2016). All continuous variables are winsorized at the first and 99th percentiles. In both panels, we normalize all binary independent variables to have a mean of zero and standard deviation of one. Standard errors are clustered by firm-pair. See Appendix A for variable definitions. The sample period covers 2004-2015. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

Panel A: Information flows for public firms and acquisitions of private firms

VARIABLES	(1)		(2)		(3)	
	$Private\ Acquisition_{i,j,t+1}$ Coeff	Odds Ratio	$Private\ Acquisition_{i,j,t+1}$ Coeff	Odds Ratio	$Private\ Acquisition_{i,j,t+1}$ Coeff	Odds Ratio
$Information\ Acquisition_{i,j,t}$	0.042*** (0.006)	1.043	0.065*** (0.006)	1.067	0.075*** (0.007)	1.078
$Product\ Similarity_{i,j,t}$			0.194*** (0.009)	1.214	0.203*** (0.009)	1.225
$Return\ Corr_{i,j,t}$			-0.042*** (0.008)	0.959	0.029*** (0.009)	1.030
$Log(Distance)_{i,j,t}$			-0.011 (0.007)	0.990	-0.009 (0.007)	0.991
$Product\ Market\ Fluidity_{i,t}$			0.019** (0.008)	1.020	0.066*** (0.008)	1.068
$TNIC\ HHI_{i,t}$			0.110*** (0.007)	1.117	0.104*** (0.007)	1.109
$Total\ Product\ Similarity_{i,t}$			0.009 (0.011)	1.009	0.001 (0.010)	1.001
$Size_{i,t}$			0.557*** (0.011)	1.745	0.564*** (0.011)	1.758
$Log(Cash_{i,t})$			0.133*** (0.010)	1.142	0.140*** (0.011)	1.151
$Market-to-Book\ Ratio_{i,t}$			-0.135*** (0.008)	0.873	-0.150*** (0.008)	0.861
$Leverage_{i,t}$			-0.134*** (0.008)	0.874	-0.127*** (0.008)	0.881
$ROA_{i,t}$			0.485*** (0.013)	1.625	0.487*** (0.014)	1.627
$PPE_{i,t}$			-0.077 (0.052)	0.925	-0.213*** (0.053)	0.808
$Firm\ Age_{i,t}$			-0.115*** (0.010)	0.891	-0.102*** (0.010)	0.903
$Size_{j,t}$			-0.142*** (0.012)	0.868	-0.153*** (0.012)	0.859
$Log(Cash_{j,t})$			0.232*** (0.010)	1.261	0.249*** (0.011)	1.283
$Market-to-Book\ Ratio_{j,t}$			0.108*** (0.007)	1.114	0.100*** (0.008)	1.105
$Leverage_{j,t}$			0.004 (0.008)	1.004	0.008 (0.008)	1.009

<i>ROA_{j,t}</i>		-0.022*** (0.008)	0.978	-0.036*** (0.008)	0.965
<i>PPE_{j,t}</i>		0.474*** (0.050)	1.606	0.536*** (0.051)	1.709
<i>Firm Age_{j,t}</i>		-0.048*** (0.010)	0.953	-0.029*** (0.010)	0.971
<i>Blockholder_{j,t}</i>		0.096*** (0.017)	1.100	0.067*** (0.017)	1.070
<i>Industry M&A_{j,t-1}</i>		1.225*** (0.039)	3.405	1.202*** (0.040)	3.327
Observations	252,370		252,370		252,370
Firm-Pair FE	No		No		No
Year FE	No		No		Yes

Panel B: Acquisitions of private firms—industry heterogeneity

VARIABLES	(1)		(2)	
	Private Acquisition _{i,j,t+1} Coeff	Odds Ratio	Private Acquisition _{i,j,t+1} Coeff	Odds Ratio
<i>Information Acquisition</i> _{i,j,t}	0.083*** (0.010)	1.086	0.092*** (0.010)	1.096
<i>Information Acquisition</i> _{i,j,t} × <i>Same SIC</i> _{i,j,t}	-0.063*** (0.013)	0.939	-0.061*** (0.013)	0.941
<i>Same SIC</i> _{i,j,t}	0.753*** (0.017)	2.123	0.704*** (0.018)	2.021
<i>Product Similarity</i> _{i,j,t}	0.082*** (0.009)	1.085	0.097*** (0.009)	1.102
<i>Return Corr.</i> _{i,j,t}	-0.091*** (0.008)	0.913	-0.022** (0.009)	0.978
<i>Log(Distance)</i> _{i,j,t}	-0.015** (0.007)	0.985	-0.013* (0.007)	0.987
<i>Product Market Fluidity</i> _{i,t}	0.053*** (0.008)	1.054	0.104*** (0.008)	1.110
<i>TNIC HHI</i> _{i,t}	0.095*** (0.007)	1.100	0.096*** (0.008)	1.100
<i>Total Product Similarity</i> _{i,t}	-0.062*** (0.011)	0.940	-0.069*** (0.011)	0.933
<i>Size</i> _{i,t}	0.552*** (0.011)	1.737	0.557*** (0.011)	1.746
<i>Log(Cash)</i> _{i,t}	0.157*** (0.011)	1.171	0.164*** (0.011)	1.178
<i>Market-to-Book Ratio</i> _{i,t}	-0.128*** (0.008)	0.880	-0.145*** (0.009)	0.865
<i>Leverage</i> _{i,t}	-0.119*** (0.008)	0.888	-0.116*** (0.008)	0.890
<i>ROA</i> _{i,t}	0.489*** (0.014)	1.630	0.490*** (0.014)	1.632
<i>PPE</i> _{i,t}	-0.176*** (0.052)	0.838	-0.301*** (0.054)	0.740
<i>Firm Age</i> _{i,t}	-0.112*** (0.010)	0.894	-0.100*** (0.010)	0.905
<i>Size</i> _{j,t}	-0.106*** (0.012)	0.899	-0.119*** (0.013)	0.888
<i>Log(Cash)</i> _{j,t}	0.229*** (0.011)	1.257	0.245*** (0.011)	1.278
<i>Market-to-Book Ratio</i> _{j,t}	0.114*** (0.007)	1.121	0.104*** (0.008)	1.110
<i>Leverage</i> _{j,t}	0.008 (0.008)	1.008	0.011 (0.009)	1.011
<i>ROA</i> _{j,t}	-0.026*** (0.008)	0.975	-0.037*** (0.008)	0.964
<i>PPE</i> _{j,t}	0.554*** (0.050)	1.740	0.612*** (0.052)	1.845
<i>Firm Age</i> _{j,t}	-0.037*** (0.010)	0.963	-0.018* (0.010)	0.982
<i>Blockholder</i> _{j,t}	0.120*** (0.017)	1.127	0.093*** (0.017)	1.097
<i>Industry M&A</i> _{j,t-1}	1.130*** (0.039)	3.096	1.111*** (0.039)	3.036
Observations	252,370		252,370	
Firm-Pair FE	No		No	
Year FE			Yes	

A.12 Full Tabulation of Table 7

Information flows and subsequent rival-pair investment mimicking

This table presents the full tabulation of results from regressions of changes in investment similarities between i,j firm-pairs ($\Delta Capex Similarity_{i,j,t+1}$ or $\Delta R\&D Similarity_{i,j,t+1}$) on information flows between the rival-pair ($Information Acquisition_{i,j,t}$), measured as the total number of firm j filings downloaded from the SEC's EDGAR database by firm i during year t . To capture changes in investment similarities, we examine firm-pair level changes in capital expenditures and changes in research and development expenses. Panel A presents the results of OLS regressions examining factors associated with the change in similarity between firm i and firm j 's capital expenditures and between firm i and firm j 's research and development expenses. Panel B examines cross-sectional variation in the associations between information acquisition and investment similarities based on the product similarity of firms i and j . To isolate information flows among i,j rival-pairs, observations must fall within firm i 's product space (text-based industry classifications, as in Hoberg and Phillips, 2016). All continuous variables are winsorized at the first and 99th percentiles. We normalize all nonbinary independent variables to have a mean of zero and standard deviation of one. Standard errors are clustered by firm-pair. See Appendix A for variable definitions. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

Panel A: Pairwise information flows and pairwise investment similarity

VARIABLES	(1) $\Delta Capex Similarity_{i,j,t+1}$	(2) $\Delta R\&D Similarity_{i,j,t+1}$
<i>Information Acquisition</i> _{i,j,t}	0.006** (0.003)	0.005* (0.003)
<i>Product Similarity</i> _{i,j,t}	-0.017*** (0.005)	0.022*** (0.005)
<i>Return Corr</i> _{i,j,t}	0.032*** (0.006)	0.001 (0.005)
<i>Same Auditor</i> _{i,j,t}	0.068*** (0.014)	-0.058*** (0.012)
<i>Log(Distance)</i> _{i,j,t}	0.024* (0.013)	0.021 (0.014)
<i>Product Market Fluidity</i> _{i,t}	0.028*** (0.005)	0.076*** (0.006)
<i>TNIC HHI</i> _{i,t}	0.006 (0.004)	0.006** (0.003)
<i>Size</i> _{i,t}	0.178*** (0.026)	-0.015 (0.022)
<i>Market-to-Book Ratio</i> _{i,t}	0.065*** (0.009)	-0.154*** (0.011)
<i>Leverage</i> _{i,t}	-0.065*** (0.011)	-0.033*** (0.009)
<i>Log(Cash)</i> _{i,t}	-0.591*** (0.062)	-2.446*** (0.105)
<i>ROA</i> _{i,t}	-0.003 (0.006)	-0.056*** (0.008)
<i>Sales Growth</i> _{i,t}	-0.013*** (0.005)	-0.018*** (0.005)
<i>Size</i> _{j,t}	0.471*** (0.027)	0.104*** (0.024)
<i>Market-to-Book Ratio</i> _{j,t}	-0.044*** (0.009)	0.020** (0.010)
<i>Leverage</i> _{j,t}	0.014 (0.009)	-0.048*** (0.010)
<i>Log(Cash)</i> _{j,t}	-0.528*** (0.054)	-0.230*** (0.060)
<i>ROA</i> _{j,t}	-0.041*** (0.009)	-0.088*** (0.011)
<i>Sales Growth</i> _{j,t}	0.053*** (0.006)	-0.075*** (0.007)
<i>Log(Filings)</i> _{j,t}	-0.001 (0.005)	-0.013*** (0.005)
<i>Leader</i> _{j,t}	-0.018	-0.004

	(0.023)	(0.022)
Observations	204,555	218,208
R-squared	0.293	0.373
Firm-Pair FE	Yes	Yes
Year FE	Yes	Yes

Panel B: Pairwise information flows and pairwise investment similarity—product similarity heterogeneity

VARIABLES	(1) $\Delta Capex Similarity_{i,j,t+1}$	(2) $\Delta R\&D Similarity_{i,j,t+1}$
<i>Information Acquisition</i> _{<i>i,j,t</i>}	0.006** (0.003)	0.009*** (0.003)
<i>Information Acquisition</i> _{<i>i,j,t</i>} × <i>Product Similarity</i> _{<i>i,j,t</i>}	0.000 (0.002)	-0.011*** (0.003)
<i>Product Similarity</i> _{<i>i,j,t</i>}	-0.017*** (0.005)	0.023*** (0.005)
<i>Return Corr</i> _{<i>i,j,t</i>}	0.032*** (0.006)	0.001 (0.005)
<i>Same Auditor</i> _{<i>i,j,t</i>}	0.068*** (0.014)	-0.058*** (0.012)
<i>Log(Distance)</i> _{<i>i,j,t</i>}	0.024* (0.013)	0.021 (0.014)
<i>Product Market Fluidity</i> _{<i>i,t</i>}	0.028*** (0.005)	0.076*** (0.006)
<i>TNIC HHI</i> _{<i>i,t</i>}	0.006 (0.004)	0.006** (0.003)
<i>Size</i> _{<i>i,t</i>}	0.178*** (0.026)	-0.015 (0.022)
<i>Market-to-Book Ratio</i> _{<i>i,t</i>}	0.065*** (0.009)	-0.154*** (0.011)
<i>Leverage</i> _{<i>i,t</i>}	-0.065*** (0.011)	-0.033*** (0.009)
<i>Log(Cash)</i> _{<i>i,t</i>}	-0.591*** (0.062)	-2.446*** (0.105)
<i>ROA</i> _{<i>i,t</i>}	-0.003 (0.006)	-0.056*** (0.008)
<i>Sales Growth</i> _{<i>i,t</i>}	-0.013*** (0.005)	-0.018*** (0.005)
<i>Size</i> _{<i>j,t</i>}	0.471*** (0.027)	0.105*** (0.024)
<i>Market-to-Book Ratio</i> _{<i>j,t</i>}	-0.044*** (0.009)	0.020** (0.010)
<i>Leverage</i> _{<i>j,t</i>}	0.014 (0.009)	-0.048*** (0.010)
<i>Log(Cash)</i> _{<i>j,t</i>}	-0.528*** (0.054)	-0.230*** (0.060)
<i>ROA</i> _{<i>j,t</i>}	-0.041*** (0.009)	-0.088*** (0.011)
<i>Sales Growth</i> _{<i>j,t</i>}	0.053*** (0.006)	-0.075*** (0.007)
<i>Log(Filings)</i> _{<i>j,t</i>}	-0.001 (0.005)	-0.013*** (0.005)
<i>Leader</i> _{<i>j,t</i>}	-0.018 (0.023)	-0.005 (0.022)
Observations	204,555	218,208
R-squared	0.293	0.373
Firm-Pair FE	Yes	Yes
Year FE	Yes	Yes

A.13 Full Tabulation of Table 8

Information flows and subsequent rival-pair product similarities

This table presents the full tabulation of results from regressions of subsequent changes in product similarities between i,j rival-pairs ($Encroachment_{i,j,t \text{ to } t+k}$) on pairwise information flows between the rivals ($Information\ Acquisition_{i,j,t}$), measured as the total number of firm j filings downloaded from the SEC's EDGAR database by firm i during year t . Panel A presents the results of OLS regressions of ex post product encroachment on pairwise information flows, where product encroachment is defined as the change in similarity of firm i 's products with rival firm j 's products, measured over three future periods (years $t+k$, where $k = 1, 2$, or 3). Panel B examines cross-sectional variation in the associations between information acquisition and encroachment based on the product similarity of firms i and j . To isolate information flows among i,j rival-pairs, observations must fall within firm i 's product space (text-based industry classifications, as in Hoberg and Phillips, 2016). All continuous variables are winsorized at the first and 99th percentiles. We normalize all nonbinary independent variables to have a mean of zero and standard deviation of one. Standard errors are clustered by firm-pair. See Appendix A for variable definitions. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

Panel A: Ex post product encroachment

VARIABLES	(1) <i>Encroachment</i> _{<i>i,j,t to t+1</i>}	(2) <i>Encroachment</i> _{<i>i,j,t to t+2</i>}	(3) <i>Encroachment</i> _{<i>i,j,t to t+3</i>}
<i>Information Acquisition</i> _{<i>i,j,t</i>}	-0.008** (0.003)	-0.011*** (0.003)	-0.017*** (0.003)
<i>Product Similarity</i> _{<i>i,j,t</i>}	-1.046*** (0.008)	-1.141*** (0.008)	-1.078*** (0.007)
<i>Return Corr</i> _{<i>i,j,t</i>}	0.045*** (0.005)	0.047*** (0.005)	0.011** (0.004)
<i>Same Auditor</i> _{<i>i,j,t</i>}	0.000 (0.013)	0.049*** (0.013)	-0.018 (0.013)
<i>Log(Distance)</i> _{<i>i,j,t</i>}	0.002 (0.011)	0.009 (0.009)	0.017* (0.009)
<i>Product Market Fluidity</i> _{<i>i,t</i>}	0.046*** (0.006)	0.095*** (0.006)	0.014** (0.006)
<i>Total Product Similarity</i> _{<i>i,t</i>}	-0.055*** (0.013)	0.024* (0.013)	0.115*** (0.013)
<i>TNIC HHI</i> _{<i>i,t</i>}	-0.012*** (0.003)	-0.011*** (0.003)	0.004* (0.002)
<i>Size</i> _{<i>i,t</i>}	0.133*** (0.020)	0.071*** (0.020)	0.024 (0.020)
<i>Market-to-Book Ratio</i> _{<i>i,t</i>}	0.002 (0.004)	0.022*** (0.004)	-0.031*** (0.004)
<i>Leverage</i> _{<i>i,t</i>}	-0.098*** (0.006)	-0.142*** (0.006)	-0.068*** (0.006)
<i>ROA</i> _{<i>i,t</i>}	0.030*** (0.004)	0.008** (0.003)	0.013*** (0.003)
<i>Sales Growth</i> _{<i>i,t</i>}	0.002 (0.002)	-0.013*** (0.002)	-0.019*** (0.002)
<i>Firm Age</i> _{<i>i,t</i>}	2.191*** (0.387)	3.879*** (0.483)	4.044*** (0.492)
<i>Size</i> _{<i>j,t</i>}	0.145*** (0.018)	0.136*** (0.018)	0.096*** (0.017)
<i>Market-to-Book Ratio</i> _{<i>j,t</i>}	-0.009** (0.004)	0.020*** (0.004)	0.011*** (0.004)
<i>Leverage</i> _{<i>j,t</i>}	-0.049*** (0.006)	-0.035*** (0.006)	-0.012** (0.005)
<i>ROA</i> _{<i>j,t</i>}	-0.012*** (0.004)	-0.001 (0.004)	-0.004 (0.004)
<i>Sales Growth</i> _{<i>j,t</i>}	0.020*** (0.002)	0.009*** (0.002)	-0.003 (0.002)
<i>Firm Age</i> _{<i>j,t</i>}	-0.565*** (0.199)	-1.469*** (0.267)	-3.176*** (0.470)
<i>Log(Filings)</i> _{<i>j,t</i>}	-0.015*** (0.004)	-0.000 (0.004)	-0.008** (0.004)

<i>Leader_{j,t}</i>	-0.066*** (0.024)	-0.011 (0.022)	0.010 (0.020)
<i>Distress_{j,t}</i>	-0.132*** (0.026)	-0.086*** (0.023)	-0.074*** (0.021)
Observations	240,169	224,311	208,036
R-squared	0.443	0.588	0.679
Pair FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes

Panel B: Ex post product encroachment—product similarity heterogeneity

VARIABLES	(1) <i>Encroachment</i> _{<i>i,j,t to t+1</i>}	(2) <i>Encroachment</i> _{<i>i,j,t to t+2</i>}	(3) <i>Encroachment</i> _{<i>i,j,t to t+3</i>}
<i>Information Acquisition</i> _{<i>i,j,t</i>}	-0.005* (0.003)	-0.007** (0.003)	-0.011*** (0.003)
<i>Information Acquisition</i> _{<i>i,j,t</i>} × <i>Product Similarity</i> _{<i>i,j,t</i>}	-0.007** (0.004)	-0.010*** (0.004)	-0.015*** (0.004)
<i>Product Similarity</i> _{<i>i,j,t</i>}	-1.045*** (0.008)	-1.139*** (0.008)	-1.077*** (0.007)
<i>Return Corr</i> _{<i>i,j,t</i>}	0.045*** (0.005)	0.047*** (0.005)	0.011** (0.004)
<i>Same Auditor</i> _{<i>i,j,t</i>}	0.000 (0.013)	0.049*** (0.013)	-0.018 (0.013)
<i>Log(Distance)</i> _{<i>i,j,t</i>}	0.002 (0.011)	0.009 (0.009)	0.017* (0.009)
<i>Product Market Fluidity</i> _{<i>i,t</i>}	0.046*** (0.006)	0.095*** (0.006)	0.014** (0.006)
<i>Total Product Similarity</i> _{<i>i,t</i>}	-0.056*** (0.013)	0.022* (0.013)	0.111*** (0.013)
<i>TNIC HHI</i> _{<i>i,t</i>}	-0.012*** (0.003)	-0.010*** (0.003)	0.004* (0.002)
<i>Size</i> _{<i>i,t</i>}	0.133*** (0.020)	0.071*** (0.020)	0.025 (0.020)
<i>Market-to-Book Ratio</i> _{<i>i,t</i>}	0.002 (0.004)	0.022*** (0.004)	-0.031*** (0.004)
<i>Leverage</i> _{<i>i,t</i>}	-0.098*** (0.006)	-0.142*** (0.006)	-0.068*** (0.006)
<i>ROA</i> _{<i>i,t</i>}	0.031*** (0.004)	0.008*** (0.003)	0.013*** (0.003)
<i>Sales Growth</i> _{<i>i,t</i>}	0.002 (0.002)	-0.013*** (0.002)	-0.019*** (0.002)
<i>Firm Age</i> _{<i>i,t</i>}	2.185*** (0.387)	3.875*** (0.483)	4.038*** (0.492)
<i>Size</i> _{<i>j,t</i>}	0.145*** (0.018)	0.136*** (0.018)	0.096*** (0.017)
<i>Market-to-Book Ratio</i> _{<i>j,t</i>}	-0.009** (0.004)	0.020*** (0.004)	0.011*** (0.004)
<i>Leverage</i> _{<i>j,t</i>}	-0.049*** (0.006)	-0.035*** (0.006)	-0.012** (0.005)
<i>ROA</i> _{<i>j,t</i>}	-0.012*** (0.004)	-0.001 (0.004)	-0.004 (0.004)
<i>Sales Growth</i> _{<i>j,t</i>}	0.020*** (0.002)	0.009*** (0.002)	-0.003 (0.002)
<i>Firm Age</i> _{<i>j,t</i>}	-0.564*** (0.199)	-1.463*** (0.267)	-3.166*** (0.470)
<i>Log(Filings)</i> _{<i>j,t</i>}	-0.015*** (0.004)	-0.000 (0.004)	-0.008** (0.004)
<i>Leader</i> _{<i>j,t</i>}	-0.067*** (0.024)	-0.012 (0.022)	0.008 (0.020)
<i>Distress</i> _{<i>j,t</i>}	-0.132*** (0.026)	-0.085*** (0.023)	-0.073*** (0.021)
Observations	240,169	224,311	208,036
R-squared	0.443	0.588	0.680
Pair FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes