Acquisitions' Competitive Threat and Antitrust Lobbying by Targets' Rivals

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ABSTRACT

Corporate acquisitions can pose serious competitive threats to the target's rivals. Although the existing literature suggests that rivals respond to these threats by adapting their market strategy in the post-acquisition period, it has not yet considered the possibility that rivals might try to sabotage these deals during the acquisition process. In this paper, we hypothesize that the target's rivals may lobby antitrust agencies to block an announced deal. These lobbying efforts should reduce the probability of deal completion and cause delays in deal completion. These effects should be stronger with horizontal deals, because, with such deals, it is easier for the rivals' lobbyists to make the case that the deal would have anticompetitive effects. In contrast, these effects should be weaker when the acquirer itself engages in antitrust lobbying in its favor. Examining a sample of deals between U.S. public companies during 2008–2020, we find empirical support for our hypotheses. Findings from this study extend nonmarket strategy by highlighting that firms may engage in corporate political activities in an effort to derail rivals' strategic actions.

Keywords: Mergers and acquisitions; corporate political activity; lobbying; antitrust; canceled acquisitions.

INTRODUCTION

Mergers and acquisitions (M&As) are a central tool for implementing firms' corporate strategies (Villalonga & McGahan 2005; Wang & Zajac 2007) and can be powerful competitive weapons (Ahuja & Katila 2001; Akdoğu 2009; Bernile & Lyandres 2019; Feldman & Hernandez 2021). These transactions often allow larger acquirers to deploy their resources and complementary assets in the business domain of smaller targets and improve the target's competitive position (Silverman 1999; Capron & Pistre 2002; Helfat & Lieberman 2002; Kaul & Wu 2016). Thus, these deals can pose serious threats to the target's rivals (e.g., Bernile & Lyandres 2019). Existing research suggests that rivals respond to the threats posed by M&As in the post-acquisition period by adapting their market strategy (e.g., Valentini 2016; Uhlenbruck, Hughes-Morgan, Hitt, Ferrier, & Brymer 2017). However, strategy research has not yet considered the possibility that rivals might engage in actions to sabotage acquisitions during the acquisition process. This study investigates whether the target's rivals attempt to derail acquisitions through corporate political activities (CPAs) (Dorobantu, Kaul, & Zelner 2017).

In recent years, strategy scholars have paid increasing attention to how firms seek to elevate their competitive position by influencing governmental bodies through CPAs (Hadani & Schuler 2013; Henisz, Dorobantu, & Nartey 2014; Dorobantu et al. 2017; Katic & Hillman 2023). We posit that the target's rivals may try to obstruct announced M&A deals by lobbying antitrust authorities. Indeed, as deals are often canceled due to antitrust complaints (Savor & Lu 2009; Bena & Li 2014; Bahreini, Bansal, Finck, & Firouzgar 2019), influencing regulatory decisions can be a powerful tool to prevent the negative competitive effects of M&As.¹ Given

¹ In our theory development, we focus on the target's rivals in both horizontal and non-horizontal deals. Although the distinction between the acquirer's and the target's rivals is irrelevant in horizontal deals because the two groups coincide, the existing literature suggests that in non-horizontal deals the competitive threat is likely to be more critical for the target's rivals (e.g., see Silverman 1999; Capron & Pistre 2002; Kaul & Wu 2016). Indeed, most

the rising antitrust concerns and the more frequent political activities undertaken by firms in recent years, these strategies may become increasingly feasible.

For example, in 2018, Illumina, a U.S. biotechnology company, announced the acquisition of Pacific Biosciences, another U.S. biotechnology company. Following the acquisition, Pacific Biosciences' primary competitor, Thermo Fisher, lobbied the U.S. antitrust authority against this acquisition.² In 2019, the Federal Trade Commission (FTC) challenged Illumina's proposed \$1.2 billion acquisition. The FTC's complaint alleged that the merger would likely harm competition in the U.S. market for next-generation DNA-sequencing systems and further alleged that the merger would diminish the combined firm's incentive to innovate and develop new products. Shortly after the Commission filed its complaint, the parties abandoned the transaction and Thermo Fisher subsequently stopped lobbying towards the antitrust authority.

We argue that the target's rivals will be motivated to lobby the antitrust authorities against approving the acquisition because the deal may help the target obtain needed resources and capabilities and, therefore, elevate the target's competitive position relative to its rivals. Such lobbying may reduce the likelihood of a focal deal's completion. Moreover, we hypothesize that such efforts are positively associated with the time lag between the deal announcement and completion because antitrust complaints can often cause delays in deal completion. In addition, we hypothesize two moderators of these main effects. The first moderator is the horizontal relatedness between the merging firms, which pertains to the capabilities of the target's rivals to disrupt the deal through lobbying and can strengthen the main effects. For horizontal deals, it is

studies of the effects of M&As on rivals have focused on the target's rivals (e.g., Eckbo 1983, 1992; Chatterjee 1986; Mitchell & Mulherin 1996; Song & Walkling 2000) or, in the case of horizontal M&As, on both of the merging firms (e.g., Eckbo & Wier 1985; Fee & Thomas 2004; Shahrur 2005; Clougherty & Duso 2009; Bernile & Lyandres 2019). Thus, we center our theory on the lobbying efforts of the target's rivals (which also include the acquirer's rivals in horizontal deals), while examining the lobbying efforts of the acquirer's rivals in the discussion. ² Based on the TNIC-3 product similarity scores constructed by Hoberg and Phillips (2010, 2016), Thermo Fisher is one of the top five rivals of Pacific Biosciences in 2018, but not among the top rivals of Illumina.

more feasible for the target's rivals to highlight the possible anticompetitive effects of the deal to the antitrust agencies and make a case to block the deal. The second moderator is the acquirer's lobbying effort toward the antitrust agencies, which reflects the acquirers' ability to respond to the "attack" from the target's rivals and neutralize the target's rivals' influence on the antitrust agencies, thereby encouraging those agencies to rule in favor of the deal. We argue that the acquirer's antitrust lobbying can weaken the effectiveness of the lobbying undertaken by the target's rivals in regard to deal completion and duration of the acquisition process.

We test these hypotheses in a sample of M&As announced in the period 2008–2020 between U.S. public companies. For each deal, we capture antitrust lobbying by the target's rivals based on whether they lobbied the FTC or the Department of Justice (DOJ) after the deal's announcement. The results provide broad support for our hypotheses. In supplementary analyses, we find that the target's rivals increase their expenditures on antitrust lobbying after the deal announcement, particularly in the case of horizontal deals.

This study makes two key contributions. First, existing research on nonmarket strategies has primarily focused on unpacking how firms' CPA can complement their competitive strategies by channeling critical resources away from competitors or creating a policy environment that is unfavorable to competitors (Hillman & Dalziel 2003; Katic & Hillman 2023). Our study highlights that CPA can be used as a competitive tool to derail and sabotage competitors' strategic actions, providing new insights into why firms engage in CPA and extending research at the intersection of nonmarket strategies and competitive strategies. Second, strategy research has documented a host of factors that affect the acquisition process and deal completion, including the target's informational opacity (Coff 1999), the geographic distance between the deal partners (Chakrabarti & Mitchell 2016), the acquirer's learning from past deals

(Muehlfeld, Rao Sahib, & Van Witteloostuijn 2012), the difference in status between the acquirer and the target (Shen, Tang, & Chen 2014), the level of trust between the target's and the acquirer's managers (Testoni, Sakakibara, & Chen 2022), and the acquirer's perceived legitimacy in cross-border acquisitions (Li, Li, & Wang 2014; Hawn 2021). This study contributes to M&A research by highlighting that the target rivals can also play a critical role in influencing acquisition completion and duration.

THEORY AND HYPOTHESES

Corporate Political Activity and Firm Competitiveness

CPA, as a key component of nonmarket strategy, refers to firms' efforts to influence and manage political actors (Hillman, Keim, & Schuler 2004). Firms can undertake a range of CPAs, such as appointing directors with political connections, making political campaign contributions, mobilizing stakeholders, and having executives testify before legislators and regulators to shape their political environment by managing government relations (Hillman et al. 2004; Katic & Hillman 2023). Among the repertoire of CPAs available to firms to influence political entities, lobbying is one of the primary avenues through which firms shape their policy environments, with total lobbying expenditures far exceeding contributions to political action committees (Kerr, Lincoln, & Mishra 2014; Ridge, Ingram, & Hill 2017). Compared to other types of CPA, such as campaign contributions or testimony before legislators, firms have more direct control over when, who, and how to lobby. The discretion associated with lobbying may explain why it has become one of the most widely used corporate political strategies (Ridge et al. 2017).

Scholars have drawn on various theoretical perspectives to understand firms' motivations to engage in CPA and its consequences (Mellahi, Frynas, Sun, & Siegel 2016). Much research has drawn upon resource dependence theory to argue that firms build political connections to

manage external dependence and secure resources from important political actors, thereby bolstering firm growth and survival chances (Hillman & Dalziel 2003; Hillman, Withers, & Collins 2009). Other research has relied on the resource-based view to explain that firms can build bundles of political resources and capabilities through CPA, which can then strengthen their competitive advantages and improve performance (Bonardi 2011). Another stream of research building on agency theory suggests that executives engage in CPA to advance their own personal interests rather than the interests of their firms (Lord 2000). Given these different theoretical perspectives, empirical evidence on the relationship between CPA and firm financial performance has been mixed: Whereas some studies have suggested a positive association (Claessens, Feijen, & Laeven 2008; Cooper, Gulen, & Ovtchinnikov 2010), others (Hadani & Schuler 2013; Cao et al. 2018) have found a negative relationship.

More specific to our study is research exploring the role of a firm's CPA in shaping its acquisition process and the outcomes of that process. Croci, Pantzalis, Park, and Petmezas (2017) found that politically connected target firms receive higher takeover premiums from acquirers lacking political expertise, likely because such connections can facilitate the growth of the merged firm. Using mergers in regulated industries as their research context, Holburn and Vanden Bergh (2014) showed that firms resort to election campaign contributions to politicians to influence regulatory approvals of mergers, particularly in states with greater party competition. Brockman, Rui, and Zou (2013) investigated the influence of acquirers' political connections on acquisition performance and showed that such influence depends on acquirers' home-country institutions: Whereas politically connected acquirers may underperform unconnected bidders, they may outperform them in countries with weak legal systems or high levels of corruption.

A firm's CPA is often oriented toward shaping its policy environment, and changes in the policy environment typically influence all players in an industry. An implicit assumption behind most CPA research is that the policy changes brought about by a firm's CPA benefit the firm itself more than its rivals. For example, firms may engage in CPA that seeks to raise rivals' costs by creating legal hurdles that block the use of competitive substitute resources (McWilliams, Van Fleet, & Cory 2002). As a case in point, the Walt Disney Company and other Hollywood studios engaged in intensive CPA to block the spread of Section 230 of the Communication Decency Act of 1996 abroad. Section 230 holds the people who post content on social media platforms such as Facebook and YouTube responsible for libel or other legal issues, but does not hold the platform providers responsible, thereby making it impossible for the aggrieved parties to sue the platform providers for copyright violations. Disney executives strongly opposed the protection of platform providers and lobbied the Trump administration to exclude Section 230 protection in a trade deal with Great Britain (Karbal 2020).

Although the extant research and anecdotal evidence suggest that CPA can complement a firm's competitive position by shaping the overall policy environment, it has not yet considered whether CPA can be leveraged to target rivals' specific strategic actions. To address this question, we investigate whether firms may engage in antitrust lobbying in an effort to derail rivals' acquisitions.

Corporate Political Activity Undertaken by Targets' Rivals to Derail M&As

M&As can constitute a substantial competitive threat to rival firms. Indeed, M&As allow merging firms to combine their resources and capabilities and strengthen their competitiveness vis-à-vis their rivals. The combined entity can often perform better than the sum of the two individual firms thanks to operational, financial, and network synergies (e.g., Chatterjee 1986;

Larsson & Finkelstein 1999; Ahuja & Katila 2001; Feldman & Hernandez 2021).³ For example, Bernile and Lyandres (2019) used projections disclosed by merging firms' insiders to quantify operating efficiency gains in a sample of horizontal M&As. They found that these gains were sizeable: on average, 6.9% of the combined pre-merger market capitalization of the two merging companies. These authors also discovered that higher efficiency gains were associated with lower announcement returns to merging firms' rivals. Moreover, studies have provided evidence that merging firms benefit from increases in profitability, sales, new-product launches (Hoberg & Phillips 2010), patent outputs (Bena & Li 2014), and enhanced positions in networks of strategic alliances (Hernandez & Shaver 2019; Feldman & Hernandez 2021). In vertical mergers, efficiency gains can be realized from the elimination of transaction costs, and merging firms can also benefit at the expense of their product rivals by foreclosing access to key suppliers or customers (Lafontaine & Slade 2007; Kedia et al. 2011; Frésard, Hoberg, & Phillips 2020). Acquirers are usually much larger than their targets and have more resources and complementary assets that can be leveraged to expand the target's business (Palepu 1986; Larsson & Finkelstein 1999; Capron & Pistre 2002; Kaul & Wu 2016). For example, using a survey of post-acquisition resource transfers, Capron and Pistre (2002) showed that resource transfers (including managerial, innovation, and marketing resources) from the acquirer to the target are much more common than the reverse. Kaul and Wu's (2016) theoretical model and empirical evidence revealed that while acquirers may use M&As to source new capabilities to be deployed in their existing business, they generally prefer to acquire targets that can benefit from the deployment of

³ Consistent with the notion that M&As can benefit the merging firms, research shows that, on average, the shareholders of the acquiring and target companies enjoy a combined gain at the deal announcement (e.g., Haleblian et al. 2009).

the acquirer's capabilities. Moreover, diversifying acquisitions are often a means of market entry for the acquirer into the target's business domain (Silverman 1999; Helfat & Lieberman 2002).

Overall, M&As can allow the combined entities to become stronger competitors and gain market share, and some of these gains can come at the expense of the target's rivals. Given these competitive threats, rivals may respond to M&As by adapting their market strategy and implementing competitive actions such as more aggressive marketing, pricing, R&D, and product introductions (Valentini 2016; Uhlenbruck et al. 2017) or by engaging in M&As themselves (Eckbo 1983; Chatterjee 1986; Song & Walkling 2000; Carow et al. 2004; Cai, Song, & Walkling 2011; Gaur et al. 2013).

In addition to market-based competitive actions, the target's rivals may respond by undertaking CPAs intended to sabotage the deal. Indeed, when a deal poses a competitive threat, the best outcome for the target's rivals occurs when the deal does not go through. Deals that are announced often fail to be consummated, and blocking by antitrust agencies is a common cause of deal cancelation (Savor & Lu 2009; Bena & Li 2014; Bahreini et al. 2019). Antitrust agencies can block deals that are deemed to have anticompetitive effects or demand that the merging firms divest some of their businesses to mitigate the potential anticompetitive effects.

We hypothesize that the target's rivals could try to obstruct an announced deal by lobbying antitrust agencies. If the deal is challenged by antitrust agencies, the target's rivals could benefit for several reasons. First, if the deal is blocked entirely, its competitive threat vanishes. Moreover, deal termination can prove costly for the target firms (Neuhauser, Davidson, & Glascock 2011) and thus weaken their competitive position vis-à-vis their rivals. Second, if antitrust agencies mandate that the merging firms divest some business units or assets as a condition to approve the deal, rivals could benefit by being able to acquire these resources.

Finally, even if the deal is eventually approved, antitrust complaints can significantly delay the completion of the deal, which, in addition to being costly for the merging firms, can give their rivals more time to prepare their competitive reaction through product market changes (Valentini 2016; Uhlenbruck et al. 2017) or engaging in their own M&As (e.g., Song & Walkling 2000). In line with these notions, Eckbo (1983), Eckbo and Wier (1985), and Fee and Thomas (2004) found that the target's rivals tend to earn positive stock market returns when antitrust complaints are announced.

In sum, we posit that lobbying of antitrust agencies by the target's rivals will influence the agencies' decision on whether to challenge the deal and negatively affect the probability that the deal is completed. Moreover, given the delays associated with antitrust cases, we expect that such lobbying of antitrust agencies will increase the time to complete the deal. Thus, we predict:

Hypothesis 1a: Antitrust lobbying by the target's rivals is negatively associated with the probability of deal completion.

Hypothesis 1b: Antitrust lobbying by the target's rivals is positively associated with the duration of deal completion.

While we expect that the target's rivals will often have an incentive to lobby antitrust agencies to block the deal, a horizontal deal may reduce the overall intensity of competition in concentrated industries and ultimately *benefit* the merging firms' rivals (Weinberg 2008; Clougherty & Duso 2009; Spiegel & Tookes 2013). Even so, it is unlikely that rivals will lobby antitrust agencies to approve deals involving their competitors for the following reasons. First, despite the reduction in the number of rivals and possible increases in industry prices, it may be risky to allow a competitor to become larger and more efficient. Some synergies are typically present in horizontal deals (Bernile & Lyandres 2019), and merging firms can benefit from economies of scale and the elimination of duplicate functions and facilities. Relatedly, by accumulating more resources and becoming more efficient, the merged company can be better positioned to take advantage of future growth opportunities in the industry or be better protected against industry downturns vis-à-vis the rivals. Second, in addition to monetary costs, lobbying regulators carries an opportunity cost, because there is a limit on the number of requests a company can make to regulators. Being granted one request often comes at the expense of forgoing others. Therefore, it is unlikely that a company would incur the monetary and opportunity costs of lobbying in favor of a competitor's deal.

Moderating Effects of Related Deals and Acquirers' Antitrust Lobbying

Next, we examine two factors that could affect the effectiveness of the lobbying efforts undertaken by the target's rivals in derailing focal M&A transactions. The first factor pertains to those rivals' capabilities of blocking the deal through lobbying. The extent to which the rivals can influence the decisions of antitrust agencies rests on whether those rivals can make a strong case that the deal would have anticompetitive effects. Although non-horizontal deals may have anticompetitive effects and come under antitrust scrutiny (e.g., Lafontaine & Slade 2007), antitrust concerns are more frequently considered salient in horizontal deals because these deals imply that two direct competitors are merging (Weinberg 2008; Clougherty & Duso 2009; Spiegel & Tookes 2013). Thus, we expect that antitrust lobbying by the target's rivals will be more effective in horizontal deals because, with these deals, it is easier for rivals' lobbyists to make the case to regulators that the deal will have anticompetitive effects. Accordingly, the rivals' antitrust lobbying will be more effective in derailing horizontal deals than non-horizontal deals. We thus predict:

Hypothesis 2a: The negative association between antitrust lobbying by the target's rivals and the probability of deal completion is stronger for related deals than for unrelated deals.

Hypothesis 2b: The positive association between antitrust lobbying by the target's rivals and the duration of deal completion is stronger for related deals than for unrelated deals.

The second moderating factor pertains to the acquirer's capability to respond to the attack from the target's rivals and mitigate the influence of those rivals' lobbying on regulators. Given the observed acquisition intention, the large commitment of resources to the acquisition, and the costs associated with deal termination (e.g., Neuhauser et al. 2011; Chakrabarti & Mitchell 2016), it is in the acquirer's best interest that the deal goes through and is completed quickly. Thus, the acquirer itself could engage in lobbying activities toward the antitrust agencies to try to influence their decision in its favor and prevent antitrust challenges. If effective, the acquirer's lobbying efforts could partly neutralize the effects of the rivals' lobbying.⁴ Therefore, we predict:

Hypothesis 3a: The negative association between antitrust lobbying by the target's rivals and the probability of deal completion is weaker when the acquirer engages in antitrust lobbying than when it does not.

Hypothesis 3b: The positive association between antitrust lobbying by the target's rivals and the duration of deal completion is weaker when the acquirer engages in antitrust lobbying than when it does not.

METHODS

Data and sample

To test our hypotheses, we collect a sample of acquisition deals by U.S. public firms. Our acquisition sample comes from the SDC Platinum database and meets the following requirements: (1) The acquirer and the target are publicly traded U.S. companies that can be matched to Compustat; (2) the percentage of shares of the target sought in the deal is at least 50%; (3) the announcement date is between January 1, 2008, and December 31, 2020; (4) the

⁴ The target could also lobby antitrust agencies. Yet, while the acquirer would typically have an incentive to lobby *in favor* of the deal, the direction of the effect of the target's lobbying is more ambiguous and depends on the context. In friendly deals, the target could lobby in favor of the deal along with the acquirer. In unfriendly deals, the target could lobby *against* the deal (e.g., see Croci et al. 2017). Thus, we focus our hypotheses on the acquirer's lobbying.

deal is not a repurchase, leveraged buyout, spinoff, recapitalization, self-tender, exchange offer, acquisition of remaining interest, or privatization; and (5) the announcement and completion dates are not on the same day. We focus on domestic U.S. acquisition deals so that all firms in our sample are faced with the same regulatory environment. The sample period starts in 2008 because quarterly federal-level lobbying data became available in that year.⁵ After placing all these constraints, we are left with a final sample of 1,372 acquisitions. In this sample, the SDC labeled 1,025 deals as completed, 129 deals as withdrawn, and 208 deals as pending or with unknown status. For the deals pending or with unknown status, we verified in Orbis the status and found that 39 were eventually completed. Hence, we updated our sample data by flagging these deals as completed, and recorded their completion date from Orbis.

Information on firm lobbying directed at the DOJ and FTC is sourced from the Center for Responsive Politics (CRP). We use the Text-based Network Industry Classification (TNIC-3) data constructed by Hoberg and Phillips (2010, 2016) to identify firms' rivals. Firm financial information is collected from Compustat.

Measures

Dependent variables. We have two dependent variables. *Deal completion* is a dummy variable coded as 1 if an acquisition deal is completed and as 0 otherwise. Among the 1,372 acquisition deals, 1,064 were completed (78%). The second dependent variable is *completion duration*, which is measured as the logarithm of the number of days between the announcement date and the completion date (Hawn 2021). On average, it took 137 days for the sample firms to complete deals, with a standard deviation of 108 days.

⁵ The Honest Leadership and Open Government Act in 2007 increases lobbyist disclosure filings from semi-annual to quarterly. This act pertains to federal-level lobbying activities.

Independent variable. Our independent variable captures antitrust lobbying by each target firm's rivals. First, we identify each target firm's rivals based on Hoberg and Phillips' (2010, 2016) TNIC-3 data, which have been widely used in recent studies to define industry peers (Ammann, Horsch, & Oesch 2016; DesJardine, Grewal, & Viswanathan 2023; Kini, Lee, & Shen 2024). Hoberg and Phillips (2010, 2016) identify pairs of competitors using a text-based similarity measure based on firms' product descriptions in their 10-K filings. Firms are mandated to report accurate descriptions of their key products in their 10-K filing by Item 101 of Regulation S-K. The more similar the product descriptions of the two firms, the higher the level of competition is between those firms. The TNIC-3 classification considers two firms to be rivals if their pairwise similarity score exceeds a specific threshold (i.e., 21.32%) so that the classification has the same coarseness as three-digit Standard Industrial Classification (SIC) codes.

Using TNIC-3 to identify competitors offers several advantages. First, as TNIC-3 is based on product descriptions, it considers firms' level of business diversification, which is not possible with the SIC or North American Industry Classification System (NAICS) scheme. Second, TNIC-3 is dynamic, just as the competitive relationships of modern firms are, with each firm's competitors being updated annually. As an illustrative example, Kim, Finkelstein, and Haleblian (2015) find that, in the U.S. IT industry, roughly 35% of TNIC-3 rivals each year were no longer rivals a year later.

After identifying a target firm's rivals using TNIC-3, we focus on each target's top five rivals—that is, the nearest five neighbors of the target firm in terms of product similarity scores (Hoberg & Phillips 2010).⁶ Next, we need to identify rival firms' antitrust lobbying activities.

⁶ We focus on a small number of rivals (five) to ensure that our measure incorporates only the rivals with the highest likelihood of being affected by the deal (and therefore most likely to react by lobbying) and does not include

The Lobbying Disclosure Act of 1995 requires organizations to report their federal lobbying activities, including the amount spent, the specific issues and bills addressed, and the agencies lobbied. Because the FTC's Bureau of Competition and DOJ's Antitrust Division are the two agencies mainly responsible for antitrust review and investigation, we consider firm lobbying directed at the FTC and DOJ to represent antitrust lobbying activities. Given that 95% of acquisition deals in our sample were completed or withdrawn within two years after deal announcements, we focus on rivals' lobbying directed at the FTC and DOJ eight quarters after deal announcements, which is consistent with the approach used by Fidrmuc, Roosenboom, and Zhang (2018). *Target rival antitrust lobbying* is measured as the number of a target's top five rival firms that engage in lobbying directed at the FTC and DOJ in the eight quarters after deal announcements. Among the 1,372 deals, there are 214 deals with observed rivals' antitrust lobbying in the eight quarters after deal announcements.

In robustness tests, we verified our results using alternative definitions of *target rival antitrust lobbying*. First, we considered the top three or ten closest rivals of the target based on the TNIC-3 data instead of the top five. Second, we considered four or twelve quarters after the deal announcement as alternative time windows. In both cases, the results were consistent with our main analyses.

Moderator variables. Our first moderator is *related deal*, which is coded as 1 if the acquirer and the target belong to the same TNIC-3 industry, and as 0 otherwise. Among 1,372 deals in our sample, 17% of them were related deals. The second moderator is *acquirer antitrust lobbying*. This moderator is coded as 1 if an acquirer has engaged in lobbying activities directed

irrelevant firms. However, as the choice of the number of rivals is arbitrary, we performed robustness checks considering the top three or ten rivals of the target; when doing so, we obtained results consistent with our main analyses.

at the FTC and DOJ in the following eight quarters after the deal announcement, and as 0 otherwise. In our sample, the acquirer engaged in lobbying in 19% of the cases.

Control variables. We include a host of factors that may influence deal completion likelihood and completion duration. At the acquirer level, we first control for antitrust lobbying by the acquirer's rivals (*acquirer rival antitrust lobbying*) because deal completion and duration can be influenced by those rivals' lobbying activities. This control variable is measured as the number of the acquirer's top five rival firms that engage in lobbying of the FTC and DOJ in the eight quarters after deal announcements. Research suggests that acquirer size and financial performance can influence acquisition outcomes (Haleblian et al. 2009). Thus, we control for *acquirer size* (using the natural log of the acquirer's total assets) and *acquirer ROA* (measured as the acquirer's net income divided by its total assets). We also control for *acquirer leverage*, measured as the ratio of total liabilities minus cash and equivalents to total assets (Testoni 2022), to capture acquirers' financial position. An acquirer's acquisition experience may influence deal outcomes (Hawn 2021); thus, we control for *acquirer acquisition experience*, measured as the number of acquisitions made by the acquirer in the past three years (Reuer et al. 2012).

We also include a series of target control variables. Target antitrust lobbying may affect deal outcomes; thus, we control for *target antitrust lobbying*, which was coded as 1 if a target engages in lobbying of the FTC and DOJ in the eight quarters after deal announcements, and as 0 otherwise. Next, we control for *target size*, *target ROA*, and *target leverage*, computed in the same way as for the acquirer.

Furthermore, we include several deal-level control variables. Acquisitions that can increase product market concentration are associated with high antitrust concerns (Fidrmuc et al. 2018). Thus, we control for the expected change in industry concentration based on the

Herfindahl–Hirschman index (HHI). This variable (labeled *expected \DeltaHHI*) is calculated as 2 times the product of the market shares of the acquirer and of the target for related deals (Eckbo 1992).⁷ For unrelated deals, the variable receives a value of 0 (Fidrmuc et al. 2018). Deal attitude may affect the acquisition outcome (Campbell, Sirmon, & Schijven 2016). Thus, we include two dummy variables indicating whether the deal is a tender offer (Offenberg & Pirinsky 2015) or a hostile deal (Savor & Lu 2009)—designated as *tender offer* and *hostile deal*, respectively. Acquisitions paid by cash are associated with a higher likelihood of completion and shorter duration than those paid by stock (Martynova & Renneboog 2009). Thus, we control for *cash payment*, coded as 1 if the proportion paid by cash is greater than 50%, and as 0 otherwise. Acquirers and targets in the same state face a lower level of information asymmetry than those from different states (Ragozzino & Reuer 2011; Chakrabarti & Mitchell 2016), which can affect deal completion and duration. Thus, we control for *local deal*, which equals 1 if the acquirer and the target are in the same state and 0 otherwise.

Lastly, we include target industry fixed effects and year fixed effects to control for the possibility that acquisition completion can be shaped by target industry characteristics and the macroeconomic context. We create industry dummies based on the three-digit SIC industry classification instead of the TNIC-3 industry classification because the latter does not classify firms into distinct industry groups. We chose the three-digit SIC industry classification because the TNIC-3 industry classification has the same coarseness as three-digit SIC codes.

Econometric models

⁷ The TNIC-3 industry classification that we use for our main variables is not constrained to be transitive (i.e., while firms *i* and *j* and firms *j* and *z* may be rivals, firms *i* and *z* may not be). Despite the advantages of the TNIC-3 classification described earlier, this feature implies that the TNIC-3 industries are not non-overlapping clusters of firms, which would be needed to define the market shares to compute the HHI index. For this reason, we compute market shares using the three-digit SIC codes to define industries.

Deal completion is a dummy variable; thus, we use probit models to predict the probability of an acquisition deal being completed. In predicting the duration of deal completion, we follow previous research by performing ordinary least squares (OLS) regressions on the logarithm of the number of days to completion (Fidrmuc et al. 2018; Hawn 2021). Because firms in our sample may have conducted multiple acquisitions during our sample period, we use robust standard errors clustered at the acquirer level.

Firms that have undertaken acquisitions may differ from firms that have not, and such heterogeneity may also drive the likelihood and duration of deal completion, leading to sample selection bias. We therefore choose Heckman selection models to alleviate the possibility of sample selection bias (Heckman 1979). To estimate deal completion likelihood, the first-stage regression estimates a probit model predicting whether a firm will acquire other firms in a year. To construct the sample used for the first-stage model, we use all public firms covered by Compustat and create a firm-year panel. The dependent variable of the first-stage regression is acquisition, which was coded as 1 if a firm announces an acquisition in a year, and as 0 otherwise. The predictors in the first-stage regression include firm size, firm ROA, firm leverage, firm past acquisition experience, firm antitrust lobbying, and firm rival antitrust lobbying. The exclusion restriction included in the first-stage regression is regional acquisition intensity, measured as the annual percentage of other firms that had undertaken acquisition activities in the same Metropolitan Statistical Area (MSA) of the focal firm (relative to the total number of firms in the MSA). Research suggests that firms may imitate their geographic peers in making strategic decisions (Baum, Li, & Usher 2000; Yang & Hyland 2006; McCann, Reuer, & Lahiri 2016); however, regional acquisition intensity should not directly affect a firm's likelihood or duration of deal completion. Results from the first-stage regression are reported in the Online Appendix.

Consistent with our expectation, *regional acquisition intensity* positively and significantly predicts engagement in acquisitions (b = 0.192, p < 0.05). In unreported results, we add regional acquisition intensity as an additional predictor in estimating deal completion. The coefficient for regional acquisition intensity is -0.069 (p = 0.177), so this variable should satisfy the criteria for exclusion restriction (Certo, Busenbark, Woo, & Semadeni 2016). Based on the first-stage probit regression, we calculate the *inverse Mills ratio*, which we include as a control in our second-stage regressions.

To estimate the duration of deal completion, we focus on completed deals. That decision has the potential to create sample selection bias, because firms with completed deals may differ from firms without acquisitions and from firms that withdraw acquisitions. To alleviate this risk of sample selection bias, we use Heckman selection models (Heckman 1979). The first-stage regression estimates a multinomial logit model to distinguish among three types of firms: those that complete an acquisition in a year, those that withdraw from an acquisition in a year, and those that do not engage in acquisitions in a year. The exclusion restriction included in the firststage regression is regional deal completion intensity, measured as the annual percentage of other firms that completed acquisition deals in the same MSA as the focal firm (relative to the total number of firms in the MSA). It shows that *regional deal completion intensity* positively and significantly predicts deal completion likelihood (b = 0.124, p < 0.05) but does not significantly predict deal completion duration (b = -0.051, p = 0.267). Thus, this variable should satisfy the criteria for exclusion restriction. Based on the first-stage multinomial regression, we calculate the *inverse Mills ratio* (Hamilton & Nickerson 2003), which we included as a control in our second-stage regressions to predict deal completion duration.

RESULTS

Summary statistics and binary correlations among the variables are provided in Table 1. All of the variance inflation factor (VIF) values are less than 7.06, with an average value of 3.79, so multicollinearity is unlikely to be problematic for our models.

-----Insert Table 1 about here-----

In Table 2, we report the results from probit regressions predicting deal completion likelihood. Model 1 includes the control variables only. Model 2 adds the *target rival antitrust lobbying* variable. Models 3 and 4 add the moderation effects of related deal and acquirer antitrust lobbying, respectively. Model 5 is the full model. The control variables indicate that *acquisition experience, tender offer*, and *cash payment* are positively associated with the likelihood of deal completion, whereas *target ROA* and *hostile deal* are negatively associated with the likelihood of deal completion.

-----Insert Table 2 about here-----

Hypothesis 1a proposes that antitrust lobbying by the target's rivals is negatively associated with the probability of deal completion. As shown in Model 2, the coefficient of *target rival antitrust lobbying* is negative and statistically significant (b = -0.733, p < 0.001), which is in line with Hypothesis 1a. Our models are nonlinear, so the marginal effects vary at different values of the predictors (Busenbark, Graffin, Campbell, & Lee 2022). We use the "margins" command in Stata and hold all variables at their mean values to interpret the effect size of our independent variable. We find that a deal is 20.5 percentage points less likely to be completed when one of the target's rival engages in antitrust lobbying than when none of the target's rivals undertakes antitrust lobbying.

In Model 3, we test the moderating effect of *related deal* by including interaction terms between *related deal* and *target rival antitrust lobbying*. The negative coefficient of the

interaction term (b = -1.684, p < 0.01) is statistically significant and consistent with Hypothesis 2a. Holding all other covariates at their means, the marginal effect of *target rival antitrust lobbying* on deal completion is -0.394 (p < 0.001) for related deals and -0.071 (p < 0.1) for unrelated deals. Figure 1 visualizes the marginal effects of *target rival antitrust lobbying* on deal completion likelihood for both related and unrelated deals. We observe a stronger marginal effect of *target rival antitrust lobbying* for related deals than for unrelated deals, in line with Hypothesis 2a.

-----Insert Figure 1 about here-----

In Model 4, we test the moderating effect of *acquirer antitrust lobbying*. The positive coefficient of the interaction term (b = 0.589, p < 0.05) is statistically significant and consistent with Hypothesis 3a. Holding all other covariates at their means, the marginal effect of target rival antitrust lobbying on deal completion is -0.204 (p < 0.01) when the acquirer does not conduct antitrust lobbying, and -0.067 (p < 0.05) when the acquirer conducts antitrust lobbying. These results are consistent with Hypothesis 3a. We visualize the marginal effect of target rival antitrust lobbying on deal completion likelihood at different levels of acquirer antitrust lobbying in Figure 2. As shown in the figure, there are meaningful distinctions between the marginal effects of target rival antitrust lobbying when the acquirer does versus does not engage in antitrust lobbying is stronger when the acquirer engages in antitrust lobbying than when it does not.

-----Insert Figure 2 about here-----

In Table 3, we report the results from OLS regressions predicting deal completion duration for the sample of completed deals. Model 1 includes control variables only. Model 2 adds the independent variables. Models 3 and 4 add the moderation effects of *related deal* and *acquirer antitrust lobbying*, respectively. Model 5 is the full model. As shown in Model 2, *target rival antitrust lobbying* is positively related to completion duration and is statistically significant (b = 0.156, p < 0.05), which supports Hypothesis 1b. In terms of magnitude, deal completion duration will be 16.5% longer when at least one target rival engages in antitrust lobbying.⁸ Given that, on average, it takes 137 days to complete a deal, this implies that it will take 23 additional days to complete a deal when a target rival seeks to block the deal through antitrust lobbying.

-----Insert Table 3 about here-----

In Model 3, we test the moderating effect of *related deal*. The coefficient of the interaction term (b = 0.087, p = 0.070) is positive, in line with Hypothesis 2b, and is marginally significant. The marginal effect of *target rival antitrust lobbying* on completion duration is 0.236 (p < 0.05) for related deals and 0.149 (p < 0.05) for unrelated deals. Figure 3 illustrates the marginal effects of target rival antitrust lobbying on completion duration: There is a stronger marginal effect of *target rival antitrust lobbying* for related deals than for unrelated deals.

-----Insert Figure 3 about here-----

In Model 4, we test the moderating effect of *acquirer antitrust lobbying*. The negative coefficient of the interaction term (b = -0.044, p < 0.05) is statistically significant and consistent with Hypothesis 3b. The marginal effect of the target's rivals conducting antitrust lobbying on completion duration is 0.167 (p < 0.05) when the acquirer does not undertake antitrust lobbying and 0.123 (p < 0.1) when the acquirer does engage in antitrust lobbying. Figure 4 depicts the marginal effects of target rival antitrust lobbying on deal completion duration at different levels of acquirer antitrust lobbying. As shown in the figure, target rivals' antitrust lobbying

⁸ The following website offers insights into the interpretation of the coefficients of OLS models with a log-transformed dependent variable: <u>https://stats.oarc.ucla.edu/other/mult-pkg/faq/general/faqhow-do-i-interpret-a-regression-model-when-some-variables-are-log-transformed/.</u>

demonstrates a stronger marginal effect on the duration of deal completion when the acquirer does not engage in antitrust lobbying (when the moderator is 0) than when the acquirer engages in antitrust lobbying (when the moderator is 1).

-----Insert Figure 4 about here-----

Supplementary analyses

Instrumental variable regression. In addition to using Heckman selection models, we consider potential biases due to omitted variables or unobserved heterogeneity that could result in a correlation between our independent variable and the error term. To run this robustness test, we employ the instrumental-variable approach. Following previous studies (Fidrmuc et al. 2018), we use target rival firms' past antitrust lobbying as an instrumental variable. Lobbying behavior exhibits a high level of persistence (Kerr et al. 2014), thereby ensuring a strong correlation between rival firms' antitrust lobbying in the past period (i.e., our instrument) and rival firms' antitrust lobbying in the current period (i.e., our primary explanatory variable). Furthermore, to satisfy the exclusion condition that past lobbying is not directly related to current acquisition completion likelihood or duration, we impose a one-year gap between the deal announcement and the past antitrust lobbying instrument. This choice reflects that for the majority of deals, the number of days from the acquisition initiation to the public announcement falls within one year (Fidrmuc et al. 2018; Lee & Yerramilli 2022). Consequently, it is unlikely that antitrust lobbying by the target's rivals within quarters (-12, -4) is directly associated with future acquisition deals, as the deals are not typically planned or anticipated that far back in time. Specifically, our instrumental variable, past antitrust lobbying by the target's rivals, counts the number of each target's top five rivals that engage in federal antitrust lobbying over quarters (-12, -4) relative to

the deal announcement. Therefore, past antitrust lobbying should reflect exogenous reasons for lobbying that are not directly related to a particular acquisition.

Table 4 reports the two-stage IV probit models with deal completion as the dependent variable. Table 5 reports the two-stage least-squares (2SLS) models with deal completion time (logged) as the dependent variable.⁹ The first stage confirms that target rival past antitrust lobbying is highly correlated with target rival antitrust lobbying. Concerning the second stage, we find a significant negative effect of target rival antitrust lobbying for deal completion and a significant positive effect on deal completion time, consistent with our earlier results.

-----Insert Tables 4 and 5 about here-----

Target rival antitrust lobbying. We expect that firms will increase their federal antitrust lobbying as a response to the acquisition of their rival firms. To test this idea, we create a dummy variable—*post rival acquired*—indicating whether one of the firm's top five rivals is acquired in the year. For each M&A announcement, a firm is considered to be affected if it is one of the top five rivals of the target. After identifying all the affected firms, we construct a firm-quarter panel by comparing firm antitrust lobbying expenditures before and after an acquisition event. *Post rival acquired* is coded as 1 in the eight quarters following an acquisition announcement, and as 0 during the eight quarters prior to the acquisition event. We use OLS regression models to predict firm expenditures on antitrust lobbying (logged). We include firm fixed effects to control for unobserved idiosyncrasies of firms. Then, we add several time-variant control variables that may affect firm expenditures on antitrust lobbying. Specifically, we control for *firm size* and financial indicators (i.e., *firm ROA* and *firm leverage*) that may affect a firm's ability to devote

⁹ The number of observations in Tables 4 and 5 is lower than in Tables 2 and 3, respectively, because the instrument (*target rival past antitrust lobbying*) cannot be computed for the deals in the first years of the sample as quarterly-level data on lobbying became available in 2008.

funds to lobbying (Ridge, Ingram, & Hill 2016). Moreover, we control for *firm acquisition experience* and *rival antitrust lobbying amount*, as they may affect a firm's motivation to engage in antitrust lobbying. *Firm acquisition experience* is measured as the number of acquisitions by the firm in the past three years. *Rival antitrust lobbying amount* is measured as the total amount of antitrust lobbying expenditures made by a firm's top five rivals (logged) in a year. Furthermore, we include industry concentration using the HHI of market shares based on threedigit SIC to capture industry competitiveness. Finally, we include year fixed effects to control for time-specific trends that may affect firm expenditures on antitrust lobbying.

As shown in Table 6, firms significantly increase federal antitrust lobbying expenditures after their rival firms are acquired (b = 0.075, p < 0.05). Moreover, we examine whether firms respond differently when they are affected by related acquisitions versus unrelated acquisitions. To do so, we include the interaction term of *post rival acquired* and *related deal* in Model 3. The coefficient of the interaction term is positive and significant (b = 0.100, p < 0.05), suggesting that affected firms increase their expenditures on federal antitrust lobbying after an acquisition announcement by a greater extent if the acquisition is a related deal.

-----Insert Table 6 about here-----

DISCUSSION AND CONCLUSION

Given the competitive threats that acquisitions can pose to the target's rivals, this study explores whether the target's rivals engage in CPA to sabotage acquisitions during the acquisition process. In line with our hypotheses, we find that lobbying by the target's rivals directed toward antitrust authorities is negatively associated with the probability that the deal is completed and positively associated with the time to deal completion. We find also evidence of two moderators of these main effects. First, these effects are stronger when the focal deal is horizontal, because for these deals it is more feasible for lobbyists to highlight the possible anticompetitive effects of the deal to the antitrust agencies and make a case to block the deal. Second, these effects are weaker when the acquirer itself engages in antitrust lobbying and, therefore, is able to partly neutralize the attack by the target's rivals. Finally, we find that the target's rivals increase their expenditures on antitrust lobbying after the deal announcement, particularly with horizontal deals, which is consistent with the notion that the target's rivals engage in antitrust lobbying as a competitive reaction to the announced deal.

Overall, this study highlights that CPA can be used as a competitive tool to sabotage specific strategic actions of competitors. On this dimension, our study departs from existing nonmarket strategy research (Dorobantu et al. 2017), which has largely focused on showing how firms' CPAs can complement their competitive strategy by channeling critical resources away from competitors or altering the general policy environment for the industry as a whole. Our findings highlight a new channel through which firms can capitalize on CPAs to elevate their competitive positions. Targeting rivals' specific strategic actions through lobbying creates firm-specific political rents rather than industry-specific political rents and, therefore, can be more effective in elevating a firm's competitiveness over its rivals than attempting to change policy environments through lobbying.

Furthermore, this study contributes to strategy research on M&As by documenting how rivals' antitrust lobbying can affect the acquisition process and the chances of deal completion. Although a large body of literature has explored the determinants of deal completion (e.g., Coff 1999; Muehlfeld et al. 2012; Li et al. 2014; Shen et al. 2014; Chakrabarti & Mitchell 2016; Hawn 2021; Testoni et al. 2022), the possibility that rivals might influence the deal outcome has escaped previous investigations. Given the large number of deals that fail and the large costs that

failed deals can impose on the merging firms (Neuhauser et al. 2011; Bahreini et al. 2019), a broader understanding of the determinants of deal failure should prove valuable for managers and strategy scholars alike.

Our findings also contribute to the research on competitive dynamics. In the past, scholars have shown that when faced with increased competitive pressures, firms may respond with actions such as price campaigns, new-product introductions, and factory expansions (Chen & Miller 2012). Our study suggests that firms may also engage in competitive responses even when they are not direct targets of competitive attacks. Specifically, a target's rivals may resort to lobbying in an effort to derail M&A transactions, even if these rivals are not direct targets of the acquirers. Thus, in addition to product-market actions, non-market actions such as lobbying can serve as competitive tools. However, the effectiveness of these non-market actions depends on whether the acquirers also employ such strategies. Collectively, our findings extend the understanding of competitive dynamics by offering new insights into when and how firms engage in competitive actions.

In our theory development, we focused on the target's rivals. Although the distinction between the acquirer's and the target's rivals is irrelevant in horizontal deals because the two groups coincide, the existing literature suggests that in non-horizontal deals the competitive threat is likely to be more critical for the target's rivals. Potentially, the acquirer's rivals may also be threatened by the deal and react by lobbying antitrust authorities, just as the target's rivals do. Yet, the effect of antitrust lobbying by the acquirer's rivals on the probability of deal completion is weaker than the effect of antitrust lobbying by the target's rivals (see Table 2). Moreover, we did not observe any effect of antitrust lobbying by the acquirer's rivals on the deal completion duration (see Table 3). These patterns are consistent with previous arguments suggesting that non-horizontal acquisitions are, at least on average, more threatening to the target's rivals than to the acquirers' rivals (e.g., Silverman 1999; Capron & Pistre 2002; Kaul & Wu 2016).

Like all research, our study has some limitations, which suggest directions for future research. First, we do not have access to the specific content of firms' lobbying efforts, due to the limitations of the lobbying data. For instance, we cannot determine whether a firm is lobbying for a particular M&A deal and whether it is lobbying in favor of or against the deal. To address this issue, we have taken several measures to refine the antitrust lobbying variables. First, we consider rival firms' lobbying activities directed toward the FTC and DOJ, the two agencies responsible for antitrust review and investigation. Moreover, we consider rival firms' lobbying activities within a specific time period following the deal announcement (i.e., eight quarters). As noted by Fidrmuc et al. (2018), imposing restrictions on lobbying departments and timing enables us to more accurately link firm lobbying records to specific M&A deals. Finally, based on our conversations with corporate managers, it appears unlikely that a firm would lobby in favor of a competitor's deal, given the monetary and opportunity costs associated with lobbying activities. Future research could conduct more in-depth qualitative analyses to shed additional light on the content of the rivals' lobbying efforts.

Second, our analyses have focused on the role of CPAs undertaken by targets' rivals in shaping M&A deal completion. However, these rivals may engage in other non-market activities to influence M&A outcomes. For example, they might make donations to nonprofit organizations and attempt to use these organizations to influence media reporting and public opinion. Prior research (Bertrand et al. 2021) also suggests that firms may make donations to nonprofit organizations in an effort to shape the policy-making process. It would be interesting to explore whether such nonprofit organizations can be used as tools to derail specific strategic actions.

Relatedly, given that the media can be used as a competitive tool to elevate a firm's competitiveness (DesJardine, Shi, & Cheng 2023), future research can investigate whether firms manage their relationships with media companies to highlight potential anticompetitive effects of M&A transactions.

Third, although our analyses suggest that lobbying can be effective in sabotaging threatening deals and that firms are more likely to engage in antitrust lobbying when their rivals are being acquired, our data indicate that only 16% of deals are associated with antitrust lobbying by targets' rivals. Future research can investigate which factors may hold some targets' rivals back from engaging in antitrust lobbying. Does their reluctance reflect a lack of resources or capabilities to engage in lobbying, or concerns that antitrust lobbying might affect their future ability to conduct deals? A detailed analysis of these inhibiting factors can deepen our understanding of the role of CPA in M&A transactions.

In conclusion, this study highlights that antitrust lobbying can be a powerful tool when wielded by the target's rivals to prevent the negative competitive effects of an acquisition. Thus, CPA is another competitive weapon at these rivals' disposal, together with previously documented market strategy reactions (e.g., Valentini 2016; Uhlenbruck et al. 2017). Given the rising antitrust concerns and the more frequent CPA in recent years, these non-market strategies are increasingly feasible.

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Tab	le 1	. I	Descri	iptive	stati	stics	and	corre	lations
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	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Deal completion	0.78	0.42	1																	
2. Completion duration ^a	137.12	108.26	1	1																
3. Target rival antitrust lobbying	0.22	0.65	-0.15	0.12	1															
4. Acquirer antitrust lobbying	0.19	0.40	0.11	-0.10	0.17	1														
5. Related deal	0.17	0.38	-0.21	0.27	0.10	-0.06	1													
6. Target antitrust lobbying	0.10	0.31	-0.04	0.03	0.12	0.10	0.04	1												
7. Acquirer rival antitrust lobbying	0.34	1.06	-0.07	0.05	0.29	0.25	0.08	0.09	1											
Expected ΔHHI	1.10	6.32	-0.13	0.08	0.04	0.03	0.38	0.03	0.05	1										
9. Target size	7.16	1.22	-0.07	0.07	0.11	0.05	0.08	0.12	0.03	0.04	1									
10. Target ROA	0.17	0.58	-0.23	0.02	0.14	0.04	0.26	0.01	-0.02	0.20	0.17	1								
11. Target leverage	0.21	0.55	0.01	0.00	0.01	0.03	0.05	0.01	-0.01	0.02	0.10	-0.21	1							
12. Acquirer size	8.65	2.25	-0.05	0.10	0.07	0.11	0.04	0.03	0.12	-0.02	0.38	0.07	0.04	1						
13. Acquirer ROA	0.25	0.53	-0.09	-0.08	0.01	0.04	-0.02	0.02	-0.01	0.08	0.02	0.21	0.01	0.08	1					
14. Acquirer leverage	0.32	0.67	0.05	-0.01	0.00	-0.01	0.00	-0.00	-0.05	-0.02	0.05	-0.08	0.03	0.05	-0.19	1				
15. Acquisition experience	4.10	3.81	0.11	-0.03	0.02	0.06	-0.03	-0.01	0.02	-0.00	0.09	0.09	0.00	0.37	0.11	-0.06	1			
16. Tender offer	0.12	0.33	0.07	-0.20	-0.02	-0.01	-0.07	-0.02	-0.00	-0.04	-0.03	-0.05	0.02	0.01	0.16	-0.12	0.06	1		
17. Hostile deal	0.01	0.09	-0.05	0.03	0.03	-0.01	0.08	0.06	0.02	0.04	0.01	0.00	0.02	0.01	0.02	0.03	0.00	-0.01	1	
18. Cash payment	0.33	0.47	0.11	-0.24	-0.01	0.04	-0.12	-0.04	0.05	-0.01	-0.11	-0.05	0.00	0.02	0.17	-0.14	0.14	0.32	0.02	1
19. Local deal	0.33	0.47	0.07	0.05	-0.00	-0.05	0.01	-0.02	-0.02	-0.05	-0.04	-0.07	-0.02	-0.12	-0.15	0.11	-0.15	-0.06	-0.03	-0.13
Note: <i>N</i> =1,372.																				

^a *Completion duration* is expressed in levels here, while in the regressions it is included in log form. The sample for *completion duration* is 1,064 because this variable is calculated for completed acquisitions only.

Deal completion	(1)	(2)	(3)	(4)	(5)
Target rival antitrust lobbying × Related deal			-1.684**		-1.922**
			(0.525)		(0.662)
Target rival antitrust lobbying × Acquirer antitrust lobbying				0.589*	0.618*
Target rivel antitrust labbying		0 722***	0.588*	(0.294)	(0.305) 1 115+
Target fival antitust 1000 ying		(0.733)	-0.388	(0.505)	(0.602)
Related deal	-1.027***	-1.019***	-0.682***	-0.924***	-0.625***
	(0.157)	(0.154)	(0.145)	(0.158)	(0.144)
Acquirer antitrust lobbying	0.313*	0.312*	0.304*	0.196 +	0.182 +
~ ·	(0.146)	(0.146)	(0.145)	(0.112)	(0.106)
Controls	0.120	0.120	0.115	0.100	0.10()
Acquirer rival antitrust lobbying	-0.120+	-0.120+	-0.113+	-0.109+	-0.100+
Acquirer size	(0.007)	0.015	0.006	0.018	0.001
requirer size	(0.047)	(0.046)	(0.045)	(0.046)	(0.046)
Acquirer ROA	0.126	0.122	0.123	0.128	0.125
-	(0.125)	(0.123)	(0.123)	(0.123)	(0.122)
Acquirer leverage	0.078	0.191	0.384	0.282	0.527
	(0.272)	(0.219)	(0.250)	(0.218)	(0.342)
Acquisition experience	$0.0/9^{***}$	0.082^{***}	$0.0/9^{***}$	0.083^{***}	0.081^{***}
Target antitrust lobbying	-0.012	-0.013	-0.013	-0.017	-0.015
Turget until ust 1000 ying	(0.012)	(0.020)	(0.020)	(0.021)	(0.021)
Target size	-0.018	-0.006	-0.005	-0.010	-0.014
-	(0.068)	(0.067)	(0.070)	(0.069)	(0.071)
Target ROA	-0.413*	-0.369	-0.418*	-0.385	-0.420*
	(0.195)	(0.189)	(0.199)	(0.196)	(0.201)
larget leverage	-1.562	-1.024	-1.736	-1.635	-1.885
Expected AHHI	-0 587	(2.009)	-0.330	(1.732)	(1.797)
	(0.942)	(0.949)	(0.957)	(0.958)	(0.953)
Tender offer	0.665**	0.632*	0.661**	0.614*	0.695**
	(0.245)	(0.246)	(0.250)	(0.250)	(0.258)
Hostile deal	-1.495*	-1.496*	-1.496*	-1.496*	-1.491*
	(0.663)	(0.663)	(0.663)	(0.663)	(0.662)
Cash payment	$0.8/2^{***}$	0.893^{***}	0.916^{***}	0.905^{***}	0.923^{***}
Local deal	(0.177) 0.028	-0.030	-0.026	(0.182)	(0.183)
	(0.159)	(0.160)	(0.160)	(0.161)	(0.164)
Inverse Mills ratio	0.115*	0.115*	0.114*	0.114*	0.112*
	(0.053)	(0.053)	(0.053)	(0.053)	(0.053)
Year dummies	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes
	1372	1372	1372	1372	1372
Log pseudolikelihood	-887.293	-8/1.450	-858.364	-859.126	-849.255

Table 2. Target rival antitrust lobbying and deal completion likelihood

Log pseudolikelihood Note: Robust standard errors in parentheses. + p<0.1, * p<0.05, ** p<0.01, *** p<0.001. Two-tailed tests.

Completion duration	(1)	(2)	(3)	(4)	(5)
Target rival antitrust lobbying × Related deal			0.087+		0.102+
			(0.048)	0.044*	(0.056)
larget rival antitrust lobbying × Acquirer antitrust lobbying				-0.044*	-0.030+
Target rival antitrust lobbying		0.156*	0 148*	(0.018) 0.168*	(0.010) 0.161*
Target fiver antitust foodynig		(0.063)	(0.066)	(0.069)	(0.064)
Related deal	0.333***	0.339***	0.301***	0.340***	0.311***
	(0.047)	(0.047)	(0.046)	(0.046)	(0.046)
Acquirer antitrust lobbying	-0.008*	-0.008*	-0.008*	-0.012	-0.006
1 5 6	(0.003)	(0.003)	(0.003)	(0.007)	(0.004)
Controls					
Acquirer rival antitrust lobbying	0.010	0.007	0.007	0.006	0.005
	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
Acquirer size	0.025**	0.024**	0.024**	0.022**	0.022**
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Acquirer ROA	-0.068*	-0.069*	-0.069*	-0.069*	-0.068*
	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)
Acquirer leverage	-0.163	-0.159	-0.159	-0.159	-0.158
	(0.104)	(0.101)	(0.100)	(0.100)	(0.100)
Acquisition experience	-0.007	-0.006	-0.006	-0.006	-0.006
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Target antitrust lobbying	0.001	0.001	0.001	0.001	0.001
т. , '	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
larget size	0.033	0.032	0.032	0.032	0.030
Torrest DOA	(0.029)	(0.029)	(0.029)	(0.029)	(0.029)
Target ROA	(0.089)	(0.083)	(0.082)	(0.082)	(0.081)
Towast lawas as	(0.001)	(0.000)	(0.039)	(0.000)	(0.039)
Target leverage	(0.130)	(0.132)	(0.130)	(0.149)	(0.132)
Expected AHHI	(0.378)	(0.370)	(0.378)	(0.379)	(0.378)
	(0.208)	(0.194)	(0.185)	(0.238)	(0.236)
Tender offer	-0 548***	-0 547***	-0 547***	-0 548***	-0 549***
	(0.062)	(0.062)	(0.062)	(0.062)	(0.062)
Hostile deal	0.215	0.216	0.216	0.212	0.215
	(0.157)	(0.157)	(0.157)	(0.157)	(0.157)
Cash payment	-0.132**	-0.136**	-0.136**	-0.135**	-0.136**
F	(0.043)	(0.042)	(0.042)	(0.042)	(0.042)
Local deal	0.005	0.006	0.006	0.006	0.006
	(0.030)	(0.030)	(0.030)	(0.030)	(0.030)
Inverse Mills ratio	0.234*	0.234*	0.234*	0.234*	0.234*
	(0.109)	(0.109)	(0.109)	(0.109)	(0.109)
Year dummies	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes
N	1064	1064	1064	1064	1064
\mathbb{R}^2	0.435	0.439	0.441	0.442	0.443

Table 3. Target rival antitrust lobbying and deal completion duration

Note: Robust standard errors in parentheses. + p<0.1, * p<0.05, ** p<0.01, *** p<0.001. Two-tailed tests.

	First stage	Second stage
	Target rival antitrust lobbying	Deal completion
Target rival past antitrust lobbying	0.277***	
	(0.010)	
Target rival antitrust lobbying (Instrumented)		-0.684**
		(0.212)
Related deal	-0.303	-1.043***
	(0.452)	(0.180)
Acquirer antitrust lobbying	0.071**	0.246*
	(0.023)	(0.119)
Acquirer rival antitrust lobbying	0.051***	-0.029
	(0.010)	(0.048)
Acquirer size	0.013	0.014
	(0.098)	(0.043)
Acquirer ROA	-0.273	0.107
	(0.261)	(0.122)
Acquirer leverage	-0.547	0.175
	(0.531)	(0.206)
Acquisition experience	-0.196***	0.092***
	(0.049)	(0.024)
Target antitrust lobbying	0.613*	-0.006
	(0.247)	(0.005)
Target size	0.081	-0.002
	(0.051)	(0.051)
Target ROA	-0.219	-0.315
	(0.279)	(0.188)
Target leverage	0.382	-1.218
	(0.307)	(2.004)
Expected Δ HHI	7.715**	-0.413
	(2.483)	(0.729)
Tender offer	0.462	0.705*
	(0.521)	(0.284)
Hostile deal	-0.322	-1.245*
	(1.841)	(0.606)
Cash payment	-0.286	0.839***
	(0.373)	(0.192)
Local deal	0.195	-0.035
	(0.355)	(0.147)
Year dummies	Yes	Yes
Industry dummies	Yes	Yes
N	1056	1056
Wald χ^2	-	2.048
Wald p-value	-	0.152

Table 4. Instrumental variable regressions to predict deal completion likelihood

Note: Robust standard errors in parentheses. + p<0.1, * p<0.05, ** p<0.01, *** p<0.001. Two-tailed tests.

	First stage	Second stage
	Target rival antitrust lobbying	Completion duration
Target rival past antitrust lobbying	0.296**	
	(0.099)	
Target rival antitrust lobbying (Instrumented)		0.171*
		(0.082)
Related deal	-0.328	0.332***
	(0.959)	(0.045)
Acquirer antitrust lobbying	0.048	-0.004*
	(0.040)	(0.002)
Acquirer rival antitrust lobbying	0.059+	0.003
	(0.032)	(0.010)
Acquirer size	0.025	0.027**
	(0.100)	(0.009)
Acquirer ROA	-0.332	-0.062*
	(0.173)	(0.030)
Acquirer leverage	-0.399	-0.168
	(0.560)	(0.106)
Acquisition experience	-0.162+	-0.005
	(0.088)	(0.005)
Target antitrust lobbying	-0.191	0.002
	(0.264)	(0.001)
Target size	0.185	0.038
	(0.157)	(0.030)
Target ROA	-0.637+	0.075
	(0.335)	(0.058)
Target leverage	0.456	0.158
	(0.418)	(0.366)
Expected Δ HHI	16.308	0.180
	(20.041)	(0.231)
Tender offer	0.390	-0.526***
	(0.244)	(0.060)
Hostile deal	-1.966	0.224
	(1.901)	(0.163)
Cash payment	-0.191	-0.129**
	(0.366)	(0.040)
Local deal	0.032	0.008
	(0.337)	(0.031)
Year dummies	Yes	Yes
Industry dummies	Yes	Yes
N	830	830
Wald χ^2	-	2.239
Wald p-value	-	0.135

Table 5. Instrumental variable regressions to predict deal completion duration

Note: Robust standard errors in parentheses. + p<0.1, * p<0.05, ** p<0.01, *** p<0.001. Two-tailed tests.

Antitrust lobbying amount	(1)	(2)	(3)
Post rival acquired		0.075*	0.061*
		(0.036)	(0.030)
Post rival acquired × Related deal			0.100*
			(0.047)
Firm size	0.533***	0.533***	0.530***
	(0.036)	(0.036)	(0.036)
Firm ROA	-0.000*	-0.000*	-0.000*
	(0.000)	(0.000)	(0.000)
Firm leverage	0.009***	0.009***	0.009***
	(0.002)	(0.002)	(0.002)
Firm acquisition experience	0.003	0.003	0.003
	(0.014)	(0.014)	(0.014)
Rival antitrust lobbying amount	0.520**	0.520**	0.520**
	(0.201)	(0.201)	(0.201)
Industry concentration	0.032	0.032	0.032
	(0.041)	(0.041)	(0.041)
Year dummies	Yes	Yes	Yes
Firm fixed effect	Yes	Yes	Yes
N	37037	37037	37037
\mathbb{R}^2	0.338	0.357	0.370

Table 6. Firm antitrust lobbying in response to rival acquisition

Note: Robust standard errors in parentheses. In model 3, the baseline effect of *related deal* is controlled for by the firm fixed effects. + p<0.1, * p<0.05, ** p<0.01, *** p<0.001. Two-tailed tests.





Figure 2. Marginal Effect of Target Rival Antitrust Lobbying on Completion Likelihood at Different Levels of Acquirer Antitrust Lobbying







Figure 4. Marginal Effect of Target Rival Antitrust Lobbying on Completion Duration at Different Levels of Acquirer Antitrust Lobbying



ONLINE APPENDIX

Table A1 shows the first-stage regression results of Heckman selection models. The first model shows the first-stage probit regression results that estimate the likelihood of acquisition engagement. The second model shows the first-stage multinomial logit regression results that estimate the likelihood of firms completing an acquisition in a year (firms not conducting acquisitions in a year are treated as the base).

	First stage	First stage
	Acquisition	Acquisition completion
Regional acquisition intensity	0.192*	
	(0.085)	
Regional deal completion intensity		0.124*
		(0.057)
Firm size	0.421**	0.198*
	(0.135)	(0.087)
Firm ROA	0.076	0.025
	(0.049)	(0.021)
Firm leverage	0.002	-0.000
	(0.002)	(0.000)
Firm past acquisition experience	0.628***	0.470 +
	(0.094)	(0.268)
Firm antitrust lobbying	0.028	0.015+
	(0.018)	(0.008)
Firm rival antitrust lobbying	0.133*	-0.006
	(0.064)	(0.004)
Year dummies	Yes	Yes
Industry dummies	Yes	Yes
N	69813	69813
Log likelihood	-4970.23	-6139.48

Table A1.	Heckman	first-stage	regression	results
140101111	merinan	mst stage	16516551011	results

Note: Robust standard errors in parentheses.

+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001.

Two-tailed tests.