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CAN ALLIANCES SUBSTITUTE ACQUISITIONS? THE EVIDENCE FROM A QUASI-EXPERIMENT

Jaemin Lee
IMPERIAL COLLEGE BUSINESS SCHOOL
London, U.K., SW7 2AZ
jaemin.lee@imperial.ac.uk

Joon Mahn Lee[1]
KOREA UNIVERSITY BUSINESS SCHOOL

ABSTRACT

We utilize a quasi-experimental setting that exogenously changes costs to acquire the targeted firm to examine the relationship between costs to acquire the target and alliance decisions. We find that firms with increased acquisition costs, due to the increased takeover protection, tend to experience alliances more than their comparison group. Furthermore, we examine boundary conditions for this relationship—intra-industry transaction and resource redeployability. Our analyses also reveal that, when the costs of acquisition increase, 1) equity alliances are more likely to be adopted as a substitute; 2) acquisitions become less likely; 3) alliance performance decreases; and 4) acquisition premiums increase.

INTRODUCTION

Alliances and acquisitions have been widely acknowledged as the most important decisions a firm makes concerning its corporate development (Dyer, Kale, & Singh, 2004). A significant number of studies has focused on understanding the relationship between alliances and acquisitions (e.g., Mellewigt, Thomas, Weller, & Zajac, 2017), typically defining an alliance as an alternative governance choice to an acquisition (e.g., McCann, Reuer, & Lahiri, 2016; Villalonga & McGahan, 2005; Wang & Zajac, 2007). Despite the meaningful insights generated, existing studies have not provided direct evidence on whether firms actually consider alliances and acquisitions as strategic substitutes. That is, most studies on the choice between acquisitions and alliances, which focus on when one governance choice is preferred to the other, are based upon the empirically unsubstantiated assumption that alliances and acquisitions are a substitute for each other (e.g., McCann et al., 2016; Wang & Zajac, 2007). This is an important gap in the literature, considering that an increasing number of scholars exploits how alliances and acquisitions might be used to serve different purposes (Feldman, 2020). For example, Capron and Mitchell (2012) suggest that alliances could be used to access clearly defined resources, while acquisitions could serve more complex purposes, such as cost savings, increasing market power, and market entry. Therefore, the lack of evidence on whether alliances and acquisitions are indeed substitutable threatens the viability of studies based on such a view.

In this paper, we aim to bridge the gap between theory and evidence by testing the research's central proposition that firms consider alliances and acquisitions as strategic substitutes. To circumvent the empirical difficulty of directly testing the substitutability between acquisitions and alliances, we utilize a quasi-experimental setting that exogenously changes costs to acquire the firms affected by the change (hereafter *acquisition costs*). From the potential

10.5465/AMBPP.2021.21

acquirer's perspective, when a target becomes costly to acquire, the acquirer will be more likely to make an alliance with the target instead of acquiring it to circumvent the high acquisition costs and gain access to the resources and capabilities of the target. Moreover, this substitutability between alliances and acquisitions will be lower when acquisitions and alliances are more likely to serve different purposes (e.g., intra-industry transaction, and resource redeployability).

We adopt the enhancement of Delaware's takeover protection during the mid-1990s and a difference-in-differences approach (Kacperczyk, 2009; Wang, Zhao, & He, 2016) to examine how exogenous change in takeover protection affects a firm's likelihood of making an alliance. Delaware-incorporated firms with staggered boards (i.e., boards that are made up of different classes of directors with different service terms) became eligible for the increased takeover protection in 1996. Such a shift in the Delaware takeover regime provides an ideal setting to study our research question because it was an unpredictable statutory change that increased the acquisition costs and was orthogonal to a firm's governance choice. Hence, comparing the likelihood that potential acquirer firms will form an alliance with the treated firms with that of controlled firms before and after this event helps us to clearly test the relationship between acquisition costs and the decision to pursue alliances.

Consistent with our main prediction, we find that potential acquirers are more likely to make alliances with Delaware firms with staggered boards than the control group firms. We also find that the substitutability between alliances and acquisitions is significantly affected by the relationship of the industries of a potential acquirer and target firms and the resource redeployability of both firms, as acquisitions and alliances are expected to deliver different outcomes depending on those characteristics. Our post-hoc analyses also show that the difference in the likelihood that treated group firms will experience an alliance compared to the likelihood that the controlled group firms will experience an alliance is greater for equity alliances than for non-equity alliances. Moreover, we show that, following an increase in takeover protection, acquisitions indeed become less likely for the treated firms, and alliance performance decreases while the acquisition premium increases. Finally, we rule out potential alternative mechanisms and demonstrate that our findings are robust to several alternative econometric specifications and constructions of a dependent variable, as well as additional analyses to account for the potential confounding effects related to the quasi-experiment setting.

Our paper contributes to the research on the choice between alliance and acquisition in particular (Folta, 1998; Villalonga & McGahan, 2005; Wang & Zajac, 2007) by providing the first empirical evidence for the assumption of substitutability between acquisitions and alliances, providing a justification for those studies. Moreover, we are first to theorize on how the substitutability of alliances and acquisitions is influenced by distinctive purposes of acquisitions that can be expected under certain conditions. Our theory and analyses on when acquisitions can serve purposes that alliances cannot, such as a reduction in competition (Scherer & Ross, 1990) or resource reconfiguration (Sakhartov & Folta, 2014), and thus we extend prior studies on alliances by linking them with the literature on competitive strategy and resource redeployability.

This paper also contributes to the literature on takeover protection (Kacperczyk, 2009; Wang et al., 2016), which has taken the viewpoint of the firms directly affected by takeover protection, by examining how takeover protection will affect other firms (i.e., the potential acquirers)—thereby being the first to study the spillover effects of takeover protection policy.

THEORY AND HYPOTHESES

10.5465/AMBPP.2021.21

Alliances and Acquisitions as Substitutes

Alliances are interfirm agreements on the joint management of assets and the sharing of investment risk, costs, and achievements between participating firms without a transition of majority ownership. Alternatively, acquisitions combine a major part or all of the participating firms' assets under common ownership. Acquisitions thus afford acquirers greater control and coordination than alliances. Consequently, acquisitions can entail both greater benefits and greater risks for firms than alliances; while an alliance's participants share the potential risks, investment costs, and outcomes of the alliance, an acquiring firm bears the entirety alone (Wang & Zajac, 2007). Moreover, the deal-making processes for acquisitions are often more formal and extensive (e.g., negotiations to retain resources, including top managers) than those for alliances, which tend to be more fluid in nature based on the evolving nature of relationship management with partner firms (Inkpen & Currall, 2004).

Despite the differences, alliances and acquisitions are considered as alternative governance choices for sourcing assets that are located outside a firm and are too complicated to be purchased (Wang & Zajac, 2007). Numerous studies (e.g., McCann et al., 2016; Villalonga & McGahan, 2005; Wang & Zajac, 2007) have argued that, although they have some differences, alliances and acquisitions should be considered as substitutes, suggesting that the two types of deals can replace each other in most cases with some performance tradeoffs (Dyer et al., 2004). For example, a relationship may begin with an alliance between two firms that later discover that centralized control and unified ownership are required for their combination to succeed. The reverse (i.e., from an acquisition to an alliance) might also occur, as a firm created out of an acquisition may break into several separate but cooperating units. Hence, although acquisitions may not be fully replaced by alliances, in many cases, an alliance can be considered as an alternative option when an acquisition becomes difficult to pursue. That is, if an acquisition becomes unavailable or very costly as an option for a firm, the firm will change its governance choice to alliance to gain access to the potential target's resources and assets, especially when the target firm possesses assets and resources the potential acquirer cannot otherwise obtain (e.g., knowledge, distribution channel, and consumer data). Thus, we predict the following:

> ***H1****. An increase in the cost to acquire a firm (due to the adoption of takeover protection) will lead to an increase in the likelihood that the firm will make an alliance with potential acquirers.*

Boundary Conditions for Substitutability Between Alliances and Acquisitions

Next, we examine when alliances are less or more likely to substitute acquisitions, by focusing on when the purposes of alliances and acquisitions would be more or less overlapped.

Intra-industry transaction.

Despite some differences between them (e.g., in governance mechanisms and types of benefits), acquisitions and alliances are often considered to serve similar purposes (e.g., knowledge acquisitions, access to complementary assets, and market entry). However, one of the unique features of acquisitions, which is not applicable to alliances, is reduction in competitive intensity through acquiring competitors as long as the acquisition does not create a monopolistic

10.5465/AMBPP.2021.21

market (Porter, 2011; Scherer & Ross, 1990). In contrast, similar movements to reduce competitive intensity through alliances (e.g., price-fixing) will be penalized by antitrust law. Even if direct competitors are allowed to form alliances to reduce competition, the alliances may fail because rivals have strong incentives to draw private benefits beyond the common benefits of the alliance (Gimeno, 2004; Khanna, Gulati, & Nohria, 1998).

Based on this unique characteristic of acquisitions, we argue that the substitutability between acquisitions and alliances decreases when the potential acquirer and target firms belong to the same industry (i.e., intra-industry). When the potential transaction involves firms from different industries (i.e., inter-industry transaction), the purposes of alliances and acquisitions will be more similar, and the acquirers that have considered acquiring the target firms will be more likely to choose alliances following an increase in acquisition costs of the target. However, when the transaction being considered is an intra-industry one, the potential acquirers that have considered acquiring the target firms to reduce competition intensity may not be as likely to choose alliances since alliances cannot serve that purpose. Hence, we predict the following:

> ***H2.*** *The relationship between the cost to acquire a firm (due to the adoption of takeover protection) and the likelihood that the firm will make an alliance with potential acquirers will be mitigated when the potential transaction is between intra-industry firms.*

Potential acquirer's resource redeployability.

Studies have argued that acquisitions can help firms to combine their resources and dispose excess ones to optimize the use of resources and routines, to eliminate redundancies and achieve scale and scope economies (e.g., Anand, 2004; Capron et al., 1998; Sakhartov & Folta, 2014). We next examine how the resource redeployability of a potential acquirer could influence the degree to which the acquirer can combine its resources through an acquisition, thereby affecting the likelihood that alliances would be used to replace acquisitions.

Acquisitions can be an important vehicle through which firms can reconfigure their resources (Anand, 2004; Capron et al., 1998). Following an acquisition, a firm with high resource redeployability can more freely withdraw resources from its business units and transfer them to the units of the acquired firm if they would be better used there. Conversely, if the resources of a potential acquirer are not redeployable, the possibility to transfer excessive assets and resources from the acquirer to the target would be limited.

Such a reconfiguration of resources and business units is a unique purpose of acquisitions that alliances cannot serve. While alliances can help firms hold (limited) ownership of resources of an alliance partner, alliances typically do not involve a transfer of the resources between the partners. Thus, when a potential acquirer's resources are more redeployable, acquisitions can serve unique purpose that alliances cannot, suggesting limited substitutability. Furthermore, the high resource redeployability tends to lower the perceived costs of failure from an acquisition (Lieberman, Lee, & Folta, 2017) and the potential costs of pursuing resource reconfiguration. For example, when the acquisition turns out to be a failure, firms with high resource redeployability may disunite their resources that were transferred to the target firms and integrate them back into themselves or liquidate them to reduce the failure costs. Thus, the effect of an increase in acquisition costs following takeover protection on the suppression of an acquisition can be mitigated for potential acquirers whose resources are highly redeployable.

In sum, when an acquirer's resources are more redeployable, alliances will have limited

10.5465/AMBPP.2021.21

substitutability with acquisitions. When the acquirer's resources are not as redeployable, the expected outcomes from acquisitions and alliances will be more overlapped—mainly limited to gaining access to external knowledge and resources. Hence, we predict the following:

> ***H3****. The relationship between the cost to acquire a firm (due to the adoption of takeover protection) and the likelihood that the firm will make an alliance with potential acquirers will be mitigated by the level of the acquirer's resource redeployability.*

Potential target's resource redeployability.

High resource redeployability of a potential target can also make acquisitions have a unique function that alliances cannot have (Anand, 2004; Capron et al., 1998). The more resources and assets held by a target firm can be redeployed, the more value a potential acquirer will perceive from acquiring the target because the acquirer can transfer more resources from the target to itself to create value through a new combination of resources (Sakhartov & Folta, 2014). Such recombination cannot be pursued through alliances, however, because alliances typically do not involve the transfer of resources and assets between partner firms (unless they are unintentionally leaked). Furthermore, resource redeployability lowers the potential costs for pursuing resource reconfiguration with the target. When the acquisition is a failure, for example, firms with high resource redeployability may be able to disunite their resources that were transferred to the acquiring firms and integrate them back into target firms.

When the target's assets are not highly redeployable, the acquirer will not be able to extract resources from the target and transfer them to itself even after the acquisition. Therefore, when the target's resources are not as redeployable, the expected outcomes from acquisitions and alliances will be more overlapped—mainly gaining access to external resources and assets. In contrast, when the target's redeployability is higher, acquisitions can be used for the purpose of resource recombination, which cannot be achieved using alliances. Potential acquirers will likely perceive the acquisition of firms with highly redeployable resources as a relatively low-risk investment compared to the acquisition of firms with limited resource redeployability, as they would be able to salvage more resources and assets from the target firms even if the acquisition ultimately turns out to be a failure (Lieberman et al., 2017). Hence, we predict the following:

> ***H4****. The relationship between the cost to acquire a firm (due to the adoption of takeover protection) and the likelihood that the firm will make an alliance with potential acquirers will be mitigated by the level of the target's resource redeployability.*

ANALYSIS AND RESULTS

We test our theory using a data on acquisitions and alliances completed by publicly traded U.S. companies between 1991 and 2000, a period chosen to represent five years before and after the change. We combined multiple data sources to create our sample. A linear probability models with firm fixed effects and clustered standard errors was used for the main results, but conditional logit produces the same results.

H1 predicts that a firm that experiences an increase in acquisition costs will be more likely to make an alliance with a partner. The results supported this hypothesis, which suggest that an increase in takeover protection increased the likelihood that a firm would make an

10.5465/AMBPP.2021.21

alliance with a partner by 0.085 percentage points, or 10.13% of the sample average. H2 predicts that the positive relationship between an increase in acquisition costs and the likelihood that the potential acquirers will make an alliance with the firm will be negatively moderated when the firms are from the same industry. This hypothesis was supported by the finding, which indicates that when the potential acquirer and target firm are in the same industry (compared to when they are in different industries), the effect of an increase in costs of acquiring Delaware-incorporated firms with staggered boards after 1996 will be about nine times weaker.

In H3, we predict that firms will be less likely to make an alliance following an increase in the costs of acquiring one when the resources of the firms considering an acquisition of the other are more redeployable. H3 was supported by the results, which reveal that when the acquirer's resource redeployability is high (vs. when it is low), the effect of an increase in acquisition costs will be weaker by 100%. Finally, H4 predicts that the positive relationship between an increase in costs to acquire a firm and the likelihood of making an alliance with that firm will be mitigated by the firm's resource redeployability. The results supported H4, suggesting that when the target's resource is highly redeployable (vs. when it is not), the effect of an increase in acquisition costs will be weaker by 100%.

Addressing alternative mechanisms, post-hoc analyses, and robustness checks

We considered two alternative explanations: 1) firms may form an alliance as a real option for future acquisitions rather than as a substitution of an acquisition (Reuer & Tong, 2005); and 2) our main relationship is driven by the target firms' poor governance (or higher managerial power) caused due to takeover protection (Straska & Waller, 2014).

Our post-hoc analyses also reveal that, when acquisition costs increase, 1) equity alliances account for most of the increased alliances; 2) acquisitions indeed become less likely to occur; 3) a sequential investment relationship of alliances and acquisitions becomes less likely; and 4) alliance performance decreases and acquisition premium increases.

We also conducted a variety of additional tests to check the robustness of our findings. First, we conducted three placebo tests to check the validity of our identification strategy. Second, we tried the following alternative estimation techniques: Poisson quasi-maximum likelihood estimation (Chatterji & Fabrizio, 2014); a log-linear model with firm fixed effect estimation; the rare events logistic regression instead of the linear probability models and conditional logit models (King & Zeng, 2001); and a matching of each realized alliance dyad with 10 randomly matched non-realized dyads based on the industry subsector and year of alliance formation (Rubin, 2006). Third, we tested different time windows of 7, 8, and 10 years. Fourth, we tested if our findings are sensitive to the inclusion of minority acquisitions as alliances (Villalonga & McGahan, 2005). Fifth, we examine if the results from the analyses conditioned on dyads are different from our main results conditioned on (focal) firms.

ENDNOTE

1. All authors contributed equally to the study and names are listed in alphabetical order.

RESULTS AND REFERENCES AVAILABLE FROM THE AUTHORS