

# **Foreign Bribery and Cross-border Mergers and Acquisitions**

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## **ABSTRACT**

While much attention has been paid to the role of foreign bribery in cross-border mergers and acquisitions, the evidence to date has been primarily anecdotal. I provide the first large-sample evidence that acquirers' ability to bribe determines their engagement in the cross-border transactions. Using the OECD Anti-bribery Convention as an exogenous shock that limits acquirers' ability to pay bribes in foreign markets, I find that deal frequency decreases significantly from affected countries after the law enactment. More corrupt target countries experience a greater decline in cross-border deals. However, the effect of the anti-bribery legislation is mainly concentrated on public acquirers. Postlegislation acquirers are on average smaller and more competitive. Finally, I argue that anti-bribery laws are costly – this is evident from deal value destruction that can be as high as 28% of the total transaction synergy.

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*We need to deal with the cancer of corruption... We can give advice, encouragement, and support to governments that wish to fight corruption – and it is these governments that, over time, will attract the larger volume of investment.*

*– James D. Wolfensohn, Former President of the World Bank*

## **I Introduction**

The opening quote attests to an important consideration in foreign investment as well as cross-border mergers and acquisitions (M&As): corruption. A report by the International Chamber of Commerce asserts that moving business from a low corruption country to a country with a medium or high level of corruption is equivalent to a 20% tax on foreign business (a similar argument is raised by Wei, 2000). Despite the wide media coverage on bribery in the international business, the evidence of foreign bribery and cross-border M&As has been primarily anecdotal. One major challenge that hinders the empirical research is data observability: bribery-related criminal cases are scant and firms rarely disclose their bribe payments. To overcome the observability problem, one can rely on exogenous shocks that either change a country's level of corruption or limit the firms' ability to bribe.

I follow this approach by employing a quasi-experimental design in this paper. I study an exogenous implementation of the OECD Anti-bribery Convention in 41 countries. The OECD Convention criminalizes bribery of foreign public officials in international business transactions; that is, cross-border acquirers will be sanctioned for foreign bribery activities regardless of

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whether bribery is legal or illegal in the target country. This quasi-experiment alleviates the endogeneity problem to the extent that the laws are passed at the country level and are not driven by firms' cross-border M&A activities.

The purpose of this paper is twofold. First, I examine the question of whether prohibitions against foreign bribery affect the frequency of cross-border M&A transactions. This is an important research question for the economists and policy-makers: if bribery is essential in cross-border transactions, acquirers in countries affected by the law will be severely disadvantaged either because they lose the otherwise possible synergy creation opportunities or because they face higher risk and transaction costs (for example, they need to use more hidden special-purpose vehicles or lobbying). In addition, since cross-border transactions play a governance role by improving governance efficiency in the target country and lead to greater international stock market integration (Rossi and Volpin, 2004; Bris and Cabolis, 2008), the anti-bribery legislations in the acquirer's country affect firms and financial market development in the target countries as well.

The second purpose of this paper is to map out the relationship between acquirer characteristics and their ability to bribe in foreign markets. The simple answer to whether bribery affects cross-border deal frequency does not translate directly into predictions about which firms are most affected and how deal premiums change. For example, how are public and private deals affected differently by the anti-bribery laws? Who continues to be active in the cross-border transactions after the anti-bribery laws are introduced? Without understanding these questions, one cannot easily integrate anti-bribery actions into broader discussions about law effectiveness, market competitiveness, or deal synergies. I thus explore the question of how anti-bribery laws change acquirer characteristics and affect deal premiums.

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The OECD Convention provides a unique setting to investigate into these questions: first, the laws, passed by 41 countries at different points in time, allow me to examine both cross sectional and within-group variation for a large group of acquirer–target country pairs during a relatively long period. I include in this study 65 countries, representing 2,113 existing acquirer–target country pairs<sup>1</sup> and 98,904 cross-border deals from 1990 to 2014. Second, the enforcement and monitoring mechanisms of the OECD Convention appear to be effective<sup>2</sup> because the OECD as well as other organizations provide a host of measures to make legislations operative.

One potential concern is the political economy of laws, that is, countries enter the OECD Convention because of the change in economic conditions that drive the change in cross-border M&A activities. This can happen when firms, facing challenges that are likely to reduce their cross-border M&As, lobby for the entry into the OECD Convention. Though it is difficult to rationalize this argument since anti-bribery legislations are more likely to harm than increase the firms' competitiveness, in Section IV.B, I show formally that this is not the case. Another concern is that OECD Convention signatories and non-signatories are significantly different from each other so the direct comparison in a difference-in-difference framework is illusive. I describe why this would not be a worry in Section III.B. Finally, one may still worry about different levels of law implementation cross different countries, as well as other confounding events such as the collapse of tech bubble at the beginning of the 21<sup>st</sup> century. I return to this issue in Section VI.

My analysis first focuses on the frequency of cross-border deal number. As is common in the cross-border M&A literature (Erel, Liao and Weisbach, 2012; Ferreira, Massa and Matos, 2009;

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<sup>1</sup> Out of 4,160 (=65×64) possible country pairs, 2,047 country pairs exhibit zero cross-border transaction history throughout 1990 till 2014. These country pairs are excluded, resulting in 2,113 country pairs with existing M&A transactional ties. This exclusion follows Erel, Liao and Weisbach (2012).

<sup>2</sup> According to the OECD website, until 2014, 361 individuals and 126 entities have been sanctioned under criminal proceedings for foreign bribery and approximately 393 investigations are ongoing after the OECD Convention came into force in 1999. This contrasts to only 143 bribery-related actions against public firms for violations of the U.S. FCPA from 1978 until 2013 (Karpoff, Lee and Martin, 2013).

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Rossi and Volpin, 2004), I use the annual cross-border deal number between each acquirer–target country pair scaled by the total number of domestic and pairwise cross-border M&As in the target country as my measure of cross-border deal frequency.<sup>3</sup> Such a scaling implicitly controls for factors that affect both domestic and cross-border deals such as the size of M&A market in the target country. My results show that the passage of the anti-bribery law lowers the deal frequency between the affected acquirer and the target by about 0.6 percent relative to unaffected pairs. The drop is economically large given the mean deal frequency of 0.02 in the sample. This finding indicates that acquirers’ ability to pay bribes is indeed a determinant of their engagement in cross-border transactions. Furthermore, one may expect a heterogeneous effect depending on the corruption level of the target country since the necessity of bribery increases with the target country’s corruption. I find this is indeed the case: cross-border deal frequency declines more dramatically when the target country is more corrupt.

I next examine how anti-bribery legislations affect public and private deals differently. Splitting acquirers and targets by their public status, I observe that the decrease in cross-border deals is mainly concentrated on publicly listed acquirers. The effect is most pronounced when both the acquirer and the target are public firms. This finding can be interpreted as firms under public spotlight being most affected by the anti-bribery laws.

I further examine the change of acquirer characteristics after the implementation of laws. Specifically, I look at the change in size and competitiveness of the public acquirers, since these factors have been shown to be related to a firm’s ability to use bribes (Bennedsen, Feldmann and Lassen, 2009). I find that public acquirers in signatory countries following the legislation are on

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<sup>3</sup> The country pairs are ordered, for example, US–UK and UK–US are two different pairs. See Appendix A for detailed measure construction. Alternatively, I use cross-border deal count as the dependent variable and fit a count model in robustness tests.

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average smaller in size and more competitive (e.g. more likely to be a Forbes 500 firm<sup>4</sup> and expense more R&D than their target firms). This is consistent with the common perception that less competitive firms are more prone to pay bribes. As a result, nimbler and more competitive acquirers remain in the cross-border M&A market.

Finally, I examine the effect on deal premiums. It is ex-ante unclear how takeover premiums should change. If acquirers from affected countries no longer pay bribes, their takeover premiums should remain the same or increase. However, if acquirers still need to bribe but can shield their bribe payments through third-party intermediaries, their transaction costs will rise, and as a result, the takeover premiums should decrease. The premium can also decrease if the synergy of the combined firm depends on that firm's ability to use bribes to obtain new contracts in the local market. Consistent with the later interpretation, I find that the deal premiums for affected acquirers decrease significantly after the laws: takeover premiums one week (one day) prior to the announcement drop by about 13% (11%) relative to the unconditional premiums of 46% (40%) in the overall sample. Therefore, if the deal premium is fully adjusted, the anti-bribery laws destroy nearly 28% of the deal synergy.

Taken together, these results suggest that, first, acquirer bribery is necessary in cross-border transactions and therefore, laws that limit acquirers' ability to engage in bribery significantly reduce cross-border M&A activities. This is consistent with broader views that regulations are a major driver of global corporate control (see, e.g., Alimov, 2013; Levine, Lin and Shen, 2015; Dessaint, Golubov and Volpin, 2015). Second, I show that anti-bribery legislations are costly to firms in implementing countries due to additional transaction costs and destruction of deal value. In contrast to intuitive sense that corruption erodes deal value, foreign bribery might provide

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<sup>4</sup> The Forbes 500 firms are ranked by Forbes magazine based on revenues, profits, credits and other factors. It represents the largest revenue-generating corporations in the world.

room for rent seeking and efficiency improvement (Huntington, 1968). So acquirers bounded by the OECD Convention might face competitive disadvantages vis-à-vis other unbounded acquirers. My results are also indicative of competitiveness as a substitute for bribery, as postlegislation acquirers are more likely to be a Forbes 500 firm and more active in the R&D investment.

The remainder of this paper is organized as follows. Section II discusses the OECD Anti-bribery Convention and other related anticorruption legislations. Section III presents data sources and variables that will be used in the main analysis. In Section IV and V, I present my main results on the effects of laws on cross-border deal frequency and deal characteristics. I also conduct various robustness tests in Section VI. Finally, Section VII concludes the paper.

## **II The OECD Anti-bribery Convention**

I begin by describing the anti-bribery legislations. The anticorruption laws have been long implemented in many countries but the majority of these laws aim to prohibit domestic bribery. In fact, prior to the OECD Convention, the United States is the only country that penalizes its domestic firms for paying bribes to foreign government officials. The U.S. Foreign Corrupt Practices Act (FCPA) was signed into law in 1977 but its effectiveness has been long put into question (see, e.g. Hines, 1995). In 1989, the OECD established an ad hoc working group aiming to coordinate a comparative review of national legislations regarding the bribery of foreign public officials. In 1997, the OECD Anti-bribery Convention was signed and it entered into force in 1999. The Convention “establishes legally binding standards to criminalize bribery of foreign public officials in international business transactions and [...] is the first and only international anti-corruption instrument focused on the ‘supply side’ of the bribery transaction” (the OECD website).

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Up to today, there are 41 signatories of the OECD Convention including all OECD countries and 7 non-OECD countries. The enforcement of the OECD Convention is at the country level while the OECD Working Group on Bribery in International Business Transactions establishes a peer-driven monitoring mechanism to ensure the thorough implementation. Table 1 lists the signatories and the year of entry into force of legislations in each country.

[ INSERT TABLE 1 ]

The OECD Convention is likely to have strong effects on international business such as exports and cross-border M&As because it constrains firms' to use bribes as a tool to obtain contracts in foreign markets when such payments are necessary. Anecdotal evidence suggests that it is not uncommon for firms to pay bribes to the target government officials in international takeovers, but acquirers bounded by the Convention are now barred from this behavior even when bribery is legal in the target country<sup>5</sup>. Therefore, cross-border deal frequency is likely to decline in the OECD signatory acquirer countries. However, some counter-arguments have also been brought up. Kaufmann and Wei (1999) provide a formal model and empirical evidence on acquirers using anti-bribery laws as a commitment device to gain competitive advantages. Firms bounded by the Convention can say something like "I would like to pay but I can't because I will otherwise go to prison" when they face a demand for bribery. If this story holds, the anti-bribery laws might actually help firms gain contracts at lower costs. Alternatively, if firms can circumvent the laws without incurring other costs, the laws will not hinder cross-border transactions either.

Laws and economics papers have discussed the effectiveness of the OECD Convention. For example, Cuervo-Cazurra (2008) argued that the coordinating nature of the OECD Convention

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<sup>5</sup> For example, *The Economic Times* (Aug. 31, 2013) reports an unnamed PE fund dropped a Rs 400-crore deal in India in fear of the UK anti-bribery law (See: [http://articles.economicstimes.indiatimes.com/2013-08-31/news/41642201\\_1\\_due-diligence-pe-fund-uk-bribery-act](http://articles.economicstimes.indiatimes.com/2013-08-31/news/41642201_1_due-diligence-pe-fund-uk-bribery-act)).



has made it much more effective than the U.S. FCPA. Baughn et al. (2010) show that the propensity to bribe is the lowest among the OECD Convention signatories. D'Souza (2012) finds that exports from signatory nations drop dramatically to corrupt countries when the Convention is implemented.

### **III Data**

#### **A. Data Sources and Variables**

The M&A sample in this paper is taken from the Security Data Corporation's (SDC) Mergers and Corporate Transactions database and includes cross-border deals that are announced between 1990 and 2014 and completed before the end of 2014. To identify a cross-border deal, I use the SDC-reported acquirer and target nations to include only deals where the acquirer and the target are from different countries. I restrain the sample to 65 countries due to the macroeconomic, stock and accounting data availability. Following prior literature (e.g. Erel, Liao and Weisbach, 2012), I exclude recapitalizations, self-tender offers, exchange offers, repurchases, partial equity stake purchases, acquisitions of remaining interest, and privatizations, as well as deals in which the target or the acquirer is a government agency. After applying these filters, I end up with a sample of 98,904 cross-border deals which have a total transaction value of 9.2 trillion U.S. dollars. In deal level analysis, I further require that (similar to, e.g., Masulis, Wang and Xie, 2007): (1) the transaction value is greater than 1 million USD; (2) the acquirer controls less than 50% of the target prior to the deal and 100% upon completion; (3) the acquirer is not a financial firm (SIC code between 60–67); (4) financial information and stock information are available.

The measure of corruption comes from the Worldwide Governance Indicators. The “control of corruption” index gauges the perceptions of the extent to which public power is exercised for private gain for a large group of countries since 1996 and is used as a main measure of corruption

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in this paper. I inverse the original index so that a higher value reflects a higher corruption level. In Section VI, I alternatively use the Transparency International CPI index to proxy corruption as a robustness check.

I construct main control variables as following. Following Erel, Liao and Weisbach (2012), I calculate the annual difference of real foreign exchange rate return and real stock indices return between the acquirer and the target countries. For the exchange rate return, I obtain the monthly national exchange rates<sup>6</sup> in the U.K. Pound Sterling from WM/Reuters through Datastream. I then manually convert these currency quotes to get the quotes for the USD. These rates are then deflated into 2014 constant USD by the monthly inflation deflators (CPI based) for each country, also obtained from Datastream. The real exchange rate return is calculated by taking the first difference of the monthly natural logarithm of the real exchange rates. Similarly, to calculate stock indices return, I obtain from Datastream the monthly local stock indices<sup>7</sup> and deflate into 2014 constant USD for each country and for each month. Then I calculate the real stock market return by averaging the first difference of the monthly natural logarithm of the real indices within a year. I obtain annual GDP per capita in 2005 constant USD, annual GDP growth rate and annual population for each country from the World Development Indicator. I obtain annual trade data (bilateral import and export) from the World Integration Trade Solution and calculate the maximum of the value of imports (exports) by the target country from (to) the acquirer country as a percentage of total imports (exports) by the target country.

Firm level financial data (e.g. total assets, Tobin's  $Q$ , leverage, free cash flows) are obtained from Compustat for U.S. firms and from Worldscope for non-U.S. firms. Stock prices are

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<sup>6</sup> I use national currencies for the Economic and Monetary Union (EMU) countries before 1999 and Euros after 1999.

<sup>7</sup> I use the most widely traded market indice wherever data permit. When the indice is not available for a certain earlier period, I use an earlier market indice and debase the price so that returns remain unaffected despite another indice.

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obtained from the Center for Research in Security Prices (CRSP) for U.S.-listed stocks and from Datastream for non-U.S. stocks.

Finally, I obtain a number of deal level variables from SDC such as acquirer/target public status, deal value, deal premium, methods of payment, hostile deal, acquirer/target primary 4-digit SIC code, acquirer's ownership in the target. I also obtain a few firm level variables from SDC such as the number of employees and acquirers' Forbes 500 ranking.

Definitions of all variables are reported in Appendix A.

### **B. Summary Statistics**

Panel A and B in Table 2 present means, standard deviations and other properties for the main variables of interest in the sample. The main dependent variable is cross-border deal frequency, which is a scaled measure of pairwise cross-border deal number bounded above by one. Since I include 2,113 country pairs over 25 years, the potential country pair-year observations are 52,825 ( $2,113 \times 25$ ). However, I exclude pair-years where both cross-border and target domestic deal numbers are zero<sup>8</sup> (i.e. M&A market in the target country is completely inactive). The final pair-year observations are reduced to 49,526 ( $52,825 - 3,299$ ). Panel A of Table 2 shows the average annual cross-border deal frequency between a country pair is 2%.

The average corruption using the WGI measure (which ranges between -2.5 to 2.5) is -0.9. The average differences in exchange rate return and stock market return between the acquirer and target countries are close to zero. The GDP growth rate in the target country on average is 6% higher than that in the acquirer country while the logarithm of GDP per capita in the acquirer country is on average 21% higher than in the target country. I proceed without mentioning in detail other variable statistics except that these numbers are largely consistent with other studies.

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<sup>8</sup> This criterion excludes 3,299 (or 6%) pair-year observations.

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The split by “OECD Convention signatory nations” and “Non-OECD Convention signatory nations” in Panel C makes it clear that signatories are much more active in cross-border transactions both as acquirers and as sellers. For example, the average number of acquiring cross-border deals for signatories during the 25-year period is 2,386 whereas non-signatories on average make only 304 acquiring deals. These differences are, however, not the results of the anti-bribery laws as they exist even before the laws are introduced. One may still worry that the different level of M&A activeness between the two groups weakens the validity to use non-signatories as a control group because countries of different M&A activeness can experience different shocks (so the parallel assumption in the difference-in-difference framework is violated). There are two reasons why this should not be a serious concern. First, it is important to keep in mind that, because of the staggering of the entries into force of legislations, countries of OECD Convention signatories are both treatment and control countries. Second, in Section VI, I restrict the sample to signatory countries so that the comparison between countries is more straightforward.

Panel D displays the characteristics of the sample of global mergers and acquisitions. In line with Fresard, Hege and Phillips (2015), the table shows that cross-border deals represent a relatively small volume of global M&As. During the sample period 21% of all transactions involve firms from different countries. In terms of deal value, cross-border deals have a total value of 9.2 trillion USD, approximately 26.2% of all transaction value. In Appendix B, where I present cross-border deal number between each existing country pair over the sample period, we see that cross-border M&A resembles a network where deal flows are concentrated between a few large pairs. For instance, U.S. firms are by far the most active global acquirers with deal relationships with most other countries. On the contrary, a large number of country pairs exhibit no deal flows.

[ INSERT TABLE 2 ]

## IV Anti-bribery Legislation and Cross-border Deal Frequency

### A. Empirical Methodology

I examine the effect of the anti-bribery legislation on cross-border deal frequency using essentially a difference-in-difference (DID) methodology. Formally, let  $Y_{ijt}$  indicate the cross-border deal frequency between the acquirer country  $i$  and the target country  $j$  in year  $t$  and  $Post_{it}$  be the treatment indicator for a signatory acquirer country  $i$  when  $t$  is greater than the year of law enactment. The basic regression I estimate is:

$$Y_{ijt} = \gamma Post_{it} + \beta X_{ijt} + D_{ij} + D_t + \varepsilon_{ijt} \quad (1)$$

where  $\gamma$  is the treatment coefficient of interest,  $X_{ijt}$  are control variables,  $D_{ij}$  and  $D_t$  are country pair and year fixed effects and  $\varepsilon_{ijt}$  is an error term. The country pair fixed effect fully controls for fixed differences between treated and nontreated countries such as languages, religions, legal systems and cultures. The year dummies control for aggregate fluctuations or trends that could confound the results such as financial crisis, technology advances, etc.

We can further improve this estimation strategy by allowing treatment effect to differ depending on the corruption level in the target country. It is reasonable to expect heterogeneous effect of laws because the necessity to use bribes in cross-border transactions is to a large extent determined by the corruption level from the target government. To implement this strategy, I include an interaction between the treatment indicator  $Post_{it}$  and the measure of corruption,  $Corr_j$ , in the target countries. Equation (2) is the specification:

$$Y_{ijt} = \gamma_1 Post_{it} + \gamma_2 Post_{it} \times Corr_j + \beta X_{ijt} + D_{ij} + D_t + \varepsilon_{ijt} \quad (2)$$

where  $\gamma_2$  is the coefficient of interest. If the abovementioned hypothesis is true, we shall expect  $\gamma_2$  to be significantly negative.

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I use 1998 corruption measure to avoid posttreatment bias (see, e.g., Ho, 2005). Posttreatment bias can exist when the enactment of law affects the economic conditions or other covariates that I include as control variables (such as corruption, see an argument brought up by Bai, Jayachandran, Malesky and Olken, 2015). Bias is likely to be the greatest for covariates directly affected by the anti-bribery laws, for example, trades. To avoid this concern, I follow suggestions from some scholars (e.g., Donohue and Ho, 2007) by excluding such possibly tainted covariates in one of the reported specifications.

Another major concern is endogeneity. The key assumption of a DID approach is that the entry into laws is conditionally exogenous. The violation of this assumption would make my strategy less credible since the evolution of cross-border deals might then be different across treated and control groups absent the laws. One possibility that leads to the endogeneity is reverse causality. Though this issue is very much minimized in this setting because there is no ground where firms will lobby for legislations that cap their ability in international transactions, I formally address this concern by studying the dynamic effects of the anti-bribery legislations (here I follow Bertrand and Mullainathan, 2003). Specifically, instead of estimating the coefficient of  $Post_{it}$ , I create four dummies:  $Before^{-1}$ , that equals 1 for an acquirer country who is an OECD Convention signatory one year prior to its entry into force of legislations;  $Before^0$ , that equals 1 for an acquirer country who is an OECD Convention signatory in the year of legislation;  $After^1$ , that equals 1 for an acquirer country of the OECD Convention one year after the entry into force of legislations; and  $After^{1+}$ , that equals 1 for an acquirer country of the OECD Convention that implemented the law at least two years ago. Combining these dummies in one estimation allows me to examine the effects of laws along the timeline: if exogeneity holds, we would expect no statistical significance for the coefficient of  $Before^{-1}$  (and of  $Before^0$  if we believe laws should not produce effects immediately). In addition, I interact these dummies with  $Corr_j$ , as in equation (2).

A second possibility for endogeneity is the omitted variables. Suppose that there exists cyclicity in international takeovers (a typical example is “merger waves”) and that anti-bribery laws are only adopted at the point of takeover peaks. The frequency of cross-border deals can decrease following law enactments only because of the coincidence of the deal cycle and the deliberately targeted timing of legislation. Causal claims are falsified if this is the case. Though such a pathological case is unlikely, I make sure that my results are robust to controlling for omitted variables by adding acquirer-year and/or target-year specific dummies.

In all cases, I allow for clustering of the observations at the country pair level to account for the possible presence of serial correlation of data (Erel, Liao and Weisbach, 2012).

## **B. Results**

### *B1. Cross-border deal frequency by public status*

In Table 3, I estimate the effect of anti-bribery laws on cross-border M&A frequency<sup>9</sup>. The estimated coefficients of interest are the ones of *Post* and of *Post*×*Target corruption*.

Columns 1 to 3 include all deals in my sample. Column 1 estimates the basic impact of anti-bribery laws on the mean deal frequency. Mean deal frequency significantly drops by 0.8 percent after the laws are passed. The coefficient is statistically significant at 1% level. I investigate the robustness of this result by adding controls that have been shown to be determinants of cross-border transactions in column 2. The estimate of law effect is still significant at 1% statistical level and the magnitude remains at 0.6 percent. In column 3, I investigate the heterogeneous effect using the specification (2). The magnitude of interested coefficient increases once I allow the effect to vary across target countries based on their level of corruption. The coefficient of *Post*×*Target*

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<sup>9</sup> The vector of cross-border deal frequency measure contains a large number of zero values since many country pairs exist zero cross-border M&A transactions in a given year (for example, in 1991, there were no cross-border takeovers from UK to Argentina). I alternatively drop these zero values and estimate the same regression models; the results are qualitatively similar and quantitatively more significant than reported in Table 3.

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*corruption*, significant at 1%, suggests that cross-border deal frequency decreases by 0.3 percent in more corrupt countries relative to less corrupt countries that lie about one standard deviation lower on the corruption index. This magnitude should be added to the general effect of 0.9 percent (the coefficient of *Post*), also significant at 1% level, to obtain the overall effect of the laws.

I briefly discuss the effect of control variables. Consistent with Erel, Liao and Weisbach (2012), I find a currency and a stock return effect. Firms from countries which experience an appreciation in currency value are more likely to acquire firms in countries whose currencies have depreciated in that year. Similarly, firms in countries whose market stock returns are higher are more likely to buy firms in countries whose stock returns are relatively lower. Firms from richer countries (measured by GDP per capita) are more likely to buy firms from poorer countries, and acquirers are more likely to come from a country that has slightly a smaller population.

The results above confirm the deterring effect of anti-bribery laws on cross-border acquisitions. This does not tell us whether the deterrence is more effective for public acquirers or for private acquirers. To investigate this, I split the acquirers and targets according to their public status. Columns 4 to 11 report the results. Column 4 shows no effect of laws on public-to-public deals. But when the interaction variable  $Post \times Target\ corruption$  is allowed, we see that public acquirers significantly reduce the takeovers, with 0.2 percent decrease in deal frequency in more corrupt countries compared to less corrupt countries. Column 6 and 7 show similar results for public-to-private deals. The average deal frequency decreases by 0.3 to 0.4 percent following the law enactment. However, the effect does not depend on the corruption level in the target countries. Surprisingly, when I examine the effect on private acquirers through columns 8 to 11, I find no significant reduction in the deal frequency. Except the coefficient of  $Post \times Target\ corruption$  in column 9, which is statistically significant at 10% level but with a much smaller economic magnitude, other coefficients of interest are all statistically insignificant. Taken together, evidence



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shows that the deterrence effect of anti-bribery laws is concentrated on public acquirers but not on private acquirers.

There are two explanations to this observation. The first is that public acquirers are more prone to engage in bribery whereas private acquirers do not bribe. The second is that even though both bribe, the laws deter only those that can be easily detected. Public firms are under public spotlight. Therefore, these acquirers are most likely to be squeezed out of the world market of acquisitions. In other words, the anti-bribery laws impose disproportionately higher costs on public firms. Though my data do not permit me to distinguish between these two possibilities, prior research points out that smaller firms are more prone to bribe (Bennedsen, Feldmann and Lassen, 2009); this might suggest that the second explanation is a more plausible one.

[ INSERT TABLE 3 ]

### *B2. Cross-border deal frequency by high and low corrupt industries*

In this section I explore the effect of laws on cross-border acquisitions by high and low corrupt industries. Common perception that capital intense and highly regulated industries are more prone to corruption leads me to hypothesize the decline in cross-border deal frequency should be mainly observed in these more corrupt industries. I thus classify deals into “high” and “low corrupt” industrial groups based on the targets’ primary 2-digital SIC codes: “high corrupt” industries include construction, mining, manufacturing, transportation and public utilities, and public administration; “low corrupt” industries include agriculture, forestry, fishing, finance, services, wholesale and retail. Appendix C lists these industries and the deal number by industry for each year. As is clear from the table, the world market for acquisition exhibits industry heterogeneity: manufacturing is the most active industry with on average 1,498 takeovers each year whereas the public administration is the least active industry. From 1990 to 2014, deal

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number in high corrupt industries is 52,139 (or 52.7%), and in low corrupt industries is 46,765 (or 47.3%).

Table 4 reports the regression results split by high and low corrupt industries. I estimate models (1) and (2) with the same set of control variables as in Table 3. Columns 1 to 3 show that high corrupt industries experience a significant deal frequency decline following the enactment of anti-bribery laws: the magnitude in deal frequency drop is similar to what we observe in the overall sample reported in Table 3; in contrast to high corrupt industries, low corrupt industries are almost unaffected by the anti-bribery laws: columns 4 to 6 show the effect of laws is statistically insignificant cross different specifications. This finding means the overall deterrent effect of anti-bribery laws documented in Table 3 is driven by high corrupt industries, consistent with the view that acquirers' ability to bribe affects cross-border takeovers when corruption is present.

[ INSERT TABLE 4 ]

### *B3. Reverse causality*

In Table 5, I investigate the reverse causality. I estimate the dynamic effect of the anti-bribery legislation on the whole balanced sample of cross-border deals. Specifically, I replace the single *Post* dummy with four dummies that track the effect of the laws before and after the implementation:  $Before^{-1}$ ,  $Before^0$ ,  $After^1$  and  $After^{1+}$ . If the laws are exogenously introduced, we should find no significant effect during the periods “before” the law implementation.

Table 5 confirms the exogeneity assumption: in column 1, the coefficient of  $Before^{-1}$  is small and insignificant. Similarly, the coefficient of  $Before^0$  is also insignificant and bears the wrong sign. The insignificance of  $After^1$  coefficient means that these laws have not started to produce effect on cross-border transactions one year after the enactment. From one year on, the effect is significant

and economically large, as shown by the coefficient of *After<sup>l+</sup>*. Furthermore, I estimate in column 2 the interaction between *Target corruption* and these four dummy variables. Consistent with column 1, the two *Before* dummies and their interactions with *Target corruption* are statistically insignificant. Interestingly, once I allow the effect of laws to vary with the target corruption, the effect becomes significant even one year after the passage of the laws. The effect becomes economically larger after two years and increases with the corruption level in the target countries. The magnitude of the significant coefficients is similar to that estimated in Table 3.

[ INSERT TABLE 5 ]

The combined findings of tables 3, 4 and 5 confirm the role played by anti-bribery legislations as a driver of cross-border M&As. The OECD Convention signatories reduce their takeover activities in almost all industries following the implementation of the laws relative to non-signatories. These findings however still leave us several important questions unanswered. As has been partly shown in Table 3, there appears to be a relationship between acquirer characteristics (e.g. public status) and the law effectiveness. I want to thus further investigate two issues in the remaining sections: how have acquirer characteristics changed following the laws, and what is the value implication for cross-border deals.

## **V Anti-bribery Legislation and Deal Characteristics**

### **A. Acquirer Characteristics**

Findings in Table 3 suggest that the anti-bribery laws squeeze out a large number of public acquirers but not private ones. This observation leads us to ask the question: who remain to be active in the world takeover market in the postlegislation era? To shed light on this question, I test the acquirer characteristics change following the laws: specifically, I focus on acquirers' size

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(measured by the logarithm of total assets and number of employees) and acquirers' competitiveness (measured by the acquirer's Forbes 500 status and the relative R&D expenses, that is, the difference in R&D/sales ratio between the acquirer and the target firms). If better-monitored firms are most hit by the laws, we should expect postlegislation acquirers to be smaller in size. On the other hand, more competitive firms might use competitiveness as a substitute for bribes (Beck, Maher and Tschoegl, 1991). Therefore, I hypothesize that postlegislation acquirers are smaller and more competitive. Formally, I estimate the following regression:

$$Y_{nit} = \gamma_1 Post_{it} + \gamma_2 Post_{it} \times Corr_j + \beta X_{ni(j)t} + D_i + D_j + D_t + \varepsilon_{nit} \quad (3)$$

where  $Y_{nit}$  is the characteristics of the acquirer firm  $n$  from country  $i$  in the year  $t$ ,  $Post_{it}$  is the treatment indicator,  $Corr_j$  is the corruption level of the target country  $j$ ,  $X_{ni(j)t}$  represents control variables,  $D_i$ ,  $D_j$  and  $D_t$  are acquirer country, target country and year dummies, and  $\varepsilon_{nit}$  is the error term. I control for the deal value, acquirer country GDP growth (or the difference of GDP growth between the country pair) and acquirer country GDP per capita (or the difference of GDP per capita between the country pair). In all cases, standard errors are corrected for clustering of observations at the acquirer country level.

Table 6 investigates the relevance of the above arguments using a sample of public acquirers as no financial information is available for private ones. Column 1 estimates the impact of the laws on the mean total assets of public acquirers. Mean total assets (in logarithm) significantly drop by 20.3% for acquirers buying firms from more corrupt countries relative to less corrupt countries lying one standard deviation lower on the corruption index. Column 2 estimates the impact on the mean number of employees. I find no significant change in employee number of public acquirers following the legislation. The signs of interested coefficients are however all negative. In column 3, I investigate whether acquirers are more likely to be a Forbes 500 company after the laws are enacted. The dependent variable is an indicator that equals one if the

acquirer is ranked on the Forbes 500 list and zero otherwise. I employ the Probit estimator. The coefficient of *Post* is positive and significant statistically at 1% level, confirming the higher likelihood of the acquirer being a Forbes 500 firm after the law enactments. In column 4, I use a relative measure of competitiveness: the difference between the acquirer and target R&D ratio. The sample size becomes much smaller because not all firms report their R&D expenses. However, I still find that postlegislation acquirers expense significantly more R&D relative to the targets. The relative R&D increases when the target is from a highly corrupt country.

[ INSERT TABLE 6 ]

These findings suggest that anti-bribery laws are a coup to larger and less competitive acquirers. The question still remains as to whether the remaining acquirers need to depend on bribes to solicit contracts in the target country. This question is however beyond the scope of this paper.

## **B. Cross-border Transaction Premiums**

I next discussed the implications of anti-bribery laws on the deal value creation. From an acquirer's perspective, it is ex-ante unclear how the legislation should change the postlegislation transaction premiums. This question depends on three dimensions: first, is corruption synergy-extractable? Second, are bribe payments adjusted in the deal premiums? Third, do laws increase bribery costs if acquirers still bribe? I discuss each of these three dimensions in turn.

First, an important source of synergy creation in cross-border transactions is to exploit the weaker governance environment in the target firms. Bris and Cabolis (2008) show that cross-border acquirers pay higher premiums to targets from countries with weaker investor protection, suggesting that corporate governance improvement constitutes deal value creation. Wang and Xie (2009) come to a similar conclusion by showing synergistic gains from improving shareholder

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rights in the target firm. Corruption, though highly correlated with these governance variables (Kaufmann, Kraay and Mastruzzi, 2010), is however an arguable source of synergy extraction since foreign firms cannot directly influence the corruption level in the target country. However, acquirers can indirectly extract value from bribery (see, e.g., Huntington, 1968). If corruption is indeed synergy-extractable, anti-bribery laws will deprive the acquirers of this source of synergistic gains and thus decrease takeover premiums. For example, the combined firm, often subject to the acquirer country's laws, will not be allowed to use bribes to obtain contracts in the target markets, leading to a lower deal synergy. In contrast, if corruption is value destructive, anti-bribery laws will not impact premiums (since the anti-bribery laws I examine here will not directly change the corruption level in the target countries).

Second, for the above argument to hold, one implicit assumption is that premiums are adjusted for bribe payments. Though it is difficult to test this assumption directly because of no disclosure of bribe payments, Utz and Sjors (2006) provide suggestive evidence that target premiums are negatively associated with the target country corruption. However, they caution that “the major effects of corruption can alternatively be explained by government effectiveness, pointing towards an endogenous relationship between bribery and bureaucracy”. It is reasonable to think that acquirers (partially) adjust corruption in the takeover premiums. If premiums are adjusted, the anti-bribery legislations will lead to changes in deal value because they affect transaction costs, which I discuss below.

Third, anti-bribery laws can change transaction costs in two directions. If postlegislation acquirers can obtain business without having to bribe anymore (as is shown by Kaufmann and Wei, 1999), their transaction costs should decrease and therefore deal premiums should increase. However, if firms still need to bribe but in a more hidden manner (for example, via payments through third-party intermediaries or special-purpose vehicles), their transaction costs can

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increase compared to the prelegislation period. Therefore, takeover premiums should decrease. Finally, if acquirers have to incur other expenses such as anticorruption due diligences<sup>10</sup>, their transaction costs will also increase irrespective of whether they continue to bribe or not.

Empirically, I examine the change of takeover premiums for deals whose acquirer is from a signatory country after the anti-bribery law is enacted. The takeover premium is the offer price scaled by the target's market value. I use both market value one week prior to the deal announcement and market value one day prior to the announcement. I employ a similar DID specification as in equation (1) where I control for the acquirer size, acquirer Tobin's  $Q$ , acquirer leverage, acquirer free cash flow, acquirer stock runup, relative deal size and deal characteristics (methods of payment, hostile deal, diversifying acquisition and target status).

Table 7 reports the results. Columns 1 to 3 investigate the effect of legislation on takeover premiums one week prior to the announcement. The basic estimation in column 1 shows that takeover premiums decrease by about 15% after the legislation, significant at statistical 1% level. This is a large drop relative to the unconditional average deal premiums of 46%. In column 2 I show that the result is robust to controlling for other variables. In column 3 I add target country fixed effect and the coefficient of  $Post$  is still significant and remains at about 13%. Columns 4 to 6 investigate the effect of legislation on takeover premiums one day prior to the announcement. The economic magnitude becomes smaller for premiums one day prior to the announcement but the statistical significance becomes larger, all at 1% level. In the basic estimation, takeover premiums drop by 12%. Columns 5 and 6 add different controls but the negative change of premiums remains at about 11%, relative to the unconditional average deal premiums of 40%. I also find that the acquirer size is negatively associated with takeover premiums, consistent with

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<sup>10</sup> Anecdotal evidence suggests that the number of anticorruption due diligence has increased due to the increasing enforcement of anti-bribery laws. See, for example, an article from the "Financier Worldwide" (February 2013): <http://www.financierworldwide.com/qa-fraud-due-diligence/#.VkX-x3arSM8>

prior studies. Premiums decrease with deal relative size but increase if the deal is an all-cash deal or an equity-financed deal. Diversifying deals are also associated with lower premiums.

These results confirm the hypothesis that anti-bribery laws pose considerably high costs to acquirers. If all costs are adjusted in the takeover premiums, the additional costs brought in by these laws make up to about 28% of deal synergies (dividing 13% by 46% for premiums one week before the announcement, or dividing 11% by 40% for premiums one day before the announcement).

[ INSERT TABLE 7 ]

## VI Robustness

Table 8 investigates the robustness of my results in Table 3. I address several concerns directly in this section.

The first concern is omitted variables. One way to make this problem less severe is to add country-year specific fixed effects. I try three sets of fixed effects (in addition to the previously controlled country pair and year fixed effects): acquirer-country-year fixed effect, target-country-year fixed effect, and both. These fixed effects should fully control for the multilateral resistance terms and country-specific time-varying factors such as trade liberalizations, tariff levels, tax rates, governance, etc. Such a specification is rarely used in empirical economics (e.g. the gravity model) and finance (e.g. cross-border M&As) studies because it absorbs almost all country-specific factors that can be of interest to researchers. It renders my results robust to omitted variables if the coefficient of  $Post \times Target\ corruption$  remains significant. However, it can also potentially introduce posttreatment bias as I have discussed in Section IV.A.



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Columns 1 to 3 report the results of these tests when additional fixed effects are controlled for. Column 1 controls for target-country-year fixed effect. It shows that deal frequency goes down significantly by 0.4 percent after the law enactments, with greater declines in more corrupt target countries. Column 2 controls for acquirer-country-year fixed effect. Since *Post* is a time-varying dummy variable for the acquirer country, acquirer-country-year fixed effect fully absorbs *Post*. The coefficient of interest,  $Post \times Target\ corruption$ , is still significant at 1% level and the economic magnitude remains unchanged at -0.003. Column 3 controls for both acquirer-country-year and target-country-year fixed effects. The statistical significance for the coefficient of  $Post \times Target\ corruption$  drops but still remains significant at 10% level. The economic magnitude also decreases slightly to -0.002. An interesting note is that the R-square, which measures the fitness of the regression, increases dramatically when the target-country-year fixed effect is controlled for. This indicates that cross-border deal frequency is largely determined by the target country's specific factors rather than those of the acquirer country.

Second, there are concerns about law enforcement. The validity of the DID relies on the assumption that anti-bribery legislations will have a substantial effect on firms. In Section II, I describe qualitatively the monitoring mechanism of the OECD and other studies that confirm the effectiveness of the OECD Convention. I further investigate this issue at country level here. Since laws are implemented at the country level, the enforcement can differ from one country to another. Transparency International (TI), a non-governmental organization that monitors and publicizes corporate and political corruption in international development, issues reports on the enforcement of the OECD Convention each year. Their report categorizes signatories into "Active", "Moderate", "Limited" and "Little or no enforcement" according to each country's level of law implementation. Appendix D provides details on the definition of each category and countries classification. According to their 2015 report, 10 countries have an active or moderate

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level of enforcement while the rest have limited enforcement. If the TI report is accurate, we should observe only significant effect of anti-bribery laws for those active or moderate enforcing countries. I test this in columns 4 and 5 of Table 8. In column 4, I include the subsample where acquirers are from the 10 active or moderate enforcing countries. As expected, the deterring effect is significant at 1% statistical level and the economic magnitude is much larger than in Table 3. In column 5 I include acquirers from limited or no enforcement countries. Unsurprisingly, I find no effect of anti-bribery laws. These findings confirm the validity of my DID results while suggesting that the overall effect of the OECD Convention is driven by countries whose enforcement level is high.

Third, I address the concern of other confounding events. One essential assumption of DID is that the treatment group is truly “treated” by the OECD Convention rather than any other events. Due to the staggering nature of entry into the treatment over a relatively long period, I argue that the documented results cannot be driven by any single event during the sample period. However, one may be worried about the collapse of the tech bubble in 2000, which shortly coincides with the entry into the OECD Convention for a large group of signatories (about 63% of signatories adopted the anti-bribery law between 1998 and 2000). I show the collapse of the tech bubble cannot explain my findings in two tests: in column 6 of Table 8, I exclude acquirers and targets from the United States, which are most affected by the tech bubble, and the results hold. In columns 7 and 8, I examine the deal frequency change separately for acquirers or targets in the high-tech and non high-tech industries, and I find the deal frequency in high-tech industries is only weakly affected by the anti-bribery legislation, while the majority of deal frequency decline comes from non high-tech industries. This refutes the concern that it is the tech bubble collapse that drives the main results. Indeed, previous analysis shows the most corrupt industries experience the largest deal frequency drop (Table 4).

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I also reestimate the results by using a sub time period prior to 2007. Some scholars argue that (e.g., Dessaint, Golubov and Volpin, 2015) the global financial crisis represents a severe structural shock for the takeover market and has affected the different economies differently. I thus exclude the crisis and the years that follow. In column 9, I show that the results carry through with the exclusion of these later years.

The fourth concern is whether non-signatories form a good control group for signatories. Panel C of Table 2 shows that signatories are on average more active than non-signatories in the world M&A market and more likely to be a developed economy. The staggering nature of the passage of laws among signatories allows me to estimate the law effect by using the subsample where both the acquirers and targets are from OECD signatories. This is what I investigate in column 10. All results carry through with this subsample in which countries are more comparable to each other.

The fifth robustness test I conduct is to replace the WGI corruption index with the TI Corruption Perception Index. In fact, the two indices are highly correlated (the correlation is close to 0.97). Because the TI Corruption Perception Index covers fewer countries than the WGI index, some countries are dropped from the analysis. In column 11, I show that my results are robust to using this alternative.

The last robustness test I conduct deals with the dependent variable, *the cross-border deal frequency*. I replace this measure with a more intuitive measure: the deal count, defined as the annual cross-border deal number between an acquirer–target country pair. I restrain myself from logarithm transforming the count data since the log-linearized models estimated by OLS can lead to severely biased estimates (Silva and Tenreyro, 2006). Moreover, log-linearization automatically excludes all zero deal flows. I specify in columns 12 and 13 two count models: negative binomial and Poisson estimations. Since there is overdispersion in the pairwise deal count, the negative

binomial model should be more appropriate. Column 12 shows the result of this estimation. The coefficient of the *Post* dummy is significant at 1% level and negative, while the coefficient of the *Post*×*Target corruption* is insignificant now. Column 13 shows the results of the Poisson estimation. The coefficients of both *Post* and *Post*×*Target corruption* are significant and negative. In addition, economic magnitudes are similar cross both estimations.

[ INSERT TABLE 8 ]

## VII Conclusions and Extensions

The results of this paper suggest that acquirers' ability to use bribes has real effect on their cross-border M&A activities. I find that the passage of the anti-bribery laws significantly reduces cross-border deal frequency, especially deals in more corrupt industries. Within country-years subject to the laws, the decline in takeover frequency is stronger for deals in more corrupt target countries. This suggests that the anti-bribery law is an important driver of the global market for corporate control. However, I find that the effect of the anti-bribery law is mainly concentrated on public acquirers, indicating that acquirers under greater public monitor are bearing larger disadvantage posed by the laws. I also find the evidence of acquirer characteristics change induced by the laws. On average, postlegislation acquirers are smaller in size, more likely to be a Forbes 500 firm and expense more R&D relative to their targets, a sign of greater competitiveness. Furthermore, I document deal value destruction due to the laws, evidenced by a large premiums drop in the postlegislation periods. This is consistent with the view that anti-bribery laws are costly to acquirers.

Anti-bribery laws can be used in the future studies to answer several important questions raised in this paper. First, are postlegislation acquirers "cleaner"? This question concerns directly

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the costs distribution among different types of acquirers and the true effectiveness of these laws. Second, one can learn about the interaction between market competition and bribery in the cross-border M&As. For example, does industry competition affect an acquirer's likelihood to use bribes? Is competitiveness substitute to bribery? Also, one can go beyond the bribery story and study the general relationship between corruption and foreign investment. Is corruption synergy-extractable? Do foreign ownerships from less corrupt countries improve corruption in the host country?

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**Table 1.****The OECD Anti-bribery Convention Signatories and Year of Legislation Enactment**

This table lists the signatory nations of the OECD Anti-bribery Convention and the year of entry into force of their anti-bribery legislations. The information is from the OECD website as of September 2015 (<http://www.oecd.org/daf/anti-bribery/>).

Signatory	Year of legislation	Signatory	Year of legislation
Austria	1998	Denmark	2000
Greece	1998	France	2000
Iceland	1998	Italy	2000
United Kingdom	1998	Spain	2000
United States	1998	Switzerland	2000
Argentina	1999	Ireland	2001
Australia	1999	Luxembourg	2001
Belgium	1999	Netherlands	2001
Bulgaria	1999	New Zealand	2001
Canada	1999	Poland	2001
Czech Republic	1999	Portugal	2001
Finland	1999	Brazil	2002
Germany	1999	Chile	2002
Hungary	1999	Turkey	2003
Japan	1999	Estonia	2004
South Korea	1999	South Africa	2004
Mexico	1999	Israel	2008
Norway	1999	Russia	2011
Slovak Republic	1999	Colombia	2012
Slovenia	1999	Latvia	2014
Sweden	1999		

**Table 2.****Summary Statistics**

The sample consists of 65 countries (2,113 acquirer-target nation pairs) that engaged in cross-border mergers and acquisitions between 1990 and 2014. This represents 98,904 completed cross-border deals (listed in SDC). Panel A and B report summary statistics for variables that are used in models we estimate. Panel C reports comparison statistics between OECD Anti-bribery Convention signatory nations and non-signatory nations (standard deviations are reported in parentheses). Panel D reports M&A deals summary. Firm characteristics, deal value and deal relative-size are winsorized at 1%, 99% level. Variable definitions are in the Appendix.

	Obs.	Mean	S.D.	25th	Median	75th
<i>Panel A: Country pair-level variables</i>						
Pairwise cross-border deal frequency	49,526	0.02	0.09	0	0	0.01
Target corruption (WGI)	49,526	-0.90	1.10	-2.07	-0.93	0.18
Target corruption (TI)	48,023	4.02	2.46	1.30	4.30	6.50
Post	49,526	0.42	0.49	0	0	1
(Exchange rate return) <sub>i;j</sub>	49,269	0.00	0.54	-0.07	0.00	0.07
(Stock indice return) <sub>i;j</sub>	46,998	0.00	0.38	-0.18	-0.00	0.17
(GDP growth) <sub>i;j</sub>	48,823	-0.06	4.70	-2.70	-0.09	2.52
(GDP per capita) <sub>i;j</sub>	48,685	0.21	1.81	-0.86	0.13	1.48
(Population) <sub>i;j</sub>	49,445	-0.20	2.40	-1.83	-0.21	1.39
Max(import, export)	49,526	0.03	0.06	0.00	0.01	0.03
<i>Panel B: Deal and firm level variables</i>						
Premium 1 week prior to announcement (in %)	1,008	46.11	54.97	21.20	36.08	56.83
Premium 1 day prior to announcement (in %)	1,012	39.67	52.12	16.67	31.02	50.78
Size	7,617	6.45	2.12	4.95	6.36	7.90
Tobin's Q	7,541	3.37	4.90	1.26	1.81	3.06
Leverage	7,525	0.12	0.13	0.01	0.09	0.18
Free cash flow	7,575	0.08	0.12	0.04	0.09	0.14
Relative R&D	316	-0.29	1.28	-0.12	-0.02	0.01
Stock runup	7,622	0.07	0.43	-0.15	0.01	0.18
# Employees	5,875	7.95	2.08	6.51	8.01	9.40
Forbes 500	7,622	0.04	0.19	0	0	0
Deal value	7,479	3.51	1.92	2.12	3.27	4.66
Relative size	7,401	0.24	0.78	0.01	0.04	0.16
All-cash deal	7,622	0.33	0.47	0	0	1
Stock deal	7,622	0.22	0.41	0	0	0
Hostile deal	7,622	0.01	0.08	0	0	0
Diversifying deal	7,622	0.43	0.49	0	0	1

## BRIBERY AND CROSS-BORDER M&amp;A

(Table 2 continued.)

<i>Panel C: OECD Convention signatory nations vs. Non-signatory nations</i>				
	All	OECD Convention signatory nations	Non-OECD Convention signatory nations	Difference (2 – 3)
	1	2	3	4
Average acquiring cross-border deals (1990-2014)	1,521.60 (3,596.22)	2,386.47 (4,502.17)	304.37 (598.1)	2,082.10**
Average selling cross-border deals (1990-2014)	1,521.60 (2,678.21)	2,309.68 (3,252.4)	412.44 (646.05)	1,897.24***
Corruption 1998 (WGI)	-0.67 (1.1)	-1.20 (0.97)	0.09 (0.81)	-1.28***
Annual GDP growth (in %)	3.35 (3.99)	2.60 (3.34)	4.40 (4.56)	-1.80***
Log(GDP per capita) (in 2005\$)	9.11 (1.39)	9.87 (0.85)	7.99 (1.27)	1.88***
Log(population)	16.75 1.74	16.66 1.54	16.88 1.99	-0.22**
<i>Panel D: Mergers and acquisitions from 1990 to 2014</i>				
	Total	Domestic	Cross-border	
Number of deals	470,457 (100%)	371,553 (78.98%)	98,904 (21.02%)	
Value of deals (in \$ bn)	35,188 (100%)	25,967 (73.80%)	9,221 (26.20%)	

Table 3.

**Main Results: Acquirer-Target Country Pairwise DID Regression**

This table reports OLS balanced panel regressions of cross-border mergers and acquisitions country pairs. The dependent variable is the number of cross-border deals in year  $t$  ( $\bar{X}_{ijt}$ ) in which the target is from country  $j$  and the acquirer is from country  $i$  (where  $i \neq j$ ) scaled by sum of the number of domestic deals in target country  $j$  ( $\bar{X}_{jtt}$ ) and the number of the cross-border deals involving target country  $j$  and acquirer  $i$  ( $\bar{X}_{ijtt}$ ). Columns 1, 2 and 3 examine the entire sample of cross-border deals. Columns 4 through 11 examine subsamples of deals in which various combinations of public status of the parties are selected and then aggregated to the country level. Variables are defined in Appendix. Country pair and year fixed effects are included in all regressions. Standard errors are corrected for clustering of observations at the country pair level and are reported in parentheses. The symbols **\*\***, **\***, and **\*** denote statistical significance at the 1%, 5%, and 10% level, respectively.

	All		Public acquirer		Public acquirer		Private acquirer		Private acquirer		
	1	2	3	4	5	6	7	8	9	10	11
Post	-0.008*** (0.00)	-0.006*** (0.00)	-0.009*** (0.00)	-0.001 (0.00)	-0.004*** (0.00)	-0.003** (0.00)	-0.004** (0.00)	0.000 (0.00)	-0.001 (0.00)	-0.000 (0.00)	-0.001 (0.00)
PostXTarget corruption			-0.003*** (0.00)		-0.002*** (0.00)		-0.001 (0.00)		-0.001* (0.00)		-0.000 (0.00)
(Exchange rate return) <sub>ij</sub>		-0.001** (0.00)	-0.001** (0.00)	0.000 (0.00)	0.000 (0.00)	-0.000 (0.00)	-0.000 (0.00)	-0.000 (0.00)	-0.000 (0.00)	-0.000* (0.00)	-0.000* (0.00)
(Stock indice return) <sub>ij</sub>		0.002** (0.00)	0.002* (0.00)	0.001 (0.00)	0.001 (0.00)	0.002* (0.00)	0.002* (0.00)	0.001 (0.00)	0.001 (0.00)	0.001 (0.00)	0.001 (0.00)
(GDP growth) <sub>ij</sub>		0.000 (0.00)	-0.000 (0.00)	0.000** (0.00)	0.000* (0.00)	-0.000 (0.00)	-0.000 (0.00)	0.000 (0.00)	-0.000 (0.00)	-0.000 (0.00)	-0.000 (0.00)
(GDP per capita) <sub>ij</sub>		0.022*** (0.00)	0.020*** (0.00)	0.003* (0.00)	0.002 (0.00)	0.011*** (0.00)	0.011*** (0.00)	0.003 (0.00)	0.002 (0.00)	0.005*** (0.00)	0.005*** (0.00)
(Population) <sub>ij</sub>		-0.008 (0.01)	-0.010* (0.01)	-0.000 (0.00)	-0.003 (0.00)	-0.009* (0.00)	-0.010** (0.00)	-0.000 (0.00)	-0.001 (0.00)	-0.009** (0.00)	-0.009** (0.00)
Max(import, export)		0.077 (0.06)	0.078 (0.06)	0.020** (0.01)	0.020** (0.01)	0.046 (0.03)	0.046 (0.03)	0.020* (0.01)	0.020* (0.01)	0.001 (0.03)	0.001 (0.03)
Constant	0.038*** (0.00)	0.031*** (0.00)	0.031*** (0.00)	0.005** (0.00)	0.006*** (0.00)	0.009*** (0.00)	0.010*** (0.00)	0.001 (0.00)	0.001 (0.00)	0.003** (0.00)	0.003** (0.00)
Observations	46,343	46,343	46,343	14,163	14,163	30,431	30,431	9,469	9,469	27,372	27,372
Adjusted R <sup>2</sup>	0.006	0.009	0.010	0.005	0.007	0.007	0.008	0.001	0.001	0.001	0.001
Country Pair FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

**Table 4.****Additional Results: Acquirer-Target Country Pairwise DID Regression:  
Split by High versus Low Corrupt Industries**

This table reports OLS balanced panel regressions of cross-border mergers and acquisitions country pairs split by high and low corrupt industries. The dependent variable is the number of cross-border deals in either high or low corrupt industries in year  $t$  ( $X_{ijt,H}$  or  $X_{ijt,L}$ ) in which the target is from country  $j$  and the acquirer is from country  $i$  (where  $i \neq j$ ) scaled by sum of the number of domestic deals in target country  $j$  ( $X_{ijt}$ ) and the number of the cross-border deals involving target country  $j$  and acquirer  $i$  ( $X_{ijit}$ ). High corrupt industries include constructions, mining, transportation, public utilities, manufacturing and public administration. Low corrupt industries include all the rest industries such as agriculture, forestry, fishing, finance, services, wholesale and retail. These industries are based on the primary 2-digit SIC code of the target firms. The same set of control variables as in Table 3 are included in all regressions. Variables are defined in Appendix. Country pair and year fixed effects are included in all regressions. Standard errors are corrected for clustering of observations at the country pair level and are reported in parentheses. The symbols \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% level, respectively.

	High corrupt industries			Low corrupt industries		
	1	2	3	4	5	6
Post	-0.008*** (0.00)	-0.005*** (0.00)	-0.009*** (0.00)	-0.001 (0.00)	-0.000 (0.00)	0.000 (0.00)
Post×Target corruption			-0.004*** (0.00)			0.000 (0.00)
Controls	NO	YES	YES	NO	YES	YES
Observations	46,343	46,343	46,343	46,343	46,343	46,343
Adjusted R <sup>2</sup>	0.007	0.010	0.011	0.001	0.002	0.002
Country Pair FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES

## BRIBERY AND CROSS-BORDER M&amp;A

**Table 5.**  
**Reverse Causality: Dynamic Analysis**

This table reports OLS balanced panel regressions of cross-border mergers and acquisitions country pairs. The dependent variable is the number of cross-border deals in year  $t$  ( $X_{ijt}$ ) in which the target is from country  $j$  and the acquirer is from country  $i$  (where  $i \neq j$ ) scaled by sum of the number of domestic deals in target country  $j$  ( $X_{jtt}$ ) and the number of the cross-border deals involving target country  $j$  and acquirer  $i$  ( $X_{ijt}$ ).  $Before^{-1}$ ,  $Before^0$  and  $After^1$  are dummy variables that equals 1 for Convention signatory nations that enter legislation one year prior to, in the year of, or one year after the legislation enforcement.  $After^{1+}$  is a dummy variable that equals 1 for Convention signatory nations that entered legislation enforcement at least two years ago. Column 2 reports the interaction of these dummies with the target nation's corruption level. Other variables are defined in Appendix. Country pair and year fixed effects are included in all regressions. Standard errors are corrected for clustering of observations at the country pair level and are reported in parentheses. The symbols \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% level, respectively.

	1	2
Before <sup>-1</sup>	-0.001 (0.00)	-0.005 (0.00)
Before <sup>-1</sup> ×Target corruption		-0.004 (0.00)
Before <sup>0</sup>	0.004 (0.00)	0.002 (0.00)
Before <sup>0</sup> ×Target corruption		-0.002 (0.00)
After <sup>1</sup>	-0.002 (0.00)	-0.007** (0.00)
After <sup>1</sup> ×Target corruption		-0.005*** (0.00)
After <sup>1+</sup>	-0.006*** (0.00)	-0.010*** (0.00)
After <sup>1+</sup> ×Target corruption		-0.004*** (0.00)
(Exchange rate return) <sub>i,j</sub>	-0.001** (0.00)	-0.001** (0.00)
(Stock indice return) <sub>i,j</sub>	0.002** (0.00)	0.002** (0.00)
(GDP growth) <sub>i,j</sub>	0.000 (0.00)	-0.000 (0.00)
(GDP per capita) <sub>i,j</sub>	0.021*** (0.00)	0.020*** (0.00)
(Population) <sub>i,j</sub>	-0.009 (0.01)	-0.011** (0.01)
Max(import, export)	0.077 (0.06)	0.077 (0.06)
Constant	0.031*** (0.00)	0.031*** (0.00)
Observations	46,343	46,343
Adjusted R <sup>2</sup>	0.009	0.010
Country Pair FE	YES	YES
Year FE	YES	YES

**Table 6.****Anti-bribery Legislations and Acquirer Characteristics**

This table reports acquirer characteristics following the entry into force of implementing legislation of OECD Anti-bribery Convention. The dependent variables in columns 1 and 2 are acquirer's size (log assets) and (log) number of employees. The dependent variable in column 3 is a dummy variable that equal 1 for Forbes Sales 500 acquirers. The dependent variable in column 4 is the difference in R&D/Sales between the acquirer and the target. Columns 1, 2 and 4 employ OLS estimator. Column 3 employs Probit estimator. Variables are defined in Appendix. Continuous dependent variables and the deal value are winsorized at 1%, 99% level. Acquirer country, target country and year fixed effects are included in all regressions. Standard errors are corrected for clustering of observations at the acquirer country level and are reported in parentheses. The symbols \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% level, respectively.

	Size	# Employees	Forbes 500	Relative R&D	
	1	2	3	4	
				(Marginal Effect)	
Post	-0.120 (0.20)	-0.189 (0.31)	1.695*** (0.36)	(0.077)	2.174** (0.92)
Post×Target corruption	-0.203** (0.08)	-0.079 (0.11)	0.007 (0.05)	(0.000)	1.180** (0.53)
Deal value	0.606*** (0.01)	0.480*** (0.01)	0.249*** (0.01)	(0.011)	0.028 (0.03)
Acquirer nation GDP growth	-0.015 (0.02)	-0.026 (0.02)	0.160 (0.20)	(0.007)	
Acquirer nation GDP per capita	0.082 (0.79)	0.276 (0.51)	-26.890*** (5.43)	(-1.224)	
(GDP growth) <sub>i;j</sub>					-0.069 (0.04)
(GDP per capita) <sub>i;j</sub>					-1.111 (1.58)
Constant	4.330 (6.73)	5.899 (4.41)	218.806*** (45.17)		-2.022 (2.43)
Observations	7,462	5,792	3,366	3,366	312
Adjusted (Pseudo) R <sup>2</sup>	0.404	0.265	0.235		0.033
Acq. country FE	YES	YES	YES	YES	YES
Targ. country FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES

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**Table 7.****Takeover Premiums following OECD Anti-bribery Convention**

This table reports OLS regressions of cross-border mergers and acquisitions premiums. The dependent variable is the takeover premium, defined as offer price over target stock price. Columns 1 to 3 examine the takeover premiums one week prior to the announcement. Columns 4 to 6 examine the takeover premiums one day prior to the announcement. Variables are defined in Appendix. Firm characteristics and relative size are winsorized at 1%, 99% level. Acquirer country and year fixed effects are included in all regressions. Standard errors are corrected for clustering at acquirer country level and reported in parentheses. The symbols \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% level, respectively.

	Premium 1 week prior to announcement			Premium 1 day prior to announcement		
	1	2	3	4	5	6
Post	-14.724*** (5.37)	-13.097** (5.54)	-12.655** (5.60)	-12.212*** (3.39)	-10.737*** (3.14)	-10.418*** (3.36)
Acquirer size		-1.065* (0.56)	-1.517** (0.58)		-1.002* (0.57)	-1.524** (0.60)
Acquirer Tobin's Q		-0.660*** (0.19)	-0.734*** (0.23)		-0.610*** (0.18)	-0.657*** (0.22)
Acquirer leverage		-0.741 (22.05)	2.090 (18.25)		-5.228 (25.15)	-0.245 (20.42)
Acquirer free cash flow		-33.111 (20.62)	-35.063* (20.74)		-20.762 (22.74)	-24.033 (22.05)
Acquirer stock runup		0.316 (6.91)	-0.053 (6.00)		3.194 (7.49)	3.095 (6.90)
Relative deal size		-7.497* (4.04)	-7.735** (3.65)		-8.184* (4.13)	-8.741** (3.85)
All-cash deal		10.474*** (1.21)	10.605*** (1.46)		8.095*** (1.96)	8.477*** (2.71)
Stock deal		7.836*** (2.88)	9.065*** (2.58)		8.322*** (2.22)	9.435*** (2.15)
Hostile deal		3.597 (6.24)	4.485 (5.86)		7.808 (7.25)	8.968 (6.69)
Diversifying deal		-6.526* (3.81)	-7.047 (4.56)		-7.389** (2.94)	-8.141** (3.57)
Private target		-0.727 (15.96)	-2.060 (12.25)		-0.841 (13.74)	-3.531 (10.62)
Subsidiary target		-12.551 (10.08)	-5.768 (7.19)		-6.480 (9.69)	-2.503 (7.84)
Constant	24.908* (13.78)	40.371*** (13.51)	38.327** (14.19)	9.549 (20.67)	25.677 (20.87)	23.090 (20.11)
Observations	999	999	999	1,003	1,003	1,003
Adjusted R <sup>2</sup>	0.011	0.015	0.019	0.012	0.015	0.025
Acq. country FE	YES	YES	YES	YES	YES	YES
Targ. country FE	NO	NO	YES	NO	NO	YES
Year FE	YES	YES	YES	YES	YES	YES



**Table 8.****Robustness Test for Main Results (Table 3)**

This table reports results of various robustness tests for Table 3 with a balanced panel. Through columns 1 to 11, the dependent variable is the number of cross-border deals in year  $t$  ( $X_{ijt}$ ) in which the target is from country  $j$  and the acquirer is from country  $i$  (where  $i \neq j$ ), scaled by sum of the number of domestic deals in target country  $j$  ( $X_{jtt}$ ) and the number of the cross-border deals involving target country  $j$  and acquirer  $i$  ( $X_{ijtt}$ ). Through columns 12 to 13, the dependent variable is the number of cross-border deals in year  $t$  ( $X_{ijt}$ ) in which the target is from country  $j$  and the acquirer is from country  $i$  (where  $i \neq j$ ). Columns 1 through 3 examine all cross-border deals with additional controls of fixed effects. Columns 4 and 5 examine cross-border deals from “high/moderate” and “low/no” enforcement acquirer countries (categorized by Transparency International) separately. Columns 6 through 10 examine various sub-samples of cross-border deals. Column 11 uses CPI index (1998) from Transparency International as an alternative measure of corruption in the target country. Columns 12 through 13 employ other estimators (Negative binomial and Poisson estimation) to examine all cross-border deals. The same set of control variables as in Table 3 are included in all regressions. Variables are defined in Appendix. Standard errors are corrected for clustering of observations at the country pair level and are reported in parentheses. The symbols \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% level, respectively.

	Additional fixed effects			Split by level of enforcement			Exclude United States acquirers and targets
	Targ. nation × Year FE	Acq. nation × Year FE	Acq. × Year & Targ. × Year FE	Active or Moderate	Limited or No	6	
Post	-0.004** (0.00)			0.009 (0.01)	-0.004 (0.00)		-0.007*** (0.00)
Post×Target corruption	-0.002* (0.00)	-0.003*** (0.00)	-0.002* (0.00)	-0.003*** (0.00)	-0.001 (0.00)		-0.002* (0.00)
Controls	YES	YES	YES	YES	YES		YES
Observations	46,343	46,343	46,343	11,872	34,471		43,595
Adjusted R <sup>2</sup>	0.539	0.029	0.552	0.025	0.004		0.007
Year FE	YES	YES	N.A.	YES	YES		YES
Country Pair FE	YES	YES	YES	YES	YES		YES
Targ. country × Year FE	YES	NO	YES	NO	NO		NO
Acq. country × Year FE	NO	YES	YES	NO	NO		NO

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(Table 8 continued.)

	High-tech vs. Non High-tech		Deals before 2007	Convention signatory nations only	TI corruption	Other estimators (dep. var. is deal count)				
	High-tech	Non High-tech				7	8	9	10	11
Post	-0.001* (0.00)	-0.008*** (0.00)	-0.012*** (0.00)	-0.006*** (0.00)	0.002 (0.00)	-0.444*** (0.07)	-0.586*** (0.16)			
Post×Target corruption	-0.000 (0.00)	-0.003*** (0.00)	-0.003** (0.00)	-0.003** (0.00)	-0.002*** (0.00)	-0.055 (0.03)	-0.130** (0.07)			
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	46,343	46,343	30,165	25,949	45,010	46,343	46,343			
Adjusted (Pseudo) R <sup>2</sup>	0.001	0.009	0.009	0.014	0.013	0.223	0.689			
Year FE	YES	YES	YES	YES	YES	YES	YES			
Country Pair FE	YES	YES	YES	YES	YES	YES	NO			
Targ. and Acq. country FE	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	YES			

**Appendix A: Variable Definitions**

Variable	Definition
<i>Panel A: Cross-border Mergers and Acquisitions</i>	
Pairwise cross-border deal frequency	The number of cross-border deals in year $t$ ( $X_{ijt}$ ) in which the target is from country $j$ and the acquirer is from country $i$ (where $i \neq j$ ) scaled by sum of the number of domestic deals in target country $j$ ( $X_{jjt}$ ) and the number of the cross-border deals involving target country $j$ and acquirer $i$ ( $X_{ijt}$ ). (Source: SDC)

*Panel B: Country-level variables*

Post	Dummy variable equals 1 for periods after the entry into force of implementing legislation for signatory nations of OECD Anti-bribery Convention, 0 otherwise. (Source: OECD website: <a href="http://www.oecd.org/corruption/oecdantibriberyconvention.htm">http://www.oecd.org/corruption/oecdantibriberyconvention.htm</a> )
Corruption (WGI)	The WGI “Control of corruption” index that measures the extent to which public power is exercised for private gain, including both petty and grand forms of corruption. The index is inverted so a higher value reflects a higher level of corruption. The index ranges from -2.5 to 2.5. (Source: The Worldwide Governance Indicators)
Corruption (TI)	The Transparency International Corruption Perception Index (CPI). The index is transformed as $(10 - CPI)$ so a higher value reflects a higher level of corruption. The index ranges from 0 to 10. (Source: Transparency International)
(Exchange rate return) $_{i,j}$	The difference between the annual real bilateral U.S. dollar exchange rate return of the acquirer country $i$ and target country $j$ . The national exchange rates are obtained from WM/Reuters through Datastream. We obtain national exchange rates for the U.K. Pound Sterling and manually convert these currency quotes to get the quotes for the USD. These rates are then deflated into 2014 constant USD by the monthly inflation deflators calculated from consumer price index (CPI) for each country in each month. The real exchange rate return is calculated by taking the first difference of the monthly natural logarithm of the real exchange rates. (Source: Datastream)

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(Appendix A continued.)

(Stock index return) <sub>i,j</sub>	The difference between the annual local real stock market return of the acquirer country <i>i</i> and target country <i>j</i> . The monthly local stock indices are obtained for each country (Datastream code: <b>PI</b> ) and deflated into 2014 constant <b>USD</b> by the monthly inflation deflators calculated from consumer price index ( <b>CPI</b> ) for each country in each month. The real stock market return is calculated by averaging the first difference of the monthly natural logarithm of the real indice within a year. (Source: Datastream)
(GDP growth) <sub>i,j</sub>	The difference between acquirer <i>i</i> and target <i>j</i> countries of domicile in the annual real growth rate of the <b>GDP</b> . (Source: World Bank Development Indicators)
(GDP per capita) <sub>i,j</sub>	The difference between acquirer <i>i</i> and target <i>j</i> countries of domicile in the logarithm of annual <b>GDP</b> (in 2005 <b>USD</b> ) divided by the population. (Source: World Bank Development Indicators)
(Population) <sub>i,j</sub>	The difference between acquirer <i>i</i> and target <i>j</i> countries of domicile in the logarithm of population. (Source: World Bank Development Indicators)
Max(import, export)	The maximum of bilateral import and export between a country pair. Bilateral import (export) is calculated as the value of imports (exports) by the target country from (to) the acquirer country as a percentage of total imports (exports) by the target country. (Source: World Integration Trade Solution (WITS))

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*Panel C: Firm-level variables*

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Size	The logarithm of book value of total assets. (Source: Compustat, Datastream)
Market value of equity	Number of shares outstanding multiplied by the stock price. (Source: CRSP, Datastream)
Tobin's <i>Q</i>	Market value of assets (book value of assets minus book value of equity plus market value of equity) over book value of assets. (Source: Compustat, Datastream)
Leverage	Book value of debts over market value of total assets. (Source: Compustat, Datastream)
Free cash flow	Cash flow from operation activities divided by book value of total assets. (Source: Compustat, Datastream)

BRIBERY AND CROSS-BORDER M&A

(Appendix A continued.)

Stock runup	Acquirer's buy-and-hold abnormal return (buy-and-hold return during (-210,-11) period minus market buy-and-hold return over the same period). (Source: CRSP, Datastream)
Relative R&D	The difference in R&D ratio (R&D expenses scaled by total sales) between the acquirer and the target firms. (Source: Compustat, Datastream)
# Employees	The logarithm of number of acquirer's employees reported by SDC. (Source: SDC)
Forbes 500	Dummy variable equals 1 if the acquirer is among the Forbes 500 rank. (Source: SDC)

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*Panel D: Deal-level variables*

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Deal value	The logarithm of deal value in millions of U.S. dollars reported by SDC. (Source: SDC)
Relative size	Deal value reported by SDC scaled by acquirer's market value of equity in the previous yearend. (Source: SDC, CRSP, Datastream)
All-cash deal	Dummy variable equals 1 for purely cash-financed transactions, 0 otherwise. (Source: SDC)
Stock deal	Dummy variable equals 1 for deals that are at least partially stock-financed, 0 otherwise. (Source: SDC)
Hostile deal	Dummy variable equals 1 for deals that are flagged as "hostile" in SDC, 0 otherwise. (Source: SDC)
Diversifying deal	Dummy variable equals 1 if the acquirer and the target are not in the same 2-digit SIC industry, 0 otherwise. (Source: SDC)
Private target	Dummy variable equals 1 if the target is a private firm, 0 otherwise. (Source: SDC)
Subsidiary target	Dummy variable equals 1 if the target is a subsidiary, 0 otherwise. (Source: SDC)

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**Appendix C: Number of Cross-border Mergers and Acquisitions by Industry**

	High corrupt industries					Low corrupt industries					All
	Construc- tion	Mining	Manufac- turing	Transpor- tation & Public Utilities	Public Admi- nistration	Agriculture, Forestry, Fishing	Finance	Services	Wholesale	Retail	
1990	19	69	938	61	1	8	158	226	141	46	1,667
1991	35	57	950	118	0	17	161	247	152	67	1,804
1992	26	58	858	112	0	13	133	223	158	62	1,643
1993	27	92	901	145	0	17	138	267	177	52	1,816
1994	37	93	1,077	175	1	21	188	342	226	73	2,233
1995	57	108	1,353	192	1	27	251	482	228	90	2,789
1996	49	140	1,433	220	2	18	293	558	283	97	3,093
1997	36	135	1,667	252	3	17	395	767	278	110	3,660
1998	58	134	1,882	379	6	31	483	1,083	308	130	4,494
1999	63	109	1,893	463	1	22	447	1,400	318	172	4,888
2000	77	150	2,119	533	3	30	531	2,126	320	190	6,079
2001	61	141	1,621	418	6	30	428	1,259	246	134	4,344
2002	44	138	1,256	292	4	23	339	823	196	107	3,222
2003	46	193	1,304	269	6	21	366	811	167	102	3,285
2004	48	225	1,468	364	3	30	473	1,028	196	139	3,974
2005	71	255	1,698	442	12	40	700	1,323	251	161	4,953
2006	87	371	1,990	487	3	41	869	1,571	294	143	5,856
2007	100	419	2,224	579	11	56	921	1,873	369	190	6,742
2008	90	347	1,976	456	2	42	618	1,554	324	160	5,569
2009	80	404	1,279	344	6	35	448	1,050	177	111	3,934
2010	54	426	1,533	402	2	58	568	1,277	238	136	4,694
2011	82	399	1,603	385	6	50	543	1,471	252	149	4,940
2012	74	241	1,588	367	11	48	511	1,372	209	139	4,560
2013	56	168	1,431	353	5	47	489	1,290	195	144	4,178
2014	62	146	1,418	317	2	34	647	1,550	189	122	4,487
Total	1,439	5,018	37,460	8,125	97	776	11,098	25,973	5,892	3,026	98,904

**Appendix D: Enforcement of OECD Anti-bribery Convention**

Enforcement level of anti-foreign-bribery laws at the country level as reported by Transparency International (2015 report). “Active”: Countries with a share of world exports of two per cent or more must have at least 10 major cases on a cumulative basis, of which at least three must have been initiated in the last three years and at least three concluded with substantial sanctions. Countries with a share of world exports of less than two percent must have brought at least three major cases, including at least one concluded with substantial sanctions and at least one pending case which has been initiated in the last three years. “Moderate”: Countries that do not qualify for active enforcement but have at least one major case as well as one active investigation. “Limited”: Countries that do not qualify for the two higher categories. This includes countries that have only brought minor cases, and countries that only have investigations. “No Enforcement”: Countries that have no cases or investigations. (Source: <http://www.transparency.org/whatwedo/publications/>)

<b>Active</b>		<b>Little or No</b>	
Germany	United Kingdom	Argentina	Israel
Switzerland	United States	Belgium	Japan
<b>Moderate</b>		Brazil	Luxembourg
Australia	Finland	Bulgaria	Mexico
Austria	Italy	Chile	Poland
Canada	Norway	Colombia	Russian Fed
<b>Limited</b>		Czech Republic	Slovak Rep
France	Portugal	Denmark	Slovenia
Greece	South Africa	Estonia	Spain
Hungary	South Korea	Ireland-Rep	Turkey
Netherlands	Sweden	<b>No rating</b>	
New Zealand		Iceland	
		Latvia	