Bribes and Firm Value

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I exploit the passage of the U.K. Bribery Act 2010 as a shock to U.K. firms' cost of doing business. Around the Act's passage, U.K. firms operating in high-corruption countries experience a drop in firm value, while their non-U.K. competitors in these countries encounter an increase. U.K. firms respond to the Act by reducing the expansion of their subsidiary network into perceptively corrupt countries. Moreover, their sales and merger and acquisition (M&A) activity in such countries declines. In sum, bribes facilitate doing business in certain countries. Imposing unilateral antibribery regulations on some firms benefits their unregulated competitors. (*JEL* G30, G34, G38, K22)

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Corruption reduces levels of investment and ultimately economic growth (e.g., Mauro 1995).[1] Indeed, the World Bank estimates that corruption imposes annual costs to the global economy of approximately $2.6 trillion (5% of global GDP), with $1 trillion paid in bribes every year. Corruption in the form of bribery is also widespread across firms. According to a survey of more than 11,000 firms from 125 countries, one in three firms believes their competitors use bribes to secure public procurement contracts

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[1] Reviews of the literature on corruption and growth are provided by Shleifer and Vishny (1993), Bardhan (1997), and Svensson (2005).

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(D'Souza and Kaufmann 2013).[2] In an attempt to deter corruption, some developed nations have implemented unilateral antibribery regulations; other nations like India have not. Opponents of these regulations argue that they put affected firms at a competitive disadvantage vis-à-vis their unregulated competitors because bribes often facilitate doing business.

Despite their prevalence in business transactions around the globe, relatively little is known about the causal effect of bribes on firm value. An important challenge in an investigation into the impact of bribery is that bribes are largely unobserved. From 1978 to early 2013 in the United States, only 143 bribery-related enforcement actions were initiated against publicly listed firms by the U.S. Securities and Exchange Commission (SEC) or the Department of Justice (DOJ) for violations of the 1977 U.S. Foreign Corrupt Practices Act (FCPA; Karpoff, Lee, and Martin 2015).

In this paper, I examine whether the ability to use bribes creates firm value. To this end, I employ a quasi-experimental design that allows me to study the market reaction of firms that are subject to a plausibly exogenous increase in their cost of doing business in perceptively corrupt countries. Specifically, I exploit the passage of the draft of the U.K. Bribery Act 2010 on March 25, 2009. The U.K. Bribery Act, enforced since July 1, 2011, imposes substantial penalties for firms and managers found to be using bribes. Moreover, the Act requires firms to implement internal controls aimed at preventing the use of bribes.

In theory, if firms use bribes to increase the probability of winning positive net present value contracts, then the U.K. Bribery Act may curtail some profitable business, thereby reducing the value of regulated firms. Beck and Maher (1986) and Lien (1986), for instance, model bribes as a side payment within Vickrey's (1961, 1962) first-price auction framework. In this framework, firms make side payments to increase the probability of winning contracts tendered by corrupt government officials. Imposing costly antibribery regulation may impact some firms negatively and act to transfer their business to their unregulated competitors (Beck and Maher 1989).

However, while the use of bribes might create firm value in some instances, it is not ex ante clear that this is always the case. For instance, a corruptible firm manager in charge of tendering a contract might assign that contract to an inefficient subcontractor who offers him/her a side payment. In this case, an antibribery regulation could serve as an external monitoring device that makes accepting bribes costly to the manager, thereby aligning his/her incentives with shareholders'. Along these lines, Desai, Dyck, and Zingales (2007) show that increased tax enforcement enhanced the value of Russian oil firms. Antibribery regulation may further increase firm value through its impact on compliance, internal control systems, and competitive strategy.

[2] Estimates of the cost of corruption and bribes paid are obtained from reports by the World Bank Institute and based on 2001–02 survey data. Firm-level statistics on bribery are based on the 2006 Executive Opinion Survey conducted by the World Economic Forum.

With these different theories about the effect of bribes on firm value, I employ the passage of the draft of the U.K. Bribery Act 2010 to empirically test whether bribery affects firm value. Exploiting the passage of the draft of the Act on March 25, 2009, is appropriate only if it resolved residual uncertainty about antibribery regulation being passed and if it had a substantial effect on firms. One can plausibly argue that these criteria are fulfilled for at least three reasons. In the first place, the Act's passage on March 25, 2009, was not covered by the media until that day. Second, the fines assessed for violating the Act are much higher than the fines stipulated in previous legislation in the United Kingdom by the Organisation for Economic Co-operation and Development (OECD) Anti-Bribery Convention, or by comparable legislation in the United States. The Act imposes open-ended fines on corporations found not to have implemented internal antibribery controls, as well as on firms found to have paid bribes and on the individuals responsible for the bribery, both inside and outside the United Kingdom. Third, the Act unexpectedly runs counter to precedent as it also applies to foreign firms with U.K. operations. This provision makes it harder for U.K. industry lobbyists to argue that the Act places U.K. firms at a disadvantage vis-à-vis foreign competitors. Thus, the Act imposes substantial unexpected fines on the use of bribes. Taken together, these factors facilitate my investigation of the extent to which bribes affect firm value.

To examine the importance of bribes for firm value, I focus on publicly listed firms. I measure firm value by calculating abnormal returns around passage of the U.K. Bribery Act. I investigate firms' propensity to engage in bribery by using the variable *Corruption exposure*; the variable measures firms' exposure to high-corruption countries using a combination of firm-level subsidiary locations and Transparency International's Corruption Perceptions Index. My findings are based primarily on 1,097 U.K. firms and 9,457 non-U.K. firms. I also explore channels through which the U.K. Bribery Act affects firms using data on subsidiary locations and revenues, merger and acquisition (M&A) activity, and joint venture (JV) activity between 2007 and 2012.

There are three key findings. First, the passage of the U.K. Bribery Act did indeed adversely affect the value of U.K. firms. U.K. firms that are one standard deviation more exposed to perceptively corrupt countries than average firms have 0.7% lower abnormal returns around passage of the Act, reflecting a loss in market value of $12.9 million for each such firm. One example illustrating a one standard deviation difference in *Corruption exposure* is given by a comparison of a U.K. firm with seven subsidiaries in the U.K. and an otherwise comparable U.K. firm that operates six subsidiaries in the U.K. and one subsidiary in Russia.

Second, the U.K. Bribery Act had positive effects on direct competitors of U.K. firms that do not fall under the provisions of the Act. I define direct competitors as non-U.K. firms that operate at least one subsidiary within (i) the same non-OECD country and (ii) the same industry as at least one U.K. firm. Competitors do not have to comply with the Act if they do not have a U.K. subsidiary. I document that, around the passage of the Act, direct competitors

of U.K. firms that do not fall under the provisions of the Act had 0.5% higher abnormal returns than comparable non-U.K. firms. This effect is almost twice as large for direct competitors headquartered outside of OECD countries, suggesting that direct competitors headquartered in the least regulated countries benefited the most from the Act. In essence, this finding suggests that the U.K. Bribery Act transferred business from affected firms to firms that are not covered by the Act.

Third, I document responses to the U.K. Bribery Act. I find that U.K. firms opened fewer subsidiaries in non-OECD countries after passage of the Act and their revenues grew 12 percentage points slower than those of non-U.K. firms in these countries. These effects are even stronger in those non-OECD countries perceived to be most corrupt according to Transparency International's Corruption Perceptions Index. I also document that, relative to non-U.K. firms, M&A activity by U.K. firms outside the OECD increased 6–8 percentage points slower. One might suspect that U.K. firms substituted direct ownership with third party transactions; however, I do not find evidence that U.K. firms circumvented the Act by engaging increasingly in JVs in perceptively corrupt countries. This may be because internal control requirements are particularly stringent for such third party transactions, as highlighted in recent U.K. Bribery Act investigations.[3]

The empirical setting—passage of the U.K. Bribery Act—might subject my results to alternative interpretations that are unrelated to bribes. For instance, it is possible that U.K. firms found it optimal to withdraw from perceptively corrupt countries when faced with substantial costs for implementing effective internal antibribery controls without having used bribes in the first place. However, one of the Act's features that is specific to non-U.K. firms allows me to alleviate this concern. Notably, non-U.K. firms are exempted from the internal control requirements stipulated in Section 7 of the Act (i.e., they are not required to implement costly control systems). Nevertheless, I find that non-U.K. firms affected by the Act due to their exposure to the United Kingdom and to perceptively corrupt countries through subsidiary presence are negatively affected by the Act.

Another potential interpretation is that negative market response and subsequent withdrawal from perceptively corrupt countries reflect firms' decisions to reduce expected legal costs and exposure to potential legal liabilities. However, it appears that such an increase in expected costs is more binding for firms that are paying bribes than for firms that are not paying bribes because bribe-paying firms likely face higher expected legal costs and legal liabilities.

Note that any estimate of the magnitude of the effect of bribes on firm value from passage of the U.K. Bribery Act is likely conservative. For one thing,

[3] See, for example, "Serious Fraud Office launches corruption inquiry into Airbus" in *Financial Times* (online), August 7, 2016.

as stated earlier, antibribery regulation may have some positive effect on firm value through its impact on corporate governance, compliance, and competitive strategy. To this end, I document that the costs of antibribery regulation outweigh its benefits. Furthermore, firms may circumvent some of the costly implications of antibribery regulation by reorganizing in order to reduce their exposure; such strategic decisions might take time to filter through—and might take forms that are hard to observe. Similarly, other equilibrium responses—investments in compliance, reorganizations, or spin-offs—may explain some of the muted response. Finally, the market may have priced in some expectation of legislation during prior attempts to pass antibribery regulation. I study such related events in Section 2.2.6.

A key contribution of this paper is to provide firm-level evidence of the U.K. Bribery Act's impact on foreign operations, such as revenue, opening and closing of subsidiaries, and M&A activity. Very few studies have provided mixed evidence on the implications of the U.S. Foreign Corrupt Practices Act (FCPA) of 1977 on aggregate U.S. exports (Graham 1984; Beck, Maher, and Tschoegl 1991). My findings are largely supported by Hines (1995), who shows that the FCPA reduced aggregate foreign direct investment, aircraft exports, joint venture activity, and the capital/labor ratio. Voluntary disclosure of sensitive foreign payments under the SEC's voluntary disclosure program prior to passage of the FCPA was associated with negative abnormal returns (Smith, Stettler, and Beedles 1984).

More recent evidence from the Chinese anticorruption campaign suggests that, although the campaign had little impact on corporate corruption culture (Griffin, Liu, and Shu 2016), state-owned enterprises benefitted (Lin et al. 2016) while providers of luxury goods and services suffered (Ke, Liu, and Tang 2016). While these papers focus on a very recent regulatory effort to combat corruption in a perceptively corrupt country, in this paper I add the cost of doing business to the list of drivers of foreign activity and international cross-border flows.[4]

My findings are also in line with some of the findings that exploit detected cases of bribe paying companies. For instance, analysis of 166 prosecuted international bribery cases revealed that a bribe of $1 returns $11 of contract value (Cheung, Rau, and Stouraitis 2012). Yet, enforcement actions for violations of the FCPA are associated with costs that more than offset the value of contracts obtained through bribe payments if prosecution for bribery is accompanied by charges of financial fraud (Karpoff, Lee, and Martin 2015), although fines tend to be lower for socially responsible firms (Hong and Liskovich 2015). Even though detected bribery cases help identify the costs and benefits associated with bribery, such cases may raise concerns because they

[4] See, for example, studies of the determinants of international portfolio investment decisions (Brennan and Cao 1997; Kang and Stulz 1997; Graham, Harvey, and Huang 2005; Portes and Rey 2005; Gianetti and Simonov 2006; Kho, Stulz, and Warnock 2009; Leuz, Lins, and Warnock 2009), cross-border M&As (e.g., Erel, Liao, and Weisbach 2012), and cross-listing decisions (e.g., Doidge, Karolyi and Stulz 2004).

differ from undetected bribery cases along dimensions that correlate with the firm value they create. Also, using detected cases omits unsuccessful bribery attempts. Exploiting the passage of antibribery regulation, specifically the U.K. Bribery Act 2010, alleviates these concerns. Finally, survey data, although typically associated with concerns about selection, measurement error, and limited participant information, have helped document that using bribes is negatively correlated with firm growth (Svensson 2003; Fisman and Svensson 2007) and is more common among smaller firms (Bennedsen, Feldmann, and Lassen 2009).

1. Event and Methodology

In this section, I describe the event and the methodology.

1.1 U.K. Bribery Act 2010

The primary event date is March 25, 2009, which is when the draft of the U.K. Bribery Act 2010 was passed by a U.K. government commission and put forward by the Secretary of State for Justice. The draft received Royal Assent in almost unchanged form on April 8, 2010, and enforcement of the U.K. Bribery Act began on July 1, 2011.[5] I identify March 25, 2009, as the event date by a Factiva keyword search of "bribery" and "United Kingdom" in major U.K. newspapers for the ten weeks surrounding March 25, 2009. There was no other significant regulatory development in the United Kingdom during that period. Figure 1 illustrates that news about the passage of the draft did not leak prior to the event day.

In order for March 25, 2009, to be a relevant event day, it is important to understand why the draft of the U.K. Bribery Act 2010 passed on that day faced little risk of being watered down and why implications of the draft were unexpected at the time of its passage. Each will be discussed in turn.

The draft of the U.K. Bribery Act passed on March 25, 2009, faced little risk of being softened because the Labour Party was in charge of drafting the Act and had the political power needed to ensure its passage into legislation.[6] Moreover, unlike previous attempts to implement antibribery regulation, in

[5] See http://www.legislation.gov.uk/ukpga/2010/23/pdfs/ukpga_20100023_en.pdf and https://www.justice.gov.uk/downloads/ legislation/bribery-act-2010-quick-start-guide.pdf for the Act's official text and guidance provided by the Ministry of Justice. In the Factiva search, I remove "nonevents," that is, articles that do not constitute news, such as journalistic opinions on past events. I also exclude articles linked to bribery regulation elsewhere (e.g., in the United States) and those related to potential bribery cases as opposed to bribery regulation; examples include speculation about bribery of the Olympic Committee or bribery in cricket and football. One unrelated article prior to March 25 covers investigations into alleged bribery conducted by two U.K. employees in Nigeria; according to the article, these two individuals face charges under the U.S. FCPA of 1977.

[6] The draft was passed by a government commission dominated by the Labour Party. Likewise, that party held the majority in the House of Commons (occupying 355 of the 646 seats in Parliament after the 2005 general election). Even though both the House of Commons (lower house) and the House of Lords (upper house) participate in the process of turning bills into Acts of Parliament, it is possible for a bill to be passed by the House of Commons if no agreement is reached between the houses.

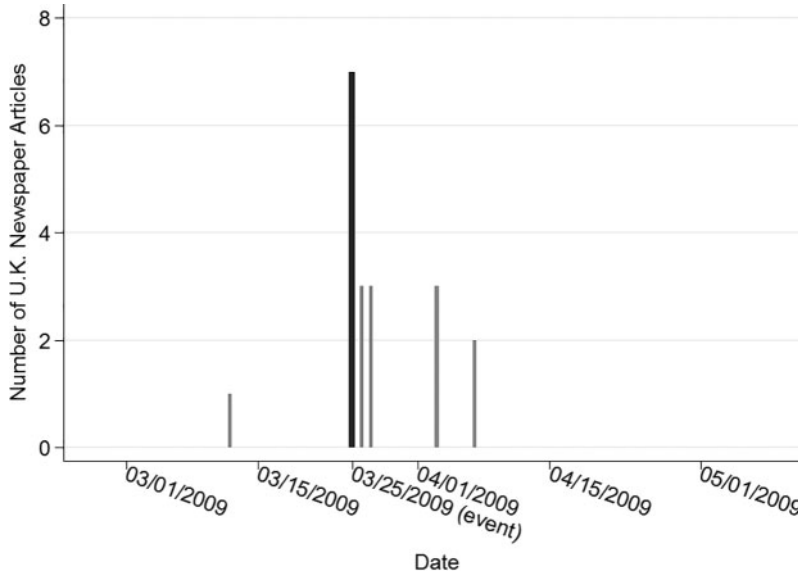

Figure 1
Newspaper articles around passage of the U.K. Bribery Act 2010
This figure shows the number of newspaper articles related to bribery regulation that were published in major U.K. newspapers around the passage of the U.K. Bribery Act 2010 on March 25, 2009. The figure is based on a Factiva search in U.K. newspaper articles that include the term "bribery" and the term "United Kingdom" (or "Britain") but do not include the terms "cricket," "Olympic," "football," or "contract notice." Newspaper articles published after 8 p.m. in the online version are dated to the following day; duplicate articles are omitted.

this case there was considerable pressure to act quickly: OECD sanctions were looming and there was also a relatively short time until the next general election. With election outcomes predicted to be unfavorable for the Labour Party, it was highly pressured to turn the Act into legislation quickly so as to avoid time-consuming amendments. Ultimately, the Act was pushed so hard that once turned into legislation its enforcement had to be delayed twice because firms had not been provided with sufficient guidelines for implementation. Another reason why the draft faced little risk of falling through the legislative process is that industry lobbyists had a hard time arguing against the draft. Prior attempts to pass antibribery regulation were aimed solely at U.K. firms. This feature made previous attempts an easy target for industry lobbyists, who argued that enforcing any such antibribery regulation would be entirely at the expense of U.K. firms. A distinct and decisive feature of the U.K. Bribery Act 2010 is that it also applies to non-U.K. firms with U.K. operations (such as subsidiaries), irrespective of where violations occur, which addresses lobbyists' concerns.

The implications of the Act were unexpected because the penalties stipulated in its draft were more severe than anticipated and went well beyond existing U.K. regulations, the OECD Anti-Bribery Convention of 1997, and the U.S. FCPA of 1977. Prior U.K. antibribery regulation—notably the Public Bodies

Corrupt Practices Act 1889, the Criminal Cases Act 1908, and the Criminal Justice Act 1967—did not explicitly address bribery by corporations and focused on active and passive bribery of U.K. public officials only, while the U.K. Bribery Act addresses these issues.[7] According to the OECD Anti-Bribery Convention, signed by the United Kingdom in 1997, signatory countries agree to enact legislation that penalizes the bribing of foreign public officials. The U.K. Bribery Act extends beyond these requirements by making it a criminal offense (i) for individuals and corporations to engage in either active or passive bribery and (ii) for corporations to have no internal control procedures designed to prevent associated persons from acts of bribery. Furthermore, the Act prohibits facilitation payments: payments meant to induce government officials to perform tasks that they are obligated to perform in any case. Further, corporate fines for violating the Act are potentially open-ended; individuals who violate the requirements of the Act can be fined and imprisoned. Along these dimensions, the U.K. Bribery Act also goes well beyond the provisions of the FCPA, although U.K. organizations can defend against allegations by proving that they have adequate antibribery controls in place.[8]

Up to 2015, there have been few charges under the U.K. Bribery Act 2010, yet these cases are illustrative of the strictness by which the United Kingdom's Serious Fraud Office (SFO) seeks to punish violations of the Act. The first individual charged under the Act was a London-based court clerk who pleaded guilty to one count of taking a GBP 500 bribe so as not to put details of a traffic summons into a court database. In November 2011, he was sentenced to six years in prison, three years of which were for violations of the U.K. Bribery Act. The first charge against agents of a corporation came against four former employees of Sustainable AgroEnergy Plc and associated companies for bribery that occurred between April 2011 and February 2012 in association with selling biofuel investment products involving plantations in Southeast Asia. Three individuals were convicted of conspiracy to commit fraud, conspiracy to furnish false information, fraudulent trading, and Bribery Act 2010 offences. They

[7] In the Act, active bribery is defined as offering, giving, or promising to give a financial or other advantage to a person in exchange for that person's improper performance of a relevant function; this includes the bribery of foreign public officials and other firms. Conversely, passive bribery is defined as receiving or agreeing to receive a financial or other advantage in exchange for improperly performing a relevant function.

[8] Specifically, the U.K. Bribery Act and U.S. FCPA differ along a range of dimensions. First, the U.K. Bribery Act (unlike the FCPA) stipulates that a firm is strictly liable if it fails to implement antibribery controls. Second, whereas the FCPA was initially interpreted to prohibit only active bribery, the U.K. Bribery Act proscribes both active bribery (offering a bribe) and passive bribery (accepting a bribe). Third, the FCPA focuses on bribing foreign public officials; in contrast, the U.K. Bribery Act covers the bribing of private persons as well as other firms and also the employees of those firms. Fourth, there is no formal upper limit for fines under the U.K. Bribery Act; under the FCPA, the maximum fine is $2 million. Fifth, of the two Acts, only the U.K. one criminalizes facilitation payments. Sixth, the U.K. Bribery Act's jurisdiction explicitly extends to non-U.K. firms with U.K. operations, regardless of where the bribery occurs. The FCPA initially applied solely to U.S. firms and has only recently been interpreted as applying to foreign firms with U.S. operations. Sources: "The U.K. Bribery Act 2010–What U.S. Companies Need to Know" in *Mondaq Business Briefing* (June 21, 2010) and "The U.K. Bribery Act 2010 *v* Foreign Corrupt Practices Act of 1977: How different are they & should your business be concerned?" in *Mondaq Business Briefing* (April 26, 2010).

were sentenced to thirteen, nine, and six years' imprisonment and disqualified from being directors for fifteen, fifteen, and ten years, respectively.[9] The low number of convictions is due to three features of bribery investigations. First, these investigations are diverse, complex, and lengthy and often involve other jurisdictions. Second, the Act only applies to cases of bribery that occurred after June 2011. Third, the sensitivity of information revealed by the SFO makes it indispensable to keep preliminary investigations confidential until investigations are formally announced. Examples of particularly complex investigations include those into Securency International Pty Ltd (ongoing since 2011) and Harlequin Property (ongoing since 2013).[10]

1.2 Empirical methodology

One approach to studying the effect of bribes on firm value is to collect data on bribes paid, as well as the benefits received from paying bribes using data available from bribery cases detected by regulators. However, as outlined in the introduction, (i) detected cases may differ from undetected bribery cases along dimensions that correlate with the value they create, and (ii) using detected cases omits unsuccessful bribery attempts. To alleviate these concerns, I exploit the passage of antibribery regulation, specifically the U.K. Bribery Act 2010, and I construct a proxy for firms' likelihood of using bribes from subsidiary data.

In the first part of the analysis, I use event study methodology to examine whether bribes affect firm value. Specifically, I run the following regression:

$$CAR_i = \alpha + \beta_1 CE_i + \gamma' \mathbf{X}_i + \varepsilon_i, \tag{1}$$

where CAR_i denotes the cumulative returns of firm i around the day of passage of the Act, CE_i denotes a firm's exposure to corrupt countries, and $\mathbf{X_i}$ is a vector of controls including industry fixed effects. The coefficient of interest β_1 captures whether exposure to corrupt countries impacts firm value around passage of the Act.

One major prediction from auction theory with side payments and costly regulation is that unregulated non-U.K. firms competing directly with U.K. firms are positively affected by the passage of unilateral regulation (e.g., Beck and Maher 1989). I test this prediction using the following regression:

$$\begin{aligned} CAR_i = {} & \alpha + \beta_1 NO\_UK\_LINK_i + \beta_2 UK\_COMP_i \\ & + \beta_3 NO\_UK\_LINK_i \times UK\_COMP_i + \gamma' \mathbf{X_i} + \varepsilon_i, \end{aligned} \tag{2}$$

[9] The fourth person was acquitted of all charges. No charges were made against Sustainable AgroEnergy Plc or its parent company Sustainable Growth Group because Sustainable Growth Group was placed in administration in March 2012.

[10] The Serious Fraud Office (SFO) lists ongoing cases under https://www.sfo.gov.uk/our-work/our-cases/.

where UK_COMP_i measures the competition of non-U.K. firms with U.K. firms in perceptively corrupt countries, $NO\_UK\_LINK_i$ is a dummy variable equal to 1 if a non-U.K. firm has no exposure to the U.K., and $\mathbf{X_i}$ contains controls including country times industry fixed effects. Of particular interest is β_3, which indicates whether firms unaffected by the Act and competing with U.K. firms are differentially affected.

In the second part of the analysis, I test for the long-run effects of the U.K. Bribery Act on U.K. firms by running a pooled panel regression, as follows:

$$\begin{aligned} Y_{i,t} = \alpha &+ \beta_1 EARLY\_RESPONSE_t + \beta_2 EARLY\_RESPONSE_t \\ &\times UK\_FIRM_i + \beta_3 LATE\_RESPONSE_t + \beta_4 LATE\_RESPONSE_t \\ &\times UK\_FIRM_i + \gamma' \boldsymbol{X}_{i,t} + \varepsilon_{i,t}, \end{aligned} \tag{3}$$

where $Y_{i,t}$ is an outcome for firm i at time t, $EARLY\_RESPONSE_t$ is a dummy variable equal to 1 if an observation occurs between passage and enforcement of the Act, and $LATE\_RESPONSE_t$ is a dummy variable equal to 1 if an observation occurs after the Act is enforced. UK_FIRM_i denotes firms headquartered in the United Kingdom. $\mathbf{X_{i,t}}$ is a vector that contains firm fixed effects. Of particular interest are coefficients β_2 and β_4, which denote whether firms headquartered in the United Kingdom respond differentially after passage and enforcement, respectively. In a key robustness test, I additionally augment this setup by country times time fixed effects (which makes β_1 and β_3 redundant).

Equation (1) uses heteroscedasticity-robust standard errors that are clustered at the industry level. Equation (2) additionally clusters at the country level, and Equation (3) clusters at the year and country levels.[11]

2. Data

In this section, I describe the sample and key variables. Appendix A contains detailed variable definitions.

2.1 Sample

For the first part of my analysis, I obtain subsidiary information from Orbis, stock return data from Datastream/Worldscope, and accounting data from Osiris. Orbis collects, among others, ultimate ownership and subsidiary data on private and public firms headquartered around the globe. I start with 26,094 unique publicly listed firms with at least one subsidiary owned to more than

[11] In Equations (2) and (3), I use two-way clusters. I have experimented with various dimensions of clusters and obtained similar results. Clustering standard errors at the dimensions mentioned here generally produces the most conservative standard errors.

50% in 2008.[12] Matching these firms to Datastream, I obtain 18,848 firms that are active in March 2009 and have price data for March 24–26, 2009.[13] After merging these data with Osiris data, I obtain 12,906 firms (1,244 headquartered in the United Kingdom) for which assets are larger than zero. For most of my analyses, I require at least 100 return observations during days [-294;-41] relative to March 25, 2009, so as to construct abnormal returns. After removing firms with insufficient return observations and penny stocks, this leaves a final sample of 1,097 firms headquartered in the United Kingdom and 9,457 firms headquartered outside the United Kingdom.

The second part of my analysis employs subsidiary data from Orbis, as well as M&A and joint venture (JV) data from Zephyr. Zephyr provides information on 238,384 M&As involving 95,877 unique acquirers and 29,815 JVs involving 12,472 unique partners for 2007–12. I focus on M&As in which the acquirer is public and increases its share in the target to above 50%.

2.2 Main variables

All continuous variables described below are winsorized at the 1% and 99% levels, although the results are insensitive to these levels.

2.2.1 Firm value. I measure the effect of the U.K. Bribery Act on firm value using cumulative abnormal returns (*CAR*) on the day of passage of the U.K. Bribery Act (March 25, 2009) and the day thereafter. I calculate returns on the basis of price changes between closing on March 24, 2009, and closing on March 26, 2009. To calculate *CAR*[0;1], I follow Fama et al. (1969), although I use daily stock return data and control for firm size and the book-to-market ratio (Fama and French 1993), as well as momentum (Carhart 1997). All portfolios are constructed using local stocks.[14] The estimation period starts 294 days before the event and ends 41 days before the event.

2.2.2 Corruption exposure. I do not have a direct measure of bribes paid, so I try to capture firms' propensity to use bribes by constructing *Corruption*

[12] Orbis obtains information directly (e.g., from annual reports, private correspondence, company websites, and telephone calls) or through official bodies (e.g., from SEC filings, stock exchanges). As of 2008, Orbis contained close to 43.5 million active companies (54,000 thereof publicly listed). Of these, 1.3 million companies (29,900 thereof publicly listed) had at least one recorded subsidiary owned to more than 50%. Historical data for other years are obtained from Orbis DVDs. The Online Appendix shows how subsidiaries are distributed across geographic regions.

[13] In 2008, more than 20% of the firms listed in Datastream/Worldscope are inactive: Datastream/Worldscope does not remove such firms. I identify inactive firms as firms without price movements within 20 trading days prior to March 25, 2009.

[14] I follow Ince and Porter (2006) in "cleaning" daily return data. Long–short portfolios based on size, book-to-market ratio, and momentum are constructed as described in Kenneth French's data library, but for U.K. firms I split size into the top 30% and the bottom 70% of firms in order to account for the skewed size distribution in the United Kingdom. Results are not sensitive to these cutoffs.

exposure from firms' exposure to countries with high levels of perceived corruption. For each firm i, I combine two data sources as follows:

$$Corruption\ exposure_i = \sum_{c \in C} \left((10 - CPI_c) \times \frac{\#Subsidiaries_{i,c}}{\#Subsidiaries_i} \right),$$

where CPI_c is Transparency International's Corruption Perceptions Index of country c in 2008, $\#Subsidiaries_{i,c}$ is the number of subsidiaries headquartered in country c and owned by firm i in 2008, and $\#Subsidiaries_i$ is the total number of subsidiaries of firm i in 2008. By construction, this measure is increasing in firms' exposure to corruption. It is bounded by [0.7; 8.9] because $10 - CPI$ is $10 - 9.3 = 0.7$ for the least corrupt countries (Denmark, Sweden, and New Zealand) and is $10 - 1.1 = 8.9$ for the most corrupt country (Somalia). In the *Corruption exposure* measure, I assume that each subsidiary is equally important in creating firm value, yet the ideal measure would capture the fraction of value attached to certain countries of the world. I additionally employ subsidiary revenue–weighted variations of the *Corruption exposure* measure.

2.2.3 Long-run outcome variables. I consider long-run outcome variables using annual subsidiary, M&A, and JV data for the 2007–12 period from Orbis and Zephyr. I aggregate firms' revenues by country using subsidiary revenue data of subsidiaries held to 50% or more. The number of acquisitions (joint ventures) at the firm-year level is constructed for all firms that incur at least one acquisition (joint venture) between 2007 and 2012. M&As are restricted to deals where the acquirer increases their share to more than 50% of the target; JVs are restricted to those with at least one public partner.

2.2.4 Controls. Under the U.K. Bribery Act, some firms may incur compliance costs that are related to firm size, which is why I control for the natural logarithm of total assets. Also, some firms may incur a fixed per-subsidiary compliance cost under the Act. I therefore control for the natural logarithm of the number of subsidiaries. Some firms are more likely than others to be affected by the Act. A number of firms must also comply with other antibribery regulations, most notably the U.S. FCPA. *US Link* is a dummy variable equal to 1 if a firm is subject to the FCPA, which I infer in two ways: (i) from the Bank of New York's list of ADRs, in combination with Worldscope data, and (ii) from subsidiary data to indicate whether firms have U.S. subsidiaries. Additionally, some firms voluntarily adhere to corporate social responsibility (CSR) standards. Much like the Domini 400 Social Index for S&P 500 firms in the United States, the FTSE Group publishes the FTSE4Good Index for firms in the United Kingdom. Firms listed in this index are those that comply with certain environmental, human rights, social, and stakeholder relations criteria. *FTSE4GOOD* is a dummy variable identifying

index constituents. Firms voluntarily adhering to CSR standards might be less affected by the Act.[15]

2.2.5 Non-U.K. firms. I proxy for being subject to the U.K. Bribery Act using *U.K. Link*, a dummy variable set equal to 1 if a foreign firm has at least one subsidiary in the United Kingdom. *U.K. Competition* is a dummy set equal to 1 if at least one of a non-U.K. firm's non-OECD subsidiaries competes directly with a U.K. firm's non-U.K. subsidiary. Direct competition is defined as two subsidiaries operating in the same industry and in the same non-OECD country.

2.2.6 Robustness. In robustness tests, I also study raw returns and changes in Tobin's q. Moreover, I provide estimates using alternative measures of perceived corruption, all of which are defined in Appendix A.

2.3 Summary statistics

Summary statistics are presented in Table 1. Panel A shows that the equally weighted CAR[0;1] for U.K. firms around the event date is -0.43%, suggesting more negative returns for small firms around the event. In line with the notion that the Act may be more costly for firms exposed to perceptively corrupt countries, U.K. firms with foreign subsidiaries have more negative returns. The average (median) sample firm has 41.4 (9) subsidiaries in 2008, and roughly one in six U.K. firms is a FTSE4GOOD constituent; 38% of firms have a U.S. link through having an ADR (18%), a U.S. subsidiary (30%), or both. In order to account for the differences in firms that operate abroad, I repeat my main analysis for the subset of U.K. firms with foreign subsidiaries.

In panel B of Table 1, I present summary statistics for the sample of non-U.K. firms. Non-U.K. firms with U.K. subsidiaries are less exposed to perceptively corrupt countries on average, are larger, and are more likely to be cross-listed, to have U.S. exposure, and to be FTSE constituents than non-U.K. without U.K. subsidiary. Some of these differences are magnified because 40% of non-U.K. firms are smaller local firms without foreign subsidiaries. Roughly half of the revenues generated by non-U.K. sample firms outside of the OECD are in direct competition with subsidiaries owned by U.K. parents.

Panel C of Table 1 provides subsidiary, M&A, and JV summary statistics for the 2007–12 sample period. An average sample firm has a *Corruption exposure* of 3.7 through its 21.7 subsidiaries; 63% of subsidiaries, accounting for 73% of revenues, are located in OECD countries. The average sample firm conducts 1.8 M&As per year, three in four in OECD countries. Out of firms'

[15] See Bénabou and Tirole (2010) and Cheng, Hong, and Shue (2013) for reviews of the literature on CSR and firm value.

Table 1
Summary statistics

Panel A: U.K. firms

	Mean	SD	Median	# obs	Foreign subsidiary		Difference	
					Yes	No		
Cumulative abnormal returns *CAR[0;1]*	−0.43%	2.38%	−0.52%	1,097	−0.55%	−0.27%	−0.28%	**
Corruption exposure	2.56	0.79	2.30	1,244	2.76	2.30	0.46	***
Market value ($mn)	1,772	9,813	107	1,244	2,833	400	2,433	***
Number of subsidiaries	41.4	256.9	9.0	1,244	65.4	10.3	55.1	***
FTSE4Good (dummy)	16.1%	36.7%	0.0%	1,244	22.4%	7.9%	14.5%	***
ADR (dummy)	17.6%	38.1%	0.0%	1,244	25.6%	7.2%	18.4%	***
U.S. subsidiary (dummy)	30.2%	45.9%	0.0%	1,244	56.4%	0.0%	56.4%	***
U.S. link (dummy)	37.9%	48.5%	0.0%	1,244	61.6%	7.2%	54.4%	***
Foreign subsidiary (dummy)	56.4%	49.6%	100.0%	1,244				

Panel B: Non-U.K. firms

	Mean	SD	Median	# obs	U.K. subsidiary		Difference	
					Yes	No		
Cumulative abnormal returns *CAR*[0;1]	0.27%	3.45%	−0.02%	9,457	0.36%	0.24%	0.12%	
Corruption exposure	3.48	1.77	2.72	11,662	2.93	3.69	(0.76)	***
Market value ($mn)	2,824	12,600	339	11,662	5,856	1,668	4,188	***
Number of subsidiaries	27.8	125.4	8.0	11,662	64.3	13.9	50.4	***
FTSE4Good (dummy)	2.6%	16.0%	0.0%	11,662	6.8%	1.0%	5.8%	***
ADR (dummy)	10.9%	31.2%	0.0%	11,662	18.5%	8.0%	10.5%	***
U.S. subsidiary (dummy)	45.7%	49.8%	0.0%	11,662	73.2%	35.2%	38.0%	***
U.S. link (dummy)	51.7%	50.0%	100.0%	11,662	78.5%	41.5%	37.0%	***
U.S. link (non-U.S. firm; dummy)	32.3%	46.8%	0.0%	6,749	64.7%	22.4%	42.3%	***
Competes with U.K. firm outside OECD	43.2%	49.5%	0.0%	2,510	66.5%	31.4%	35.1%	***
Foreign subsidiary (dummy)	58.6%	49.3%	100.0%	11,662	100.0%	42.8%	57.2%	***
U.K. subsidiary (dummy)	27.6%	44.7%	0.0%	11,662				

(*continued*)

average 2.9 JVs, less than half (41%) of the targets are headquartered in OECD countries.

3. The U.K. Bribery Act 2010 and Firm Value

In this section, I document the results of event studies for U.K. firms and direct competitors of U.K. firms around March 25, 2009.

3.1 U.K. firms

Table 2 provides results for the full regression (1) for U.K. firms. The dependent variable is *Cumulative abnormal returns* (*CAR*) [0; 1] in columns (1) to (5) and

Table 1
continued

Panel C: Subsidiaries, mergers and acquisitions (M&As), and joint ventures (JVs)

	Mean	SD	Median	# obs
(i) Subsidiaries				
Average number	21.7	104.9	6.0	84,256
% subsidiaries in OECD	63%	44%	92%	84,256
% revenues OECD	73%	43%	100%	84,256
% firms with OECD subsidiary	73%	45%	100%	84,256
% firms with non-OECD subsidiary	54%	50%	100%	84,256
Subsidiary revenues ($mn)	311	602.7	15.1	784,464
(ii) Mergers and acquisitions (M&As)				
Average number	1.8	1.8	1.0	16,675
% target in OECD	76%	41%	100%	16,675
% firms with OECD M&A target	79%	41%	100%	16,675
% firms with non-OECD M&A target	30%	46%	0%	16,675
(iii) Joint ventures (JVs)				
Average number	2.9	1.7	2.0	2,250
% partner in OECD	41%	48%	0%	2,250
% firms with OECD JV partner	43%	50%	0%	2,250
% firms with non-OECD JV partner	62%	49%	100%	2,250

Note: This table provides summary statistics for variables used in event studies for U.K. firms (panel A) and non-U.K. firms (panel B), as well as in the analysis of firms' responses to the passage of the U.K. Bribery Act (panel C). Appendix A provides detailed variable definitions. All continuous variables are winsorized at the 1% and 99% levels. In panels A and B, observations are at the firm level using 2008 data, with the exception of *Cumulative abnormal returns*, which denote abnormal returns relative to March 25, 2009 (when the draft of the U.K. Bribery Act was passed), and the next day. In panel A, firms are additionally split by *Foreign subsidiary*, a dummy variable set equal to 1 if a firm has at least one subsidiary outside of the U.K. in 2008. In panel B, firms are split by *U.K. subsidiary*, a dummy variable set equal to 1 if a firm has at least one subsidiary in the U.K. in 2008. ** and *** denote significance at the 5% and 1% levels, respectively. In panel C, observations are at the firm-year level (except *Subsidiary revenues ($000s)*, which is at the subsidiary-year level) over the 2007–12 period.

Cumulative raw returns (*CRR*) [0; 1] in column (6). Without further controls, *Corruption exposure* loads significantly negatively on abnormal returns with a coefficient of −0.72; that is, firms that are more exposed to high-corruption countries have more negative abnormal returns around passage of the U.K. Bribery Act (column (1)). This result is robust to controlling for industry fixed effects and further firm-level controls, alleviating concerns that industry corruption levels or other firm-specific characteristics may drive the result. In the full specification (column (3)), an increase of one standard deviation in *Corruption exposure* is associated with a 0.73% (=0.79 × 0.93%) decline in firm value, which is equivalent to $12.9 million (= $1,772 million * 0.73%) for the mean firm. One example illustrating a one standard deviation difference in *Corruption exposure* is given by the comparison between a U.K. firm with seven subsidiaries in the United Kingdom, with a *Corruption exposure* of 2.3 (=10−7.7), and an otherwise comparable U.K. firm that operates six subsidiaries in the United Kingdom and one in Russia; this latter firm's *Corruption exposure* is 3.1=(10−7.7)*(6/7)+(10−2.1)*(1/7)).

As shown in Table 1, of the U.K. sample firms, 43.4% do not have subsidiaries outside the United Kingdom; these firms have a *Corruption exposure* of 2.3 by construction. The coefficient for *Corruption exposure* is still significantly negative when I rerun the main regression for firms with at least one foreign

Table 2
Firm value of U.K. firms around passage of the U.K. Bribery Act

Dependent variable:	Cumulative abnormal returns					Cumulative raw returns
Sample:	All firms	All firms	All firms	Firms with foreign subsidiary	All firms	All firms
Corruption exposure measure:	Equally weighted (1)	Equally weighted (2)	Equally weighted (3)	Equally weighted (4)	Revenue weighted (5)	Equally weighted (6)
Corruption exposure	−0.717**	−0.838**	−0.925**	−0.791*	−0.839*	−0.931**
	(−2.08)	(−2.26)	(−2.42)	(−1.85)	(−1.92)	(−2.43)
LN (assets)			0.223	0.511	0.032	0.226
			(1.00)	(1.60)	(0.21)	(1.01)
LN (# subsidiaries)			−0.204	−0.021	0.085	−0.206
			(−0.64)	(−0.05)	(0.33)	(−0.64)
FTSE4GOOD (dummy)			−1.306	−0.835	−0.623	−1.285
			(−1.30)	(−0.67)	(−0.84)	(−1.28)
US link (dummy)			−0.607	−0.500	−0.664	−0.587
			(−0.81)	(−0.52)	(−1.16)	(−0.78)
Beta						0.979
						(0.77)
Market-to-book						0.022
						(0.70)
Momentum						−0.728
						(−1.18)
Industry FE	No	Yes	Yes	Yes	Yes	Yes
N	1,097	1,097	1,097	618	935	1,097
Adj. R^2	0.004	0.043	0.055	0.096	0.046	0.055

Note: This table relates returns of U.K. firms around the passage of the U.K. Bribery Act to firm characteristics. The sample consists of all publicly listed U.K. firms, with the exception of column (4), which focuses on U.K. firms with at least one foreign subsidiary. The dependent variable is *Cumulative abnormal returns* [0;1] in columns (1) to (5) and *Cumulative raw returns* [0;1] in column (6). These returns are relative to March 25, 2009 (when the draft of the U.K. Bribery Act was passed), and the next day. In columns (1) to (4) and (6), *Corruption exposure* is constructed weighing each subsidiary equally. In column (5), *Corruption exposure* is constructed weighing each subsidiary by its revenue. Appendix A provides detailed variable definitions. All continuous variables are winsorized at the 1% and 99% levels. Industry fixed effects (Fama–French 48) are included as indicated. Standard errors are clustered at the industry level. *t*-statistics are given in parentheses; *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

subsidiary (column (4)). The previous results are also confirmed when I repeat the main analysis using a *Corruption exposure* measure that weights subsidiaries by the fraction of revenues they generate (column (5)) and using raw returns as dependent variable (column (6)).

None of the other control variables have significant power in explaining returns around the passage of the U.K. Bribery Act. The negative sign of the coefficients on *FTSE4GOOD* and *US link* are at odds with predictions but are insignificant. The number of subsidiaries loads insignificantly negatively, while size loads weakly positively.[16]

For robustness, I repeat the analysis using alternative event days, event windows, measures of corruption exposure, measures of firm value, and a

[16] The results are unaffected by removing size and/or number of subsidiaries; the correlation between these controls is 0.53.

sample of non-U.K. firms. Results are presented in Appendix B and summarized in the following.

First, I also explored alternative days in 2000–11 where there were notable events related to bribery legislation, using the identical search methodology used for the main event. *Corruption exposure* loads negatively on CARs over most event windows during which attempts to pass antibribery regulation in the United Kingdom were made (panel A in Appendix B). Stacking all events bearing news in favor of stronger regulation, I find that *Corruption exposure* provides significant explanatory power for abnormal returns on event days.

In panel B in Appendix B, I show that the full effect of the draft on firm value occurs around March 25, 2009, rather than during eight weeks before and after the passage of the Act. In panel C, I examine a range of alternative *Corruption exposure* measures. Neither excluding sovereign tax havens from the construction of *Corruption exposure* nor using *Worldwide Governance Indicators*' *Control for Corruption* as a measure of corruption affects results. Firms more exposed to corrupt industries—through operating subsidiaries in perceptively corrupt industries—are also more negatively affected by the passage of the U.K. Bribery Act. The idea of this test is that bribery may be more common in certain industries. While industry fixed effects address this if subsidiaries operate in the same industry as their headquarter firms, it might be that some firms are more exposed to certain industries through their subsidiaries.

The negative firm value reaction of U.K. firms is also reflected in long-term firm value measures (panel D in Appendix B). For the 2007–12 sample period, I estimate a pooled panel regression using Tobin's q and revenue growth as dependent variables. I document that Tobin's q and the revenue growth of U.K. firms go down relative to non-U.K. firms, more so for U.K. firms with higher exposure to perceptively corrupt countries. I also investigate whether something else may have driven the negative market reaction of U.K. firms with high exposure to perceptively corrupt countries on March 25, 2009, by studying non-U.K. firms. Panel E of Appendix B shows that non-U.K. firms exposed to the U.K. Bribery Act—these firms, which have both a U.K. subsidiary and a high *Corruption exposure,* exhibit more negative abnormal returns on the event date. I also find that the negative spillovers are more pronounced among OECD firms, which may reflect that firms headquartered in OECD countries face different detection probabilities and costs, prosecution and enforcement probabilities, and reputational losses, but also different levels of home country antibribery regulation.

All results are also robust to a range of additional standard event study tests that are untabulated for brevity. First, I use non-U.K. indices to calculate *CARs* (Zhang 2007).[17] Second, event-time clustering could bias the coefficient found for *Corruption exposure*. To alleviate this concern, I follow Karpoff and

[17] Specifically, I follow specification (1a) in Zhang (2007), which contains contemporaneous Canadian, European, and Asian returns, as well as lead European and Asian returns. However, I do not use nonlocal indices in my main

Malatesta (1995) in using seemingly unrelated regressions (SURs) to calculate CARs for portfolios of firms with different levels of exposure to perceptively corrupt countries. Third, results on related events (panel A in Appendix B) are robust when I allow slopes on *Corruption exposure* to shift on event days (following Schipper and Thompson 1983). Finally, the results reported in Table 2 are not sensitive to other specifications of the estimation period or different treatment of outliers.

3.2 Direct competitors of U.K. firms

I have shown that the U.K. Bribery Act reduced the value of U.K. firms with exposure to perceptively corrupt countries. I now examine spillovers of the U.K. Bribery Act on non-U.K. competitors of U.K. firms. In theory, costly antibribery regulation may transfer business from regulated firms to unregulated firms.

Table 3 presents the results of regression (2), which tests whether non-U.K. firms with U.K. competitors but without exposure to the U.K. Bribery Act are positively affected by the Act. The variable of interest is the interaction between a dummy variable indicating whether subsidiaries owned by non-U.K. firms compete directly with those owned by U.K. firms and a dummy variable indicating whether non-U.K. firms are exposed to the U.K. Bribery Act. I also control for non-U.K. firms' *Corruption exposure*. This is important because competing with U.K. firms may be correlated with *Corruption exposure*.[18]

The results in Table 3 show that increased exposure to U.K. competitors outside the OECD countries is associated with more positive CARs but only among non-U.K. firms that are not exposed to the U.K. Bribery Act through a U.K. subsidiary (columns (1) and (2)). Non-U.K. firms that are exposed to competition with U.K. firms through their non-OECD subsidiaries and not exposed to the U.K. Bribery Act have 0.51% more positive CARs around the passage of the U.K. Bribery Act.

Non-U.K. competitors of U.K. firms may benefit through two channels. First, some unregulated competitors' expected payoffs from offering bribes may increase as regulated firms may decide to quit perceptively corrupt countries, resulting in a reduction in competition (e.g., Beck and Maher 1989). Second, competitors subject to antibribery regulation in their home country but nevertheless competing in corrupt countries may benefit because the U.K. Bribery Act levels the playing field.

In an attempt to shed light on the channel driving the spillovers from U.K. to non-U.K firms, I split the sample by headquarter regions. For instance, firms headquartered in OECD countries likely adhere to the standards of the OECD

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specification because, in a competitive setting with unilateral regulation, non-U.K. indices may reflect spillover and competitive effects.

[18] Empirically, the correlation between U.K. competition and corruption exposure is less than 0.1 though.

Table 3
Spillovers of the U.K. Bribery Act on direct competitors of U.K. firms

Competition measure:	Dummy							Sales
Sample:	All non-U.K. firms (1)	All non-U.K. firms (2)	OECD non-U.K. firms (3)	OECD Non-U.S. firms (4)	U.S. firms (5)	Non-OECD firms (6)	All non-U.K. firms (7)	All non-U.K. firms (8)
U.K. comp. × no U.K. sub.		0.514*	0.380	0.520	0.320	0.973***	0.591*	0.093**
		(1.91)	(1.21)	(1.32)	(0.58)	(3.08)	(1.80)	(2.07)
U.K. competition	0.239	−0.012	−0.075	0.163	−1.101*	0.056	0.118	−0.058
	(0.99)	(−0.07)	(−0.30)	(0.61)	(−1.88)	(0.25)	(0.79)	(−1.58)
No U.K. subsidiary	0.059	0.117	0.047	0.204	−0.235	0.408***	0.143	−0.008
	(0.81)	(1.25)	(0.40)	(1.45)	(−1.26)	(2.83)	(1.50)	(−0.05)
Corruption exposure	−0.060	−0.009	−0.026	−0.053	0.022	0.021	−0.009	−0.023
	(−1.38)	(−0.37)	(−0.67)	(−1.22)	(0.30)	(0.64)	(−0.33)	(−0.31)
Constant & controls	Y	Y	Y	Y	Y	Y	Y	Y
Country × industry FE	Y	Y	Y	Y	N	Y	Y	Y
industry FE	-	-	-	-	Y	-	-	-
N	2,510	2,510	2,068	1,254	814	442	9,457	2,510
Adj. R^2	0.058	0.059	0.064	0.035	0.054	0.081	0.018	0.061

Note: This table relates returns of non-U.K. firms around the passage of the U.K. Bribery Act to firm characteristics. The dependent variable *CAR* is constructed as in Table 1. In columns (1) to (7), the key control variable is *Competes with UK Firm outside OECD*, a dummy variable set equal to 1 if at least one of a non-U.K. firm's non-OECD subsidiaries competes directly with a U.K. firm's subsidiary. A non-U.K. firm's subsidiary is defined as competing directly with a U.K. firm if (i) that subsidiary is headquartered in the same non-OECD country as at least one U.K. firm subsidiary and (ii) that subsidiary operates in the same Fama–French 48 industry as the U.K. firm's subsidiary. In column (8), competition with U.K. firms is measured by the logarithm of average sales made by those U.K. subsidiaries that compete directly with subsidiaries owned by respective non-U.K. firms. *No U.K. Subsidiary* is a dummy equal to 1 if a non-U.K. firm does not have a U.K. subsidiary in 2008. Other controls are those included in Table 2 column (3) and described in Appendix A. Sample firms are all firms headquartered outside the United Kingdom that have at least one non-OECD subsidiary. Columns (3) to (6) further reduce this sample to firms headquartered in certain regions, and column (7) contains all non-U.K. firms. Fixed effects are included as indicated. All continuous variables are winsorized at 1% and 99% levels. Standard errors are clustered at the country and industry level (two-way). *t*-statistics are given in parentheses; *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Anti-Bribery Convention, while U.S. firms likely adhere to the even stricter provisions of the FCPA. I find that the positive effect of the U.K. Bribery Act on direct competitors is strongest among non-OECD firms (+0.97%), suggesting that firms presumably facing less stringent antibribery regulation benefit the most. The effect on OECD firms is insignificantly positive, and even less so for U.S. firms (columns (3) to (6) in Table 3). The main result is similar in magnitude when including non-U.K. firms that do not have non-OECD country subsidiaries (column (7)).

One might argue that, rather than the presence of a direct competitor, the size of that competitor is a good proxy for potential business opportunities that become available to non-U.K. firms after passage of the Act. For each non-U.K. firm, I measure the size of competition from U.K. firms by the logarithm of sales made by those U.K. subsidiaries that compete directly with subsidiaries owned by respective non-U.K. firms. As before, I focus on subsidiaries headquartered outside OECD countries. Indeed, I find that non-U.K. firms exposed to competition from larger U.K. subsidiaries prior

to passage of the Act have more positive abnormal returns around the passage of the Act (column (8)).

4. Long-Run Implications of the U.K. Bribery Act

In order to shed more light on U.K. firms' response to the U.K. Bribery Act, I examine U.K. firms' response to the Act in terms of subsidiary locations and revenues, as well as M&A and JV activity.

4.1 Geographic exposure

An increase in the cost of doing business may affect the decision to open new subsidiaries or to continue operating existing ones in perceptively corrupt countries. I analyze whether the U.K. Bribery Act affects such decisions by examining whether there is a difference in geographic exposure between U.K. and non-U.K. firms after the Act was passed. I use regression (3) to compare U.K. firms' corruption exposure to that of non-U.K. firms over the 2007–12 period.

In panel A of Table 4, I present the results of an analysis of firms' *Corruption exposure*. In constructing the *Corruption exposure* variable, I weigh subsidiary countries using the 2008 Corruption Perceptions Index so that my results are not driven by changes in that index. I denote by *Early response* the period after passage of the Act but before its enforcement (2009–10) and *Late response* for the years thereafter (2011–12).

I document in column (1) of Table 4, panel A that, relative to 2007–08, all sample firms significantly increased their exposure to perceptively corrupt countries by 0.083 in 2009–10 and by 0.120 (i.e., a further 0.037) thereafter. Comparing the increase in corruption exposure by U.K. firms to that of non-U.K. firms, I find in columns (2) and (3) that U.K. firms increased their exposure more slowly than non-U.K. firms, respectively, even after controlling for *industry times year* fixed effects. This effect occurs immediately after the passage of the U.K. Bribery Act and does not reflect a pretrend, as shown when including a pre-event dummy for U.K. firms in 2008 (column (4)).

In panel B of Table 4, I examine changes in the logarithm of the number of subsidiaries in and outside of OECD countries, as well as in countries that are among the 50 most corrupt countries according to Transparency International's Corruption Perceptions Index. All sample firms established more subsidiaries in OECD and non-OECD countries after 2009. During the *Early response* and *Late response* periods, the average sample firm increased its number of OECD subsidiaries by 19.1% and a further 17.4% ($=0.365-0.191$) and its number of non-OECD subsidiaries by 23.8% and a further 29.9%, respectively (columns (1) and (4)). Further, relative to non-U.K. firms, U.K. firms engaged relatively more in OECD countries right after the passage of the U.K. Bribery Act (columns (2) and (3)), and relatively less in non-OECD countries right after enforcement of the U.K. Bribery Act in 2011 (columns (5) and (6)). This latter

Table 4
Geographic exposure

Panel A: Corruption exposure

Dependent variable:	Corruption exposure			
	(1)	(2)	(3)	(4)
Early response × U.K. firm		−0.040*	−0.033*	−0.021*
		(−2.09)	(−2.01)	(−1.84)
Late response × U.K. firm		−0.051**	−0.044**	−0.032**
		(−2.75)	(−2.77)	(−2.57)
Early response	0.083**	0.088**		
	(2.87)	(2.81)		
Late response	0.120***	0.126***		
	(5.52)	(5.20)		
Before event × U.K.				0.014
				(1.26)
Controls	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y
Industry × year FE	N	N	Y	Y
N	84,256	84,256	84,256	84,256
Adj. R^2	0.964	0.964	0.964	0.964

Panel B: Number of subsidiaries

Dependent variable:	LN (1 + # subsidiaries headquartered in the OECD)			LN (1 + # subsidiaries headquartered outside the OECD)			LN (1 + # subsidiaries in 50 countries perceived to be most corrupt)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Early response × U.K. firm		0.160**	0.123***		0.039	0.013	−0.014
		(1.99)	(3.12)		(1.81)	(0.69)	(−0.56)
Late response × U.K. firm		0.039	−0.004		−0.118**	−0.129***	−0.145***
		(0.76)	(−0.09)		(−4.54)	(−5.39)	(−8.06)
Early response	0.191***	0.175***		0.238***	0.235**		
	(4.54)	(4.00)		(2.73)	(2.43)		
Late response	0.365***	0.359***		0.537***	0.547***		
	(9.54)	(8.93)		(6.34)	(5.79)		
Controls	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y
Industry × year FE	N	N	Y	N	N	Y	Y
N	84,256	84,256	84,256	84,256	84,256	84,256	84,256
Adj. R^2	0.927	0.927	0.928	0.872	0.872	0.875	0.876

Note: This table relates changes in firms' *Corruption exposure* (panel A) and number of subsidiaries by region (panel B) between 2007 and 2012 to firm characteristics. In panel A, the dependent variable *Corruption exposure* is constructed as described in Table 1, although subsidiary data are from Orbis for 2007–12 and Transparency International's Corruption Perceptions Index for 2008 is used after 2008. The dependent variable in panel B is the logarithm of the number of subsidiaries headquartered in OECD countries (columns (1) to (3)), non-OECD countries (columns (4) to (6)), and the 50 most corrupt countries by Transparency International's Corruption Perceptions Index in 2007 (column (7)). Controls include the logarithm of total assets and fixed effects as indicated. Appendix A provides detailed variable definitions. All continuous variables are winsorized at the 1% and 99% levels. Standard errors are clustered at the year and country levels (two-way). *t*-statistics are given in parentheses; *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

effect is economically slightly stronger for subsidiaries in the 50 most corrupt countries (column (7)).

Taken together, after passage of the U.K. Bribery Act, U.K. firms became relatively less exposed to perceptively corrupt countries and reduced their engagement in more corrupt countries.

4.2 Revenues

Above I document that the U.K. Bribery Act slowed down U.K. firms' expansion into perceptively corrupt countries. In order to understand whether this development is associated with a drop in revenue or merely reflects closures of small subsidiaries, I analyze revenues from perceptively corrupt regions. I examine whether the revenue U.K. firms earned from corrupt countries grew more slowly than for non-U.K. firms. In Table 5, the dependent variables are the sum of firms' revenue by region using firm-level data (columns (1) to (5)) and revenue by surviving subsidiaries using subsidiary-level data (columns (6) and (7)).

As far as the revenue from OECD countries is concerned, all sample firms experienced an increase after passage of the U.K. Bribery Act and a further increase after enforcement. U.K. firms experienced a slightly more pronounced increase only during the early response period. This increase in revenue is robust to additionally controlling for industry times time fixed effects (columns (1) and (2)).

In terms of revenue from outside of the OECD, the revenue for non-U.K. firms from such regions increased significantly faster than for U.K. firms after 2011 (i.e., after enforcement of the Act). Economically, after enforcement, the revenue of U.K. firms from non-OECD countries grew 11.9 percentage points more slowly after controlling for time-variant industry and parent headquarter country characteristics (columns (3) and (4)). This effect is much more pronounced when focusing on revenue from the fifty most corrupt countries. Revenue generated by U.K. firms from such countries grew 27.7 percentage points more slowly after enforcement of the Act (column (5)).

The structure of the Orbis data additionally enables analysis of subsidiary-level revenue data. This allows for making statements about U.K.-owned subsidiaries in perceptively corrupt countries after controlling for a wide range of subsidiary characteristics, alleviating concerns that U.K. subsidiaries are different. In column (6) of Table 5, I focus on surviving subsidiaries. Indeed, compared to subsidiaries owned by non-U.K. firms, subsidiaries owned by U.K. firms experience a drop in revenue of 14.5 percentage points during the *Late response* period even after controlling for subsidiary fixed effects. Further controlling for headquarter country times year and industry times year fixed effects, I find that the drop in revenue is significantly more pronounced among U.K.-owned subsidiaries headquartered in regions perceived to be more corrupt, as shown in column (7), which provides support for the previous results.

4.3 Mergers and acquisitions and joint ventures

Above, I have shown that U.K. firms added fewer subsidiaries in perceptively corrupt countries than non-U.K. firms after enforcement of the U.K. Bribery Act. I now examine whether one form of opening new subsidiaries—M&A activity—was affected and whether firms circumvent the U.K. Bribery Act through JVs.

Table 5
Subsidiary revenues

	LN (firm revenues inside OECD)		LN (firm revenues outside OECD)		LN (firm rev. from 50 countries perceived to be most corrupt)	LN (subsidiary revenue)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Early response × U.K. firm	0.083**	0.085**	−0.019	0.003	−0.051**	−0.053	
	(2.26)	(2.22)	(−0.41)	(0.06)	(−2.32)	(−0.99)	
Late response × U.K. firm	0.016	−0.037	−0.149***	−0.119**	−0.277***	−0.145***	
	(0.28)	(−0.23)	(−2.93)	(−2.27)	(−6.31)	(−2.61)	
Early response	0.142**		0.134***			0.032	
	(2.24)		(7.60)			(1.11)	
Late response	0.334***		0.313***			0.041	
	(11.28)		(16.97)			(1.22)	
Midresponse × U.K. firm × Corruption exposure							−0.016
							(−1.63)
Postresponse × U.K. firm × Corruption exposure							−0.033***
							(−3.87)
Early response × Corruption exposure							0.035***
							(3.16)
Late response × Corruption exposure							0.061***
							(5.19)
Controls	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	N	-
Subsidiary FE	N	N	N	N	N	Y	Y
Industry × year FE	N	Y	N	Y	Y	N	Y
Country × year FE	N	N	N	N	N	N	Y
N	84,256	84,256	84,256	84,256	84,256	784,464	784,464
Adj. R^2	0.901	0.901	0.804	0.807	0.814	0.950	0.951

Note: This table relates revenues around the passage of the U.K. Bribery Act for a panel of firms (columns (1) to (5)) and subsidiaries (columns (6) to (7)) over the 2007–12 period to firm characteristics. In columns (1) to (5), the dependent variable is the logarithm of revenues generated by firms' subsidiaries headquartered in OECD countries (columns (1) and (2)), in non-OECD countries (columns (3) and (4)), and in the 50 most corrupt countries by Transparency International's Corruption Perceptions Index in 2008 (column (5)). Columns (6) and (7) consider subsidiary-level revenues of subsidiaries that existed since 2007. Controls include the logarithm of total assets and fixed effects as indicated. Appendix A provides detailed variable definitions. All continuous variables are winsorized at the 1% and 99% levels. Standard errors are clustered at the year and country levels. *t*-statistics are given in parentheses; *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Acquisitions in perceptively corrupt countries may be associated with additional costs, such as costs associated with the probability of such targets engaging in bribery regardless of internal controls.

In panel A of Table 6, I examine M&A activity around passage of the Act (2007–12). The number of M&As with targets in OECD countries declined throughout the *Early* and *Late response* periods; this decline is pronounced for U.K. firms as much as for all sample firms (columns (1) and (2)). A different picture emerges from firms that are located outside OECD countries.

Table 6
Merger & acquisition and joint venture activity

Panel A: Mergers and acquisitions (M&As)

	Dependent variable: LN (1 + # targets in OECD)		Dependent variable: LN (1 + # targets outside OECD)	
	(1)	(2)	(3)	(4)
Early response × U.K. firm	0.032	0.047	−0.066*	−0.076**
	(0.94)	(1.20)	(−2.09)	(−2.68)
Late response × U.K. firm	0.028	0.044	−0.051	−0.058
	(0.92)	(1.39)	(−1.32)	(−1.43)
Early response	−0.125**		0.001	
	(−3.51)		(0.06)	
Late response	−0.087**		−0.007	
	(−3.13)		(−0.59)	
Controls	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y
Industry × year FE	N	Y	N	Y
N	16,675	16,675	16,675	16,675
Adj. R^2	0.418	0.420	0.440	0.439

Panel B: Joint ventures (JVs)

	Dependent variable: LN (1 + # partners in OECD)		Dependent variable: LN (1 + # partners outside OECD)	
	(1)	(2)	(3)	(4)
Early response × U.K. firm		−0.072		0.144
		(−0.31)		(0.50)
Late response × U.K. firm		−0.048		−0.281
		(−0.34)		(−0.42)
Early response	−0.059	−0.045	−0.019	−0.032
	(−1.01)	(−0.67)	(−0.11)	(−0.21)
Late response	−0.126	−0.118	−0.042	−0.031
	(−1.42)	(−1.19)	(−0.28)	(−0.17)
Controls	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
N	2,250	2,250	2,250	2,250
Adj. R^2	0.279	0.313	0.242	0.242

Note: This table relates changes in the number of mergers and acquisitions (M&As; panel A) and joint ventures (JVs; panel B) by target region for 2007–12 to firm characteristics. Data are obtained from Zephyr. In panel A, sample firms are firms that engaged in at least one M&A activity during the sample period. The dependent variable is the logarithm of (1 + the number of M&A targets headquartered in OECD countries; columns (1) and (2)) and the logarithm of (1 + the number of M&A targets headquartered in non-OECD countries; columns (3) and (4)), set to 0 in years in which firms did not conduct an M&A. In panel B, sample firms are firms that engaged in at least one JV activity during the sample period. The dependent variable is the logarithm of (1 + the number of JVs with partners headquartered in OECD countries; columns (1) and (2)) and the logarithm of (1 + the number of JVs with partners headquartered in non-OECD countries; columns (3) and (4)), set to 0 in years in which firms did not conduct a JV. In both panels, controls include the logarithm of total assets and fixed effects as indicated. Appendix A provides detailed variable definitions. All continuous variables are winsorized at the 1% and 99% levels. Standard errors are clustered at the year and country levels. *t*-statistics are given in parentheses; *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

While the number of M&As outside OECD countries during the early and late response periods hardly changed for non-U.K. sample firms, U.K. firms conducted 7.6% and 5.8% fewer such deals (columns (3) and (4)) during these periods.

It is not ex ante clear whether U.K. firms engage more or less in JVs after the Act's passage and enforcement. On the one hand, third party transactions fall under the provisions of the U.K. Bribery Act; if JV partners are found to be engaged in bribery, U.K. firms are liable for their partners' actions. On the other hand, it is harder to detect bribery by third parties and to link such activities back to U.K. firms.

In panel B of Table 6, I examine the number of JVs by target region for the 2007–12 period. Overall, I document a reduction in the number of JVs inside OECD countries; this reduction is neither statistically significant nor more or less pronounced for U.K. firms relative to non-U.K. firms (columns (1) and (2)). Similarly, JV activity outside of OECD countries does not increase or decrease throughout the sample period, and decreases only insignificantly for U.K. firms during the late response period (columns (3) and (4)). It should be noted that JV data are relatively sparse and potentially biased toward JVs that occurred several years ago; also, JV data do not allow for statements about quality and types of JVs.

5. Conclusion

In this paper, I show that passage of the U.K. Bribery Act on March 25, 2009, leads to a permanent drop in the value of U.K. firms, while the value of non-U.K. firms competing directly with U.K. firms increases. Furthermore, passage of the Act adversely affects U.K. firms' economic activity in perceptively corrupt countries. My evidence is consistent with the notion that bribes facilitate doing business in certain countries. Imposing unilateral antibribery regulation on some firms hurts these firms but benefits their unregulated competitors.

This paper constitutes a first step toward understanding the implications of unilateral antibribery regulation for regulated firms and their competitors. One important topic for future research is whether the regulatory punishment that can be meted out under the U.K. Bribery Act has implications for firm boundaries, such as decisions about whether or not to internalize customers or suppliers. Additionally, I focus on the costs and benefits to firms of antibribery regulations. Research on the social benefits and costs of the U.K. Bribery Act for the United Kingdom but also for perceptively corrupt countries can help depict a more complete picture of the motives for antibribery regulation and its implications. For instance, multinationals' bribery decisions may be aimed at maximizing shareholder value, yet these decisions may have externalities on the environment within which firms operate. This reflects the possible tensions between firms making decisions in shareholders' interest and governments seeking to correct distributive failures (e.g., Bénabou and Tirole 2010).

Appendix A. Variable Definitions

Variable	Description	Data source
Firm value measures		
Cumulative abnormal returns [a;b]	Cumulative daily abnormal returns in % from closing on day $a-1$ to closing of day b relative to some event date. Unless stated otherwise, the event date is March 25, 2009. Daily abnormal returns are obtained from parameters of a four-factor Carhart (1997) model estimated over days [−294; −41] relative to event days. *Excess return on the market* is the return of the local index over and above the local risk-free rate. *Size* and *book-to-market* ratio are constructed using the cutoffs described in Kenneth French's data library but using accounting data from Osiris. Momentum is constructed as described in Kenneth French's data library using returns on two size portfolios and three momentum portfolios ($2\times3=6$ portfolios).	Datastream
Cumulative raw returns [a;b]	Cumulative daily stock returns in % from closing on day $a-1$ to closing of day b relative to some event day. Unless stated otherwise, the event date is March 25, 2009.	Datastream
Tobin's q	(MV of Total Equity+MV of Total Liabilities)/(BV of Total Shareholder Equity +BV of Total Liabilities). Regressions use the natural logarithm.	Orbis
Corruption exposure measures		
Corruption exposure (main measure)	Combines, for each firm, subsidiary location data from Orbis with Transparency International's Corruption Perceptions Index (CPI). For each firm, *Corruption exposure* is the sum—over all countries—of the percentage of the firm's subsidiaries headquartered in the focal country in 2008 multiplied by the CPI of that country in 2008. The resulting sum is subtracted from 10 (the upper limit of the CPI) so that *Corruption exposure* is increasing in firms' exposure to high-corruption countries. This is the main measure used throughout the paper.	Orbis, Transparency International (TI)
Corruption exposure value-weighted by subsidiary revenues	Constructed like the main *Corruption exposure* measure (see above) but additionally weighing by the fraction of revenues generated from firms' subsidiaries.	Orbis, TI
Corruption exposure equally weighted excluding tax havens	Constructed like the main *Corruption exposure* measure but excluding territories characterized as tax havens as per OECD's Grey List (as of August 17, 2009).	Orbis, TI, OECD
Corruption exposure equally weighted using World Governance Indicators (WGI)	Constructed like the main *Corruption exposure* measure but using the *Control of Corruption* measure provided by Worldwide Governance Indicators (WGI).	Orbis, Worldwide Governance Indicators

(*continued*)

Variable	Description	Data source
Corruption exposure equally weighted using *BEEPS Survey* Sector Corruption levels	Constructed like the main corruption exposure measure but using subsidiaries' industry corruption levels to weigh observations. Industry corruption levels are obtained from the 2009 version of the EBRD–World Bank Business Environment and Enterprise Performance Survey (BEEPS). This survey was conducted in 2008–09 among 11,800 firms from 29 Eastern European and Asian countries. The corruption measure tabulates, by industry, the percentage of firms responding "major" (i.e., 4 on a 5-point scale) to this question: "Please [indicate whether this] factor is No Obstacle, a Minor Obstacle, a Moderate Obstacle, a Major Obstacle, or a Very Severe Obstacle to the current operations of this establishment" when the factor in question is "corruption." Respondents provide primary SIC codes, which are converted into the Fama–French industry classifiers.	Orbis, World Bank Business Environment and Enterprise Performance Survey (BEEPS)
Corruption exposure using *BEEPS Survey* Sector Corruption levels (value-weighted by subsidiary revenues)	Constructed as before but additionally weighing by the fraction of revenues generated from firms' subsidiaries.	Orbis, World Bank Economic Survey
Corruption exposure equally weighted using Transparency International's Sectoral Corruption levels	Constructed like the main corruption exposure measure but using Transparency International's Sector Corruption measure associated with the industry of firms' subsidiaries to weigh observations.	Orbis, TI
Controls		
Market value	Market value at the end of the calendar year.	
Assets	Total assets. Regressions use the natural logarithm.	Orbis
# subsidiaries	Number of subsidiaries owned to more than 50%. Regressions use the natural logarithm.	Orbis
FTSE4GOOD	For U.K. firms, this is a dummy set equal to 1 if a firm was part of the FTSE4Good U.K. Index in 2008. For non-U.K. firms, this is a dummy set equal to 1 if a firm was part of the FTSE4Good All Index in 2008.	FTSE Group
ADR	A dummy variable set equal to 1 if a firm has an ADR in the United States in March 2009 or in the prior two years.	BNY Mellon
US subsidiary	A dummy set equal to 1 if a firm has a U.S. subsidiary in 2008.	Orbis
Beta	The coefficient on market excess returns in a regression of firm excess returns on market excess returns over days [−294; −41] before March 25, 2009.	Datastream
Market-to-book	Market value in 2008 over book value in 2008.	Orbis
Momentum	Cumulative raw returns over the six months up to 41 days before March 25, 2009.	Datastream
U.K. subsidiary	A dummy set equal to 1 if a firm has a U.K. subsidiary in 2008.	Orbis
Foreign subsidiary	A dummy set equal to 1 if a firm has a foreign subsidiary in 2008.	Orbis

(*continued*)

Variable	Description	Data source
Competes with U.K. firm outside OECD	A dummy variable set equal to 1 if at least one of a non-U.K. firm's non-OECD subsidiaries competes directly with a U.K. firm's subsidiary. A non-U.K. firm's subsidiary is defined as competing directly with a U.K. firm if that subsidiary (i) is headquartered in the same non-OECD country as at least one U.K. firm's subsidiary and (ii) operates in the same Fama–French 48 industry as that subsidiary.	Orbis
Subsidiaries, M&As, and JVs		
Number all	The number of subsidiaries/M&As/JVs at the firm-year level. Restricted to subsidiaries held to more than 50%, M&As that lead to >50% control, and JVs involving at least one public partner. Regressions use the natural logarithm.	Orbis, Zephyr
% …in OECD	% of subsidiaries/M&A targets/JV partners headquartered in OECD countries at the firm-year level.	Orbis, Zephyr
% revenues OECD	% of firm revenues from OECD subsidiaries at the firm-year level. Uses data from all subsidiaries.	Orbis
% firms with OECD (non-OECD) …	% of firms with at least one OECD (non-OECD) subsidiary/M&A/JV at the firm-year level.	Orbis, Zephyr
Subsidiary revenues	Average revenues obtained from a firm's subsidiary at the subsidiary-year level. Restricted to surviving subsidiaries, i.e., subsidiaries with revenue data in the pre-early-, and late-response periods. Regressions use the natural logarithm.	Orbis
Time dummies		
Early response	A dummy set equal to 1 in years 2009 and 2010, i.e., in years during which the draft of the U.K. Bribery Act 2010 was passed by the government commission but not enforced.	
Late response	A dummy set equal to 1 in years 2011 and 2012 (i.e., years during which the U.K. Bribery Act 2010 was enforced).	
Country classifications		
OECD	A dummy set equal to 1 if a firm is headquartered in/has a subsidiary in an OECD country.	
OECD non-US	A dummy set equal to 1 if a firm is headquartered in/has a subsidiary in an OECD country other than the United States.	
Non-OECD	A dummy set equal to 1 if a firm is not headquartered in/does not have a subsidiary in an OECD country.	

Appendix B. Robustness Tests

Panel A: Alternative bribery-related events

Date	Headline/content	Source	Predicted direction	Corruption exposure	# obs
March 30, 2000	OECD urges U.K. to toughen antibribery laws	*The Guardian*	-	−0.241%	852
May 23, 2000	U.K. government to announce new laws aimed at bribery crackdown	*The Guardian; Financial Times*	-	0.344%	843
June 21, 2000	U.K. home secretary announces new antibribery law	*The Independent; The Guardian*	-	−0.535%**	829
November 9, 2001	U.K. government announces measures to tackle international corruption, proposes tightening bribery laws, pushes for crackdown on bribery by Britons abroad	*Associated Press Newswires; Evening News - Scotland*	-	−0.513%*	978
September 2, 2002	British anticorruption plans branded toothless	*The Guardian*	+	−0.103%	996
March 25, 2003	U.K. government issues draft corruption bill	*WMRC Daily Analysis*	-	0.072%	993
August 1, 2003	Corruption bill faces delay over loopholes	*Financial Times*	+	0.043%	1,072
February 18, 2004	U.K. government backtracks over bribery	*Financial Times*	+	−0.052%	1,112
December 9, 2005	Corruption laws to be overhauled in the U.K.	*Global Insight Daily Analysis*	-	−0.073%	1,219
November 19, 2008	Bribery law reform plans focus on overseas work of businesses; managers face jail in bribery cases (published November 20, 2008)	*The Times; Press Association National Newswire; The Guardian; The Daily Telegraph*	-	−0.121%	1,367
July 20, 2010	Clark delays enforcement of bribery law	*Financial Times*	+	0.109%	1,244
January 31, 2011	U.K. delays enforcement of U.K. Bribery Act 2010 by three more months	*The Wall Street Journal; Reuters*	+	−0.030%	1,286
Stacked regressions					
	All events with positive direction		1	0.040%	5,710
	All events with negative direction		−1	−0.337%***	7,081
	All events			−0.223%*	12,791

Panel B: Alternative event windows

	Around event		Before event			After event		
	CAR [−10;10]	CAR [−1;+1]	CAR [−40;−11]	CAR [−10;−1]	CAR [−2;−1]	CAR [+2;+3]	CAR [+2;+10]	CAR [+11;+40]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Corruption exposure	−0.848*	−0.988**	−0.006	0.001	0.008	0.023	−0.029	0.007
	(−1.89)	(−2.21)	(−0.29)	(0.00)	(0.09)	(0.25)	(−0.72)	(0.40)
Constant & controls	Y	Y	Y	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y	Y	Y	Y
N	1,097	1,097	1,097	1,097	1,097	1,097	1,097	1,097
Adj. R^2	0.110	0.061	0.140	0.103	0.075	0.052	0.088	0.070

Panel C: Alternative measures of corruption exposure

	Geographic measures		Industry measures		
	Using Transparency International Corruption Measure	Using Worldwide Governance Indicators Corruption Measure	Using World Bank *BEEPS* Survey Corruption Measure	Using World Bank *BEEPS* Survey Corruption Measure	Using Transparency International's Sectoral Corruption Measure
	Equally weighted by subsidiary count excl. tax havens	Equally weighted using Orbis subsidiary count	Equally weighted by # subsidiaries in sector	Value-weighted by subsidiary revenues in sector	Equally weighted by # subsidiaries in sector
	(1)	(2)	(3)	(4)	(5)
Corruption Exposure	−0.925** (−2.27)	−2.003* (−1.80)	−1.146* (−1.79)	−1.027* (−1.75)	−0.603 (−0.34)
Controls	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y
N	1097	1068	753	753	477
Adj. R^2	0.053	0.017	0.008	0.010	0.038

Panel D: Long-term firm value implications

Dependent variable	Tobin's *q*		Revenue growth
	(1)	(2)	(3)
Early response × U.K. firm	−0.090*** (−3.70)		
Late response × U.K. firm	−0.024* (−2.10)		
Corruption exposure × early response × U.K. firm		−0.058** (−3.05)	−0.020 (−1.10)
Corruption exposure × late response × U.K. firm		−0.040* (−2.09)	−0.060*** (−4.30)
Early response	−0.058 (−0.74)		
Late response	−0.097 (−1.27)		
Corruption exposure × early response	0.018** (3.15)		−0.026** (−2.01)
Corruption exposure × late response	0.004 (0.65)		−0.031** (−2.38)
Controls	Y	Y	Y
Firm FE	Y	Y	Y
Year FE	N	-	-
Country × year FE	N	Y	Y
N	105,062	105,062	94,866
Adj. R^2	0.762	0.770	0.655

Panel E: Spillovers of the U.K. Bribery Act 2010 on non-U.K. firms with U.K. exposure

	All non-U.K. firms		OECD non-U.K. firms		Non-OECD firms	
	$CAR[0;1]$ (1)	$CAR[0;1]$ (2)	$CAR[0;1]$ (3)	$CAR[0;1]$ (4)	$CAR[0;1]$ (5)	$CAR[0;1]$ (6)
Corruption exposure	−0.067	−0.024	−0.157	−0.060	0.104	0.153
	(−0.59)	(−0.20)	(−0.93)	(−0.34)	(0.75)	(1.03)
U.K. subsidiary (dummy)	−0.063	0.874*	−0.182	1.246*	0.708	1.840
	(−0.30)	(1.65)	(−0.80)	(1.82)	(1.40)	(1.59)
Corruption exposure ×	−0.326**		−0.529**		−0.277	
U.K. subs. (dummy)		(−2.01)		(−2.26)		(−1.07)
Constant & controls	Y	Y	Y	Y	Y	Y
Country × industry FE	Y	Y	Y	Y	Y	Y
N	9,457	9,457	6,955	6,955	2,502	2,502
Adj. R^2	0.151	0.151	0.121	0.121	0.248	0.248

Note: This table provides robustness tests for the main results (Table 2). Panel A replicates the main result for alternative event dates. Each row shows the coefficient on *Corruption exposure* when replicating the main specification (Table 2, column (3)) on a day with news concerning bribery regulation and the day thereafter. The left-hand-side variable *Cumulative abnormal return* [0;1] is based on abnormal returns obtained relative to these alternative days. Events are derived from a Factiva search for "bribery" in U.K. newspapers. The table reports the coefficient for *Corruption exposure* constructed using Orbis data for the relevant year, using 2005 data for events prior to 2005. Besides the controls used in Table 2, the stacked regressions also contain date fixed effects multiplied with industry fixed effects, and standard errors are clustered at the firm level. For the stacked regression with all events, values for $CAR[0;1]$ of events with the predicted positive direction are multiplied by −1. Panel B replicates the main result (Table 2, column (3)) using alternative event windows around the event date to construct the dependent variable. Panel C replicates the main specification (Table 2, column (3)) using alternative geographic and industry-level measures of *Corruption exposure*. Panel D relates long-run measures of firm value and revenue growth to firm characteristics for a panel of firms for 2007–12. In columns (1) and (2), the dependent variable is the natural logarithm of Tobin's q, and in column (3) the dependent variable is *Revenue growth*. Corruption exposure is measured as before but held constant after 2009. Controls include the logarithm of total assets and fixed effects as denoted. Standard errors are clustered at the year and country levels (two-way clusters). Panel E documents spillovers of the U.K. Bribery Act to non-U.K. firms with exposure to the United Kingdom. Columns (1) and (2) consider all sample firms, columns (3) and (4) consider sample firms headquartered in the OECD (excluding the United Kingdom), and columns (5) and (6) consider firms headquartered outside the OECD. The dependent variable is *Cumulative Abnormal Returns* relative to March 25, 2009 (when the draft of the U.K. Bribery Act was passed), and the next day. Country fixed effects interacted with industry fixed effects (Fama–French 48) are included. Standard errors are clustered at the country and industry level. Appendix A provides detailed variable definitions. All continuous variables are winsorized at the 1% and 99% levels. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

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