BANNING US FOREIGN BRIBERY: DO US FIRMS WIN?

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Abstract

I document a striking stock market underperformance of US firms in industries engaged in international trade during the period March 1976 to December 1977. I argue that a suitable candidate for explaining it is the US unilateral banning of foreign bribery that takes place in this period of time. I conduct a long-run event-study to analyse the stock market performance of firms differing in exposure to this policy. The results show that the cumulative abnormal returns of companies in industries most opened to international trade start to fall precisely the day banning foreign bribery is introduced in the political debate, and keep falling until it becomes law. I also show that the patterns observed are also evident when considering simply raw returns. Results are robust to different specifications and alternative explanations, such as oil prices or the exchange rate. I also disregard the influence of global shocks by performing the analysis for a country not subject to the policy. I conclude that the evidence points in the direction that the US unilateral banning of foreign bribery had a significant negative effect on the market value of firms most exposed to this policy.

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1 Introduction

When Multinational Corporations do businesses abroad, they are often required to make questionable payments to foreign officials. Since the 1970s, a large stream of foreign corruption scandals has involved major companies in the world, showing that foreign bribery is prevalent and widespread when internationalized firms conduct businesses overseas.[1] Interestingly, these foreign payoffs were not illegal in any country in the world until the United States (US) prohibited them unilaterally in 1977, by means of the Foreign Corrupt Practices Act (FCPA). For the rest of the developed world, they remained within law. In 1997, the Organization of Economic Cooperation and Development (OECD) approved the Convention on Combating Bribery of Foreign Public Officials in International Business Transactions. Under this accord, signatory countries -representing three quarters of global exports- agreed to pass national legislation criminalizing the act of bribing foreign officials.

The US unilateral banning of foreign bribery offers an appealing experiment to measure how much value these payoffs had and how firms were affected by the policy banning them. In this paper, I provide an assessment of the consequences of the FCPA on US firms. I conduct an event-study analysis to gauge how the market value of companies responded to the FCPA. Under the assumption of efficiency in the financial markets, the stock market performance of firms around the time of the FCPA provides a measure of the value that the market gave to overseas payments. In principle, as foreign competition was not subject to the law, the one-sided prohibition put American Multinationals in disadvantage with respect to the rest of the world. This should translate in a decrease in the market value of firms affected by the policy.

The event-study I conduct has three major challenges. First, it is a long-run event study. The proposal, debate and approval of the FCPA took 21 months. As a consequence, as it is usual in the long-run event-study literature, I control for long-run common risk factors that explain realized returns. In particular, I estimate the Fama-French Three-Factor Model and compute abnormal returns as the part of the return not explained by the common factors. I follow closely the work by Abadie and Gardeazabal (2003).

Second, identifying the firms exposed to the legislation is not straightforward. In principle, companies that made use of foreign bribery or potentially could make use should be the firms most affected by the policy. However, by their own nature, bribes are unobserved. Therefore, I resort to indirect evidence. I choose exports as a proxy for exposure. Firms more engaged in international trade are in principle more likely to be affected. I use exports at the industry level due to data limitations and convenience for the analysis. I also explore whether results are robust to data on exports at the firm level.

And third, the 1970s is a turbulent period in the global economy, specially due to the two oil shocks of 1974 and 1979. For this reason, I make an effort to rigorously control for industry and global shocks that could provide alternative explanations to the observed returns. Aside from

[1] See, for instance, the notorious cases of the US aerospace company Lockheed (1975), the German conglomerate Siemens (2006) and the UK defense contractor BAE Systems (2007).

excluding the oil firms from the analysis, I use industry dummies, expenditures in energy and the returns of firms in a country not affected by the FCPA -United Kingdom- to control for them.

I find a significant negative stock-market performance of firms in sectors engaged in international trade around the time of the proposal and approval of the FCPA. I interpret it -at least partly- as capturing the market effect of banning foreign bribery. For the firms in sectors most opened to international trade, these are of around 25%. I also use the Jensen's alpha approach, common in the long-run finance event-study literature, to provide further evidence. With this approach, the negative returns are of around 15%.

I use the event-study as motivating evidence, in order to study the data in a more systematic way. I run regressions of the firms' cumulative abnormal returns during the period of interest against the pre-policy exposure, controlling for equity characteristics that could help explain abnormal returns. I provide some alternative specifications on the benchmark portfolios and robustness checks. Overall, the qualitative results prevail.

Some papers have dealt previously with the economic consequences of the US banning of foreign bribery. Beck et al. (1991) shows that the US import share decreased in bribe-prone countries outside Latin America in the years after the FCPA was passed. This paper reversed the results of Graham (1984), who had found no difference on the evolution of the market share of the US industry between countries of high and low corruption. Hines (1995) examines the performance of the US businesses in the years after 1977. He finds negative effects on foreign direct investment (FDI), capital labour ratios, joint venture activity and aircraft exports. In 1981, in a survey of 250 large firms by the General Accounting Office, 32 per cent of companies reported a decrease in overseas business due to the FCPA, whereas 62 per cent thought that American companies could not compete against other abroad without the use of questionable payments.

In a closer study to this paper, Smith et al. (1984) show that firms that voluntarily reported foreign payoffs experienced negative abnormal returns at the date of the announcement. I also analalyse the abnormal returns of firms, but my focus is on the effect of the legislation that prohibited overseas payments. Therefore, I consider all firms listed in the New York Stock Exchange (NYSE), not only companies that self-reported foreign bribes. Also, my window of analysis is much wider, as I consider the whole period surrounding the anti-bribery legislation. This is important, as the process of enacting laws extends for several months and, therefore, the information content of the law -and hence the potential impact- is revealed slowly. By considering the complete timeline that led to the FCPA, we can better understand the *total* effect of the policy on the market value of firms.

In recent years, the research work on corruption has become much larger.[2] In particular, several papers have studied the rationale behind illegal payments and bribery. Svensson (2003) explains the variation in bribes across graft-reporting firms in Uganda, using variations in regulations across industries. Olken and Barron (2009) applies standard industrial organization theory to explain the corrupt behaviour of officials in Indonesia. Regarding corruption and international trade flows,

[2]For a recent survey, see Banerjee et al. (2009)

D'Souza (2009) examines how the OECD Anti-Bribery Convention shifted the trade flows towards low corrupt countries and Lambsdorff (1998) shows that the degree of corruption of importing countries has significant explanatory power for the trade structure of some exporting countries.

This paper analyses whether financial markets penalized firms engaged in international trade at the time of the approval of the anti-bribery legislation in the US. In this regard, as it tries to uncover the market value effects of questionable foreign payoffs, it adds to the literature of forensic economics, who explores the rationale behind illicit transactions. Examples include the value of political connections (Fisman (2001), Faccio (2006) and Fisman et al. (2006)) and the effect of conflict and wars on the market performance of firms (DellaVigna and La Ferrara (2009), Guidolin and La Ferrara (2007) and Dube et al. (2008)).

Finally, the event-study of this paper embeds in a large literature on the long-run event-study methodology. The papers of Campbell et al. (1997), Lyon et al. (1999) and Khotari and Warner (2007) are useful references. The event-study I conduct is closest to the spirit of Abadie and Gardeazabal (2003). They account for an overperformance of stocks of firms with significant activity in the Basque Country during a truce announced by terrorist group ETA, which has its origin in this Spanish region. Also related is the already cited work of Guidolin and La Ferrara (2007), who observe a significant drop on the price of stocks of firms with businesses in Angola, when an unexpected event drove the civil war affecting this country to a quick end.

The rest of the paper is organized as follows. Section 2 explains the event-study analysis. I provide a foundation for the exercise, detail the choice of the event-window, explain the empirical approach and present some graphical results. Section 3 provides a more systematic view of the results. I run regressions of the firms' cumulative abnormal returns against the exposure to the policy, controlling for industry shocks and other determinants of equity returns. I also provide evidence on the market value effect of the FCPA using a traditional method for calculating long-run abnormal returns, the so-called Jensen's alpha approach. Section 4 provides further evidence. I display the results of the same analysis on United Kingdom firms, which were not subject to the US policy. Also, I present a robustness check using firm-level export data. Section 5 concludes the paper.

2 Motivating Evidence: an Event-Study Analysis of the FCPA

In this section, I explain the the event-study analysis I conduct for the banning of foreign bribery in the US. I start by setting the rationale behind it, focusing on the specific characteristics that arise when trying to measure the effect of the FCPA. Then, I explain the choosing of the event-window, providing a description of the steps that lead the US to prohibit overseas payments. Finally, I present graphical results, who serve as motivating evidence for the next section.

2.1 The Event-Study Analysis

If financial markets are efficient, prices reflect all available information and therefore react only to changes in the business environment that affect expected profits. Consequently, if the FCPA put in disadvantage US firms, this should translate in a decrease in stock prices for companies exposed to the law. Note that this policy amounts to an increase in the cost of conducting businesses abroad. After implementation, companies must comply with formal bureaucracy -dodged previously by means of illicit payoffs- or assume the risk of being fined if still resorting to questionable payments. Therefore, the stock market performance of firms during the period in which the FCPA was debated and approved provides a measure of the impact of prohibiting corporate foreign bribery. If banning foreign bribery is perceived as detrimental to firms engaged in international trade, companies exposed to it should underperform companies not exposed.

Contrary to more traditional event-studies, this one has three major challenges. First, it is a long-run event-study. By the own nature of the legislative process, subject to debate and voting in more than one House, the procedure of enacting laws spans several months in time. In particular, 21 months passed since the first bill regarding foreign bribery was proposed until the FCPA was approved. Therefore, the whole period of interest was comprised of small shocks affecting the bill and, as a result, the information content of the law was revealed slowly. As a consequence, it is necessary to look at how returns evolved during the whole period surrounding the FCPA in order to gauge properly the *total* effect of the law on the market value of firms.

The fact that the event-window is so wide makes necessary to control for long run risk factors in stock returns. I estimate the so-called Fama-French Three-Factor Model to account for this. In this regard, I follow closely Fama and French (1993) and Abadie and Gardeazabal (2003). I compute the abnormal returns of portfolios differing in the exposure to the policy during the event-window, controlling for long-run risk factors. In the next section, I also perform the so-called Jensen's alpha approach -or the calendar-time portfolio approach- to estimate the risk-adjusted abnormal performance, which is tradition in the finance long-run event-study literature.

Second, the classification of firms exposed to the policy in opposition to firms not exposed is not straightforward. In principle, companies exposed should be the ones that resorted -or potentially could have resorted- to foreign bribery. However, by their own nature, bribes are unobserved. As a consequence, I use indirect evidence. I take exports as a proxy for foreign operations and, therefore, as a proxy for the likelihood of resorting to foreign bribery.

And third, the 1970s are a turbulent decade in the global economy, specially due to the two oil shocks that hit it in 1974 and 1979. I make an effort to isolate the abnormal returns from these events. Although the specific time period around the FCPA is out of these oil shocks, during the whole analysis I exclude the oil firms, which nevertheless could be affected by expectations of higher future oil prices. I also control in the regressions for the cost of electricity and fuels at the industry level, as well as industry dummies to account for sectoral shocks. Finally, I also look at the stock market returns of a country not subject to the FCPA, the United Kingdom. Overall, these tests allow me to disregard global shocks at the industry level that could explain the observed

returns.

In the next subsection, I explain the steps that lead the US to prohibit corporate foreign bribery, in order to specify the window of analysis of the event-study. Next, I define the proxy for exposure to the policy and present some facts about the data. Next, I present graphical results of the event-study.

2.2 Event Window: The US Foreign Corrupt Practices Act

The anti-bribery legislation in the US has its origin in the Watergate scandal in the early 1970s. The investigations that followed showed that some of the most important corporations of the country had made contributions to the 1972 President Nixon's reelection campaign, which were forbidden by law.

The fact that these corporations failed to report such contributions made the Securities and Exchange Commission (SEC) to step in. In 1974 it started an inquiry which lead to the revelation that the secret funds were spent not only on domestic political contributions but also on bribing officials in foreign countries.

In March 1975, the SEC moved against two major oil companies, Phillips Petroleum and Gulf Oil. The SEC alleged that these companies kept slush funds for political contributions and other purposes, although it did not say who received the funds. More importantly, on April 9, 1975, the Commission filed a complaint against United Brands Company for failing to disclose $2 million in payments to Honduran officials and an unnamed European government, in order to secure favorable treatment. This marked the first foreign bribery scandal that hit the public opinion.

Importantly, bribing foreign officials -contrary to bribing domestic officials- was not against the US law at the time. Therefore, the SEC litigation was based on full and adequate disclosure of all financial information, as well as proper accounting.

In the months that followed the United Brands case, several other major US multinationals were accused by the Commsion of being involved in foreign bribery[3]. President Ford initially played down the scandals. However, in February 1976, facing growing pressure from society and the US Congress, which was conducting an inquiry, he condemned the payment of bribes overseas and began a review of ways to punish them.

The first legislative proposal regarding foreign bribery was introduced on March 11, 1976 by Senator William Proxmire, chairman of the Senate Banking Committee, who was probing the foreign bribery scandals since August 1975. The measure would make it a crime for US firms to bribe foreign officials, candidates and political parties. In June 1976, once it became clear that Congress would take action, President Ford presented his legislative proposal. He called for

[3]In June 1975, they were more than a dozen. By January 1976, 45 companies were involved. In May of that same year the SEC submitted a report to Congress on *Questionable and Illegal Corporate Payments and Practices*. It disclosed that 95 of the largest US corporations had admitted making questionable payments abroad. In total, more than 500 companies acknowledged having resorted to dubious foreign payoffs, including more than 100 listed on the Fortune 500. At least $300 million in foreign payoffs were reported.

disclosure of all 'questionable payments', but he was not supportive of making them unlawful.

In September 1976 a bill making it illegal to bribe or attempting to bribe foreign officials under penalties of fines and jail was passed unanimously by the Senate. However, the adjournment of the US Congress for the Presidential Elections of November 1976 prevented the bill from getting through the House of Representatives and obtaining White House approval.

Shortly after the Congress convened in January 1977, Senators Proxmire and Williams introduced Senate Bill 305, similar in content as the one approved the previous year. In March 1977 the Carter administration gave its support to legislation making foreign bribery a criminal offence. This marked a change in the official US policy regarding foreign bribery. As Democratic Nominee, President Carter opposed Ford's legislative proposal on the grounds of being too lax.

Finally, after some amendments, Senate Bill 305 was approved with no opposition by the Senate and the House of Representatives. On December 19, 1977, President Carter signed the Foreign Corrupt Practices Act (FCPA) into law.

The law was divided in two sections -the anti bribery provisions and the accounting and internal control provisions. The anti-bribery provisions made it illegal for US businesses and persons to give anything of value to foreign officials, political parties or political candidates in order to influence their decisions. The accounting provisions obliged companies to keep books, records and accounts that accurately reflect the corporate payments and transactions.

Civil and criminal penalties imposed by the law applied both to individual and corporate violators. Persons violating the FCPA could be fined up to $10,000 and served a 5-year prison sentence. Companies engaged in foreign bribery could be fined up to $1 million.[4] Fines imposed on individuals could not be paid by the companies.

Enforcement of the anti-bribery provisions was the primary responsibility of the Department of Justice. The SEC was mainly in charge of the accounting and internal control provisions. Within months of the approval of the law, Katy Industries Inc. was charged with violating the FCPA and a fine was imposed. Between 1977 and 1995, near twenty companies were charged under the FCPA. Corporate fines ranged between $ 10,000 and $3.45 million.[5] In January 1995, Lockheed agreed to pay a record criminal fine of $21.8 million and one official served a prison sentence. Recent penalties involve multinationals such as Siemens ($800 million in 2008); Halliburton and KBR entities ($579 million in 2009) and BAE Systems ($400 million in 2010).

I consider an event-window that covers the period of proposal, debate and approval of the FCPA. That it, the event window goes from March 11, 1976 -introduction of the first bill regarding foreign bribery, which would be ultimately approved- to December 19, 1977 -when President Carter signed the FCPA into law-. I also extend the analysis to show the results one year before the proposal and one year after the approval, to control for trends. This allows me to show the stock market evolution after the first corruption scandals, that start in April 1975. These affected the

[4]This was one of the stiffest penalties ever written in the US Criminal Code. For example, it was twice as high as the maximum penalty for corporate price-fixing.

[5]The Alternative Fines Act allows the federal government to request twice the gain or loss associated with an offense if the Justice Department shows that a crime was committed.

firms involved,[6] but it is not until March 1976 when a proposal of outlawing foreign payoffs was made. Actually, the official stance was to play down the scandals and, after June 1976, to require only disclosure. Having said that, I analyse the stock market performance for a period covering the first corruption scandals, the bill introduction and its debate and eventual approval.

2.3 Exposure to the FCPA

Companies that made use of foreign bribery, or potentially could make use of it, should be the most affected by the policy that prohibited questionable foreign payments. However, by their own nature, bribes are unobserved.[7] As a consequence, I use indirect evidence. I take exports as a proxy for foreign operations. Firms more engaged in international trade conduct a higher amount of businesses abroad and therefore are more likely to engage in foreign payoffs.[8]

I gather data on NYSE firms from Compustat for the period 1970 to 1980.[9] A crucial limitation of the dataset is that export data is available only since 1976, and only for a negligible subsample of firms[10] This poses a significant problem, because exports in 1977 -the first year in which I have export data for a sufficient number of firms- could be the result of the policy itself, introduced in 1976. That is, the foreign bribery scandals in 1975, the debate of on the law in 1976-1977 and the evolution of the stock market in these years could affect the amount of exports, and therefore this simultaneity bias prevents from establishing a causal relationship regarding exports and stock market performance.

As a consequence, I resort to export data in 1974, the year before the first foreign bribery scandals hit the public opinion. With this I make sure that the proxy for exposure is not contaminated by the policy. As there are no data for firm exports in this year, I use aggregate US exports at the

[6] See Smith et al. (1984).

[7] In early 1975, following the first foreign bribery scandals, the SEC instituted a voluntary disclose programme in which corporations were encouraged to report voluntarily questionable foreign payments. Disclosure, although not exempting companies from prosecution, would reduce the likelihood of litigation against them. Under this programme, more than 500 corporations reported having resorted to this practice. It would be tempting to use these companies to construct a portfolio of exposed companies and compare it with a portfolio of non-reporting -non-exposed- companies. However, the fact that reporting was voluntary induces self-selection. Therefore, I would expect that the companies that reaped the highest benefits from foreign bribery would not choose to report, in order to not to jeopardize their network of corruptible officials. Moreover, the voluntary reporting extended from 1975 to the end of 1977, therefore, covering the whole period of debate and approval of the FCPA.

[8] An alternative is to use subsidiaries overseas as a proxy for foreign operations. Unfortunately, I do not have data on foreign direct investment (FDI) neither at the firm not at the sectoral level for the pre-policy period. Aggregate data show that trade flows were six times as high as FDI flows in the first half of the 1970s.

[9] See Appendix A for a list of the variables used throughout the paper, as well as definitions and sources.

[10] Just 12 firms of the final sample have export data in 1976. In 1977 the missing values are reduced, but still they account only for 58% of the final sample. Thus, it is not possible to gather *individual* export data *before* the policy was implemented.

four-digit SIC sectoral level, the highest disaggregation available in Feenstra (1997).[11] [12]

The aim of this event-study is to build financial portfolios that differ in the exposure to international trade, and follow their returns during the event-window, that is, the period that goes from the introduction of the bill that proposes to outlaw foreign bribery until the bill is signed into law.

In order to calculate exposure, I define the Export Intensity of the 450 four-digit manufacturing SIC sectors in 1974 -the year prior to the first foreign bribery case- as:

$$\text{Export Intensity}_j = \frac{\text{Exports}_j}{\text{Total Value of Shipments}_j}$$

That is, the Export Intensity of sector j is the amount of Exports of that sector over the total output of the sector.[13]

Then, I rank all the sectors according to their Export Intensity and divide them in three reference groups each containing 150 sectors -low, medium and high exports-. Next, I assign each of the NYSE firms to a different group, according to the four-digit SIC of each company. For each group, I build a value-weighted buy-and-hold portfolio. In doing so, I restrict the analysis to manufacturing firms with complete data for the period 1970 to 1980. I also exclude the oil firms from the analysis, as these companies are most likely to be affected by the oil shocks of the 1970s. This leaves me with a sample of 356 manufacturing non-oil companies.[14] Henceforth, I refer to these financial portfolios as the low, medium and high export portfolio, stemming from the assignment of NYSE companies to sector of low, medium and high exports, respectively.

[11] Also, to explore the results when considering exports at the firm level, I perform a robustness check of the baseline results through an instrumental variables approach, performing an imputation to increase the sample size. See Subsection 4.2.

[12] Note that using sectoral export data is interesting by itself. Prohibiting foreign bribery may affect the stock price of firms engaged in international trade, as expected profits are lower. However, it may also lower the expected profits of firms not engaged in international trade but who operates in highly foreign exposed sectors, as the market would anticipate that these firms, in order to grow, would have to engage in foreign bribery in the future. Therefore, expected profits for these firms are also lower.

[13] Export intensity is very stable in the pre-policy period. For instance, the correlation between Export Intensity between 1973 and 1974 is .97 and between 1972 and 1974 is .96. An alternative to build the groups of low, medium and high export sectors is to classify them according to the mode of the groups each industry belongs to in the period 1970 to 1974. If I do this, results of Section 2.4 are even more pronounced. The high export portfolio experienced a negative cumulative abnormal return of 29.1 percent -instead of 26.1 percent- whereas the low export portfolio experienced a negative cumulative abnormal return of 0.1 percent -instead of 2.9 percent-. Still, I stick to the classification according to Export Intensity in 1974 given the stability of the variable and the proximity to the policy period.

[14] I construct a balanced panel in order to facilitate the building of the portfolios as well as the common risk factors of the Fama-French model as in Abadie and Gardeazabal (2003). I restrict to manufacturing firms -those with SIC between 2000 and 3999- as there are no data on industry exports outside manufacturing in Feenstra (1997). Oil firms are those belonging to SIC sectors between 1300 and 1399; between 2900 and 2999 and 3533 -23 companies of the balanced panel-.

Table I shows descriptive statistics of the sectors and firms that comprise each portfolio. The first three columns display the descriptive statistics of the low, medium and high export portfolio, respectively. The fourth column performs a test of the differences in means of the high minus the low export portfolio being different from zero.

Note that there are more sector and firms in the high export portfolio than in the low export portfolio. The average export intensity of the low export portfolio is 0.8 percent whereas it is 15.1 percent in the high export portfolio. Both sectors and firms in the high export portfolio are bigger in terms of value of shipments as well as market value, although only the latter difference is significantly different from zero. Firms in the high export portfolio also tend to have higher Tobin's Q and experienced a higher growth in real sales between 1973 and 1974.

Figure I shows the stock market evolution of the 3 portfolios during the whole period of interest. The event-window is between the red bars, corresponding to the 21 months that go from the introduction of the bill -March 11, 1976- to the FCPA signing into law -December 19, 1977-. Some important dates are also marked with grey bars. The graph is extended one year before the outset of the event-window and one year after its ending. The low, medium and high export portfolio are represented with dashed, dotted and solid lines, respectively. The cumulative returns are normalized to zero at the beginning of the event-window.

Note that the 3 portfolios perform in a remarkably similar fashion before the bill banning foreign bribery is introduced. From that moment on, they start to diverge. An investment in the value-weighted low export portfolio in March 11, 1976 would have yielded a 8.4 percent benefit in December 19, 1977. On the contrary, the same investment in the medium and high export portfolios would have yielded losses of 10.7 and 19.8 percent, respectively. Hence, during the event-window, the difference in returns between firms in sector of low export intensity versus firms in sectors of high exports intensity was as large as 28.2 percent. After the event-window, that is, once the policy is approved and the market has incorporated all the information, the 3 portfolios behave very similarly again.

2.4 Fama-French Model

One possible explanation for the discrepancy in the stock market returns of the 3 portfolios during the event-window may be related to different riskiness or characteristics of the portfolios. That is, literature has identified several equity characteristics that have explanatory power when analysing realized returns. If this characteristics differ systematically between the portfolios, this could explain at least some of the disparity in the observed returns.

Therefore, to analyse long-run stock returns it is necessary to control for this equity characteristics that help explain observed returns. The influential work by Fama and French (1993) identified three of these common risk factors, composing the so-called Fama-French Three-Factor Model. These three factors are exposure to the market return, size and book-to-market ratio. All these factors are related to fundamentals.[15]

[15]For instance, size is associated to profitability -small firms tend to have lower earnings on assets- whereas

Table I

Descriptive Statistics of Sectors and Firms Comprising Each Portfolio in 1974

	Low Exports	Medium Exports	High Exports	t test
	Mean (Std. Dev)	Mean (Std. Dev)	Mean (Std. Dev)	High - Low [p-value]
Panel A: Sectors				
Export Intensity	0.0078 (0.0054)	0.0399 (0.0125)	0.1512 (0.0895)	0.1434 [0.0000]
Total Value of Shipments	2667 (2351)	3349 (5546)	3932 (6121)	1265 [0.1222]
Cost of Energy	0.0467 (0.1044	0.0407 (0.0509)	0.0431 (0.0619)	-0.0036 [0.8330]
Number of Sectors	45	63	70	
Panel B: Firms				
Book to Market	2.6014 (3.0032)	1.9899 (1.3626)	2.2764 (1.8499)	-0.3250 [0.4243]
Log Market Value	4.3402 (1.5710)	4.9996 (1.6943)	4.8194 (1.7247)	0.4792 [0.0497]
Log Volume	9.9512 (1.5218)	10.0962 (1.7464)	10.1209 (1.6253)	0.1697 [0.4661]
Tobin's q	0.8478 (0.3883)	1.0072 (0.6304)	0.9594 0.5497	0.1116 [0.0938]
Dividend Yield	0.0847 (0.0590)	0.0659 (0.0371)	0.0725 (0.0638)	-0.0122 [0.1805]
Yearly Return	-0.2749 (0.2730)	-0.2357 (0.2533)	-0.2642 (0.3012)	0.0108 [0.7988]
Real Sales Growth	-0.0191 (0.1581)	0.0233 (0.1015)	0.0208 (0.1312)	0.0399 [0.0795]
Number of Firms	64	143	149	

Table I shows descriptive statistics of the sectors -Panel A- and firms -Panel B- that comprise the financial portfolios of low, medium and high export intensity. All the variables refer to the end of 1974, before the first foreign corruption scandals start. The fourth column reports the results of a test with null hypothesis being that the mean of the high export intensity portfolio is different from the mean of the low export intensity portfolio, allowing for unequal variances. See the Appendix for further information on the variables.

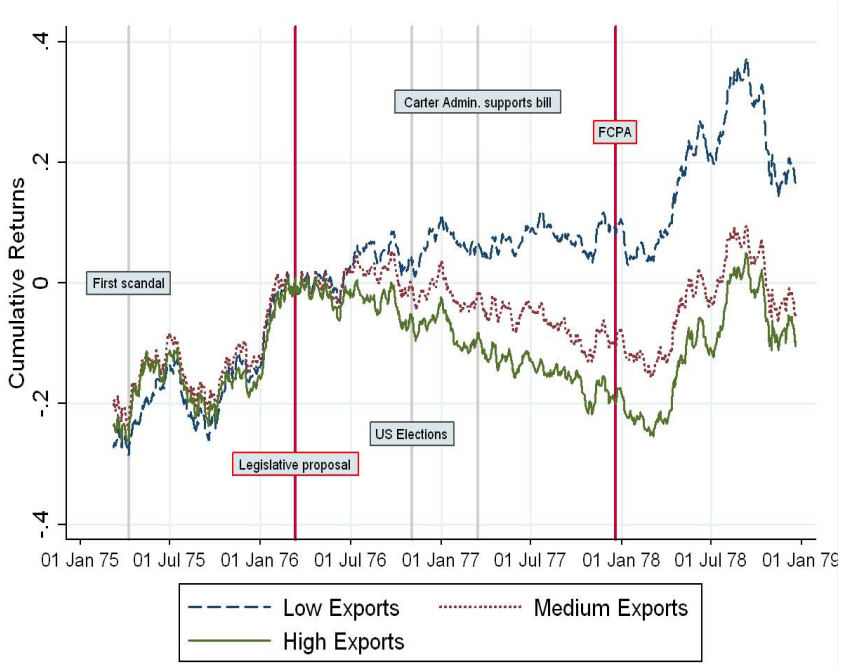
Hence, to account for this, I estimate for each portfolio the Fama-French Three-Factor Model with daily data for the period January 1970 to December 1974. I choose an estimation-window that does not overlap with the first corruption scandals (starting in April 1975), in order to guarantee that the estimates are not influenced by them.[16] I estimate the following regression by OLS:

book-to-market is related to earnings -a high book-to-market implies sustained lower earnings-.

[16] An alternative is to estimate the Fama-French Three-Factor Model for the period January 1970 to March 1975. I choose not do so because in March 1975 the SEC moved against two major oil firms alleging that these companies kept slush funds for political contributions and other purposes, although it did not disclose who received the funds. Therefore, an estimation-window finishing in December 1974 ensures that the estimates are not contaminated by any foreign bribery issue. In any case, results do not change if I choose estimation windows finishing in March 1975

Figure I

Cumulative Raw Returns of the 3 portfolios



$$R_t^j = \alpha_j + \beta_1^j R_t^m + \beta_2^j SMB_t + \beta_3^j HML_t + AR_t^j \tag{1}$$

where R_t^j is the excess daily return -over the risk-free interest rate, the Fed Funds rate- of the buy-and-hold portfolio j in time t, R_t^m is the excess return on the market portfolio in time t, SMB_t ('Small Minus Big') is the difference between the returns of portfolios comprised of firms with small and big market capitalizations at time t, and HML ('High Minus Low') is the difference between the returns of portfolios composed by stocks with high and low book-to-market ratios at time t.[17] [18]

Given the estimates $\hat{\alpha}_j, \hat{\beta}_1^j, \hat{\beta}_2^j$ and $\hat{\beta}_3^j$ I calculate daily out-of-sample abnormal returns as the part of the return not explained by the common risk factors ($\hat{AR}_t^j$). Finally, in order to analyse the performance of the different portfolios, I customarily aggregate the abnormal returns of each portfolio calculating the cumulative abnormal return as:

$$\hat{CAR}_t^j = \Big(\prod_{s=1}^{t}\{1 + \hat{AR}_s^j\}\Big) - 1 \tag{2}$$

Remember that the event-window goes from March 11, 1976 -day of the introduction of the bill- to December 19, 1977 -when the FCPA is signed into law-.

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or March 1976 -just before the introduction of the foreign bribery bill-.

[17] See the subsection *Calculation of Portfolio Returns and Risk Factors* in Appendix B of Abadie and Gardeazabal (2003) for an explanation on how I compute the portfolio returns as well as the covariates of the Fama-French Three-Factor Model.

[18] Appendix B shows the results of the estimation.

Figure II shows the cumulative abnormal returns for the low, medium and high export portfolios during the period of interest. As before, the red bars delimit the event window, the trading days between the introduction of the bill to the signing into law. The cumulative abnormal returns are normalized to zero at the beginning of the event window.

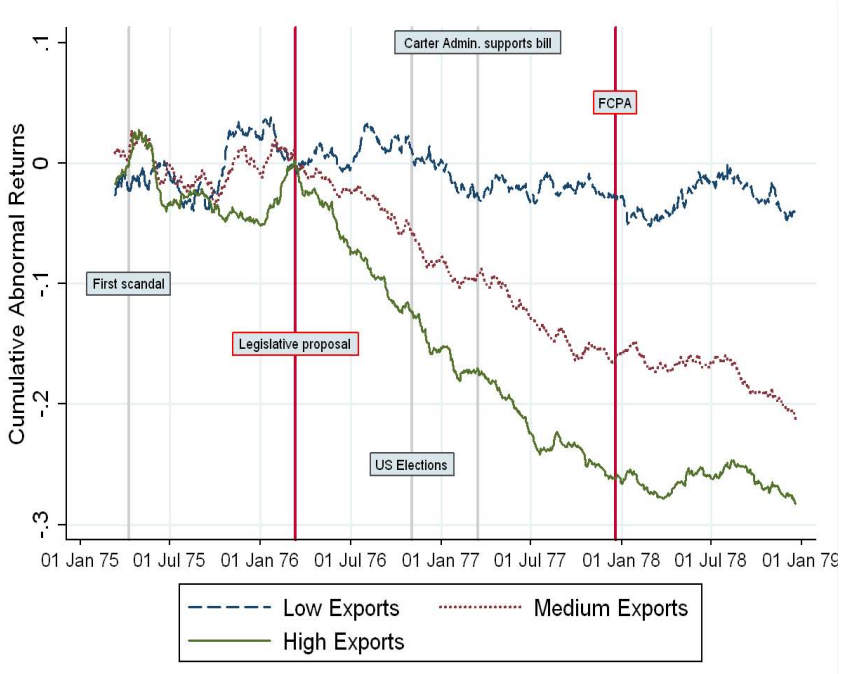
Note that the cumulative abnormal returns of the high export portfolio start to fall precisely the day that the first legislative proposal regarding foreign bribery is made public. They keep falling during the event-window only to become flat after the FCPA is approved. On the contrary, the cumulative abnormal returns of the low export portfolio are near zero for the whole period of interest. For the medium export portfolio, the abnormal returns fall in between the low and high exports portfolio.

Before the outset of the event-window, there is no a clear pattern regarding the evolution of the abnormal returns of the portfolios. However, it is visually clear that the underperformance of firms in high exporting sectors during the debate and approval of the FCPA is not the consequence of a past trend.

Quantitatively, the high export portfolio experience a negative cumulative abnormal return of 26.1 percent, compared to also negative returns of 16.4 and 2.9 percent of the medium and low export portfolios, respectively. The difference between portfolios is in line with the differences in raw returns observed Figure I.

Figure II

Cumulative Abnormal Returns of the 3 portfolios



In the next section, I assess the statistical significance of these differences. Moreover, I control for industry shocks and more covariates that could explain stock market performance.

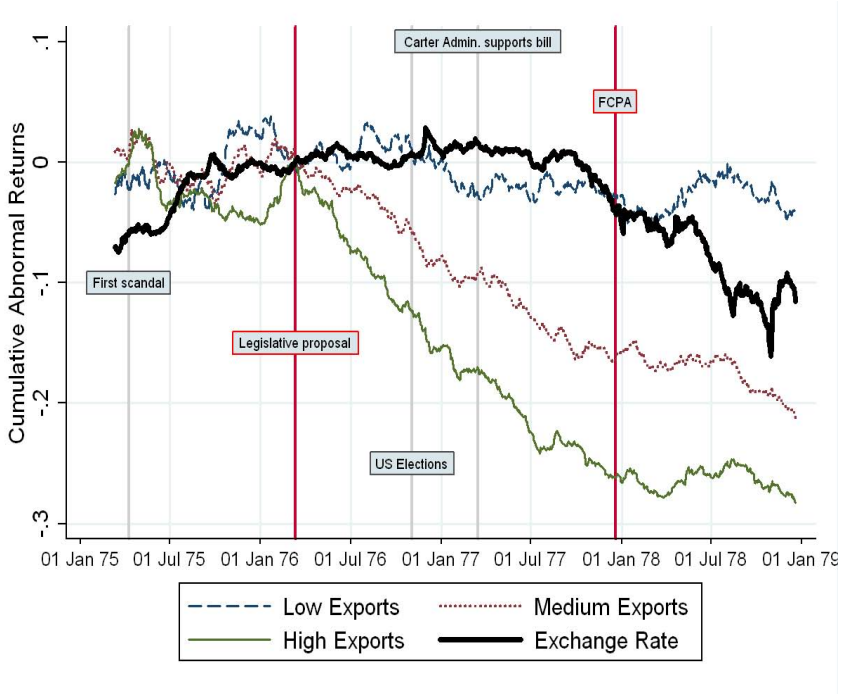
For the time being I explore two alternative explanations that could be behind the underper-

formance of firms in sectors most opened to international trade: the evolution of the exchange rate and the oil prices.

Figure III adds to Figure I the evolution of the nominal effective exchange rate. As is visible from the graph, the evolution of the dollar was very stable during most of the event window, suggesting the exchange rate is not behind the stock market returns of this period.[19]

Figure III

Cumulative Abnormal Returns of the 3 portfolios and the Dollar Exchange Rate



Another plausible explanation for the poor performance of firms in high export sectors during the event-window is the evolution of oil prices. Oil firms benefited from sharp increases in oil prices during the 1970s. For this reason, as stated above, I exclude them from the analysis. However, it remains the concern that sectors opened to international trade could be affected by higher costs of fuels, thereby explaining their underperformance in the stock market.

Figure IV plots the evolution of the log oil price on a monthly basis for the decade of the 1970s. The event-window is the period between the red bars.

Note that there are two oil shocks in this decade. The first one takes place in December 1974 and the second starts in April 1979. Oil prices increase by 184 percent and 166 percent in these shocks, respectively. In the event-window, oil prices increase by 23 percent. Therefore, the period of analysis is outside of the two major oil shocks that hit the global economy in this decade.

[19] Also, adding the exchange rate as an additional factor to the Fama-French model does not change the qualitative results. The daily return of the exchange rate only has explanatory power for the high export portfolio. Still, the cumulative abnormal returns of this portfolio if this augmented market model is estimated are -24.5 percent during the event-window.

Figure IV

Evolution of log oil prices in the 1970s

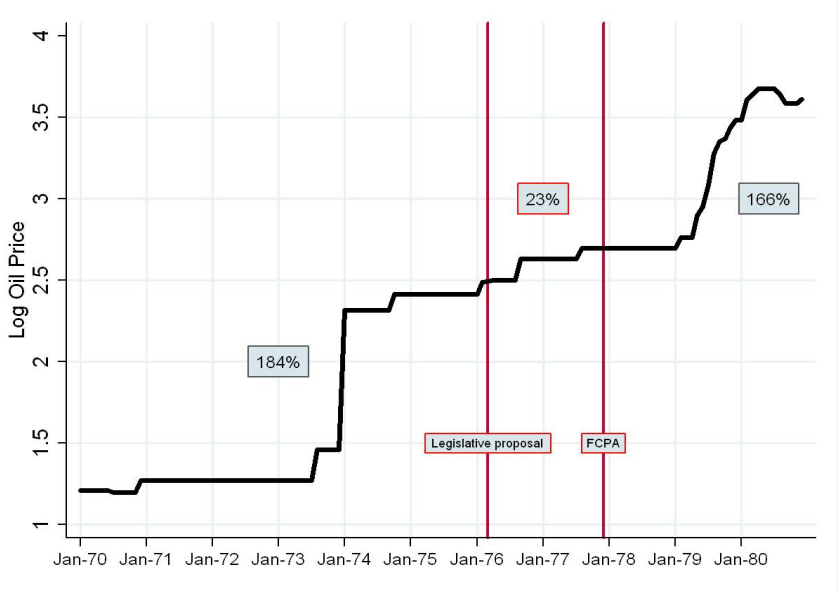


Table II shows the correlation between the abnormal returns of the three portfolios and the daily change in oil prices between January 1977 and December 1980.[20]. I find a negative correlation between the abnormal returns of the medium export portfolio and oil prices, significant at the 90 percent confidence level. For the low and high export portfolio, the coefficients are not significantly different from zero. Actually, the point estimate for the high export portfolio is positive. Overall, it seems that oil prices do not explain the abnormal returns of sectors most engage in international trade.

Table II

Abnormal Returns vs. Oil Prices.
January 3, 1977 to December 31, 1980

	Low Exp. (1)	Medium Exp. (2)	High Exp. (3)
Oil Price Return	-0.0055	-0.0326~	0.0040
	(0.0197)	(0.0179)	(0.0176)
Constant	-0.0001	-0.0004**	-0.0004**
	(0.0001)	(0.0001)	(0.0001)
Observations	1,000	1,000	1,000
R-squared	0.00	0.00	0.00

Table II shows the regression of the abnormal returns of each portfolio against the daily oil price return for the period January 3, 1977 to December 31, 1980. Robust standard errors in parenthesis. Significance levels: ~: 10%; *: 5%; **: 1%.

[20] 1977 is the earliest year daily data on oil prices is available

3 Regression Results

The motivating evidence presented in the previous section suggested that firms in sectors more opened to international trade experienced negative stock market returns after the introduction of a bill that proposed the banning of foreign bribery. In this section, I explore further this result. In the next subsection I calculate the cumulative abnormal return of each firm in my sample during the event-window and regress it against the exposure to the policy and other covariates, which control for industry effects and other determinants of equity returns. In Subsection 3.2 I use the so-called Jensen's alpha approach in order to alternatively calculate the long-run abnormal returns of each portfolio during the event-window.

I explore further this result by means of a regression approach. This allows me to control for industry shocks and add other controls that could explain part of the observed abnormal returns.

3.1 Firms' CARs

In this subsection, I perform a regression of each firm cumulative abnormal return during the event-window against its exposure to the policy and other covariates, that control for other determinants of stock-market performance and industry shocks.

I proceed as follows. For each company in my sample (356 -the balanced panel-) I estimate the Fama-French Three-Factor Model for the period January 2, 1970 to December 31, 1974 -the same period as the previous analysis-. Then, I calculate the cumulative abnormal return of each firm for the event window -March 11, 1976 to December 19, 1977-, again as in the previous analysis.

Then, I estimate a cross sectional regression of the form:

$$\hat{\text{CAR}}_i^j = \beta_1 + \beta_2 \text{Medium}_j + \ \beta_3 \text{High}_j + \ \text{Industry Dummies} + \text{Controls}_i + \epsilon_i \tag{3}$$

where $\hat{\text{CAR}}_i^j$ is the cumulative abnormal return of firm i in sector j and Medium and High are dummies taking the value of 1 if sector j is a sector of medium or high exports, respectively;[21]. I also add industry dummies at the two-digit SIC level and several controls that can have predictive power in explaining out-of-sample abnormal returns. These controls are taken as of December 31, 1974, that is, before the foreign corruption scandals are made public, to guarantee that they are not contaminated by them. Observations are weighted by market value as of December 31, 1974 [22] and standard errors are clustered at the four-digit SIC level.

Table III displays the results of estimating equation (3). In column (1) we see that firms in sectors of high exports experienced an additional 24.1 percent drop on average in cumulative

[21] The excluded dummy, a sector of low exports, is captured by the constant when I exclude the two-digit industry dummies

[22] I weight observations for two reasons. First, by weighting you obtain a more accurate measure of the benefit or loss that a potential investor would incur if she takes a financial position in the period of interest. And second, asset pricing models have more troubles to explain the returns of small firms, which are more illiquid. See Fama (1998) for a discussion on weighting in calculating long-run abnormal returns.

abnormal returns -compared to firms in sectors of low exports- during the period that goes from the introduction of the bill banning foreign bribery to the moment it becomes law. This result -without controls- is the regression equivalent to Figure II.[23]

In column (2) I add two-digit industry dummies in order to account for industry shocks. Note that identification is given by the fact that the industry dummies are at the two-digit SIC level whereas the variable of export intensity is at the four-digit SIC level. That is, I exploit the extra variation of sector Export Intensity within two-digit SIC industries to guarantee identification. Therefore, I can account for broad industry shocks in analysing the abnormal returns of firms that operate in sectors that differ in their export intensity. I argue that industries defined at the two-digit SIC level are a sufficiently narrow definition of sectors in order to account for industry shocks. Note that the SIC method of classifying industries goes from general to particular industries according to the production process. Then, they are very suitable to account for technology shocks, even if not the highest disaggregation is taken into account.

The results show that within industries, firms in sectors most engaged in international trade experienced a significant 25.4 percent drop in stock market returns.

In column (3), I add several covariates that could explain the observed realized returns. Although the Fama-French model already controls for factors such as size and book-to-market, it is useful to control for other financial variables that can explain realized returns, as the dependent variable is computed out-of-sample. Then, I control for size, Tobin's Q, volume, the price level, dividend yield, the return on the stock one year before and the previous growth rate in real sales. All the controls are taken as of December 31, 1974, to guarantee that they are not contaminated by events regarding foreign bribery. I also include the cost of energy at the four-digit SIC level to control for input expenditures that can be affected by oil prices.

The previous results are robust when I control for all these covariates. The high export portfolio experiences a significant negative abnormal return with respect to the low export portfolio. The medium export portfolio also experiences a negative return, but less than half the size of the one of the high export portfolio. Interestingly, I find a significant negative effect of the cost of energy, meaning that firms in sectors with higher expenditures in electric and fuels underperformed in the stock market, perhaps because the stock market anticipated future increases in energy prices.

Certainly, the classification of NYSE companies in three portfolios is arbitrary. However, it guarantees a suitable amount of firms -and sectors- to build the portfolios and measure precisely their stock market evolution. In Table IV I consider an alternative number of portfolios in classifying sectors by their Export Intensity. They are all constructed as having the same number of four-digit SIC sectors and according to the Export Intensity in 1974 -before the foreign corruption

[23]The cumulative abnormal returns of the the three portfolios, however, are not numerically the same. This is because the cumulative of weighted averages is different from the weighted average of the cumulatives. The residuals of the Fama-French model when estimated for the portfolios are a weighted average of the residuals stemming from fitting the Fama-French model for every individual firm belonging to each portfolio. However, Figure II displays the cumulative of the out-of-sample residuals whereas results in Table III shows a weighted average of the cumulative abnormal returns of the firms.

Table III

Regression Analysis: 3 Portfolios of US Firms

	(1)	(2)	(3)
Medium Export Intensity	-0.1011	-0.0096	-0.0845~
	(0.0653)	(0.0729)	(0.0464)
High Export Intensity	-0.2415**	-0.2544**	-0.2226**
	(0.0555)	(0.0912)	(0.0565)
Constant	-0.0695		
	(0.0447)		
Cost of Energy			-1.1757**
			(0.2292)
Log Market Value			-0.081**
			(0.0200)
Log Volume			0.0699**
			(0.0126)
Tobin's Q			-0.0229
			(0.0192)
Price Level			-0.0014
			(0.0013)
Dividend Yield			1.7663*
			(0.6870)
Last Year Return			-0.1564~
			(0.0932)
Last Year Real Sales Growth			-0.2357
			(0.1667)
Industry Dummies	NO	YES	YES
Observations	356	356	356
R-squared	0.08	0.23	0.49

Table III shows the regression of the firm cumulative abnormal return for the period March 11, 1976 to December 19, 1977 against the export intensity of the firm sector and several controls. That is, the table shows the results of equation 3 in text. Observations are weighted by market value as on December 31, 1974. Control variables are taken as on December 31, 1974. Industry dummies correspond to two-digit SIC manufacturing sectors. Robust standard errors are in parenthesis, clustered at the four-digit SIC sector. Significance levels: ∼: 10%; *: 5%; **: 1%. See the Appendix and the text for further details.

scandals-. In columns (1) and (2) I consider a split in six portfolios and in columns (3) and (4) a split in ten portfolios. Note that the covariates referring to Portfolios in Table IV are not the same between specifications (1)-(2) and (3)-(4). For instance, Portfolio 6 in (1)-(2) refers to the portfolio of highest export intensity whereas in (3)-(4) it refers to the portfolio 5th in ranking of export intensity -Portfolio 10 is the first in the ranking-. The controls and industry dummies included are the same as in Table III

The results under these alternative classifications prevail. Firms in sectors most engaged in international trade significantly underperform sectors of lower exports. Actually, the non-linearity

of this results seems apparent. Firms in sectors above the median of Export Intensity -Portfolios 4 to 6 in columns (1) and (2) and Portfolios 6 to 10 in columns (3) and (4)- experience negative abnormal returns during the event window. On the other hand, sectors below the median of Export Intensity experience near zero abnormal returns

Finally, columns (5) and (6) of Table III show the results of estimating a pure linear model of the effect of Export Intensity on cumulative abnormal returns. They display the coefficient estimates of the following regression:

$$\hat{\text{CAR}}_i^j = \alpha_1 + \alpha_2 X_j + \text{Industry Dummies} + \text{Controls}_i + \xi_i \tag{4}$$

where X_j is the Export Intensity of sector j and the rest of variables are defined as before.

I find a negative coefficient on the Export Intensity variable, ranging from -0.71 to -0.50 depending on the covariates considered. This means -taking the coefficient in the full specification with controls- that an increase of 10 percent in the export intensity is associated with a 5 percent decrease in the stock market cumulative abnormal return during the event-window. Precision in the estimates, though, is lower, specially when including controls.

3.2 Jensen's Alpha Approach

To further assess the abnormal performance of the portfolios considered, I explore how the portfolios behave under a model of performance attribution -the so-called Jensen's alpha approach or the calendar-time portfolio approach-. This is a method widely used in the finance literature to estimate risk-adjusted abnormal performance (see for example Loughran and Ritter (1995), Brav and Gompers (1997), Dichev and Piotroski (2001) and Gompers et al. (2003)).

The Jensen's alpha approach has several characteristics that make it similar to the one presented above, although with differences. Previously, I used the elasticities of the portfolios with respect to the common risk factors estimated in the pre-policy period to make an expectation of the *normal* performance during the event-window. Therefore, I interpreted the difference between the actual and the *expected* returns -the out-of-sample residuals- during the event-window as the abnormal returns.

The Jensen's alpha approach, on the contrary, estimates the market model only for the event-window.[24] The underlying rationale is that the common risk factors should explain the performance of the portfolio. Therefore, it can be interpreted as a performance attribution method. The estimated intercept -the alpha- can then be thought of as the abnormal return in excess of what would have been achieved by investing in the common risk factors. That is, if the different performance is a manifestation of a diverse sensitivity with respect to the common risk factors, then the estimated alpha should be statistically not different from zero.

Note that with this approach I lose the graphical analysis presented in Figure II, which was notorious in accounting for the fact that the cumulative abnormal returns start to diverge between

[24]Therefore, by construction the estimated residuals sum up to zero.

Table IV

Regression Analysis: Additional Number of Portfolios of US Firms

	6 Portfolios		10 Portfolios		Linear	
	(1)	(2)	(3)	(4)	(5)	(6)
Portfolio 2	-0.0841	-0.0781	-0.0446	-0.0085		
	(0.0877)	(0.0862)	(0.0736)	(0.1262)		
Portfolio 3	-0.0471	-0.0672	-0.0962	-0.025		
	(0.0810)	(0.0742)	(0.1289)	(0.1081)		
Portfolio 4	-0.2514**	-0.2858**	0.0387	0.0759		
	(0.0748)	(0.0890)	(0.1639)	(0.1737)		
Portfolio 5	-0.2789**	-0.2597**	-0.0943	-0.0984		
	(0.0784)	(0.0823)	(0.0731)	(0.0925)		
Portfolio 6	-0.2694**	-0.2841**	-0.3103**	-0.1792		
	(0.0536)	(0.0834)	(0.0837)	(0.1226)		
Portfolio 7			-0.1376~	-0.269*		
			(0.0784)	(0.1266)		
Portfolio 8			-0.2603**	-0.2679*		
			(0.0788)	(0.1168)		
Portfolio 9			-0.3367**	-0.2284*		
			(0.0788)	(0.1026)		
Portfolio 10			-0.2256**	-0.2728*		
			(0.0790)	(0.1196)		
Export Intensity					-0.7065*	-0.5007~
					(0.3380)	(0.2821)
Constant	-0.0341		-0.0288		-0.168**	
	(0.0454)		(0.0582)		(0.0428)	
Industry Dummies	NO	YES	NO	YES	NO	YES
Controls	NO	YES	NO	YES	NO	YES
Observations	356	356	356	356	356	356
R-squared	0.13	0.52	0.19	0.53	0.04	0.47

Table IV shows the regression of the firm cumulative abnormal return for the period March 11, 1976 to December 19, 1977 against the export intensity of the firm sector and several controls. Columns (1) & (2) consider the regression against six portfolios of export intensity, whereas columns (3) & (4) consider 10 portfolios of export intensity. Note, therefore, that the covariates referring to Portfolios are different between specifications (1)-(2) and (3)-(4). For instance, Portfolio 6 in (1)-(2) refers to the portfolio of highest export intensity whereas in (3)-(4) it refers to the portfolio 5th in ranking of export intensity -Portfolio 10 is the 1st in the ranking-. The last two columns regress the dependent variable against the export intensity of the sector, under a linear specification. Controls and industry dummies are the same as in Table III. Observations are weighted by market value as on December 31, 1974. Control variables are taken from 31 December, 1974. Industry dummies correspond to two-digit SIC manufacturing sectors. Robust standard errors are in parenthesis, clustered at the four-digit SIC sector. Significance levels: ∼: 10%; *: 5%; **: 1%. See the Appendix and the text for further details.

portfolios when the FCPA was introduced in the political debate. However, it has the advantage that it estimates the elasticities with respect to the common risk factors in the event-window, and therefore excludes the possibility that structural changes in these elasticities aside from the actual policy considered could partly explain the evolution of the abnormal returns.

Panel A of Table V shows the results of estimating Equation (1) with daily data for each of the three portfolios with the event-window as the sample period. The estimated alpha of the high exports portfolio is a significantly negative 0.03 percent per day, which yields a negative abnormal return of 12.2 percent during the event-window. The medium export intensive portfolio also experiences a negative abnormal return of around 11.0 percent during the event-window. On the contrary, the alpha of the low exports portfolio is not statistically different from zero, suggesting no abnormal returns during the event-window.

Panel B changes the regressions' sample period to explore the performance of the portfolios during the period that goes from the first foreign corruption scandal to the day before the beginning of the event-window. For all three portfolios, the estimated intercepts are not statistically different from zero.

Finally in Panel C I run the same regressions but for one year after the approval of the FCPA. Again, none of the alphas are estimated to be different from zero. This suggests that the market discounted the effect of the policy once it was approved and therefore, the performance of the portfolios from that moment on is similar.

4 Further Evidence

In this section I perform two robustness checks of the previous findings. First, I perform the analysis for a country not subject to the FCPA -the United Kingdom- in order to disregard the existence of global shocks that could drive the results. Second, I make use of firm-level export data through an instrumental variables approach and test whether the results prevail.

4.1 Results for United Kingdom

Only firms listed on the US were subject to the Foreign Corrupt Practices Act. Therefore, companies outside the US should benefit or at least not be affected by this policy. Also, analysing the returns of companies outside the US is useful in which it allows to perform a robustness check on the existence of global shocks to trade that could explain the observed stock market returns. In this sense, I look at the returns of firms in the United Kingdom (UK) during this period.[25].

I collect data for UK firms for the period 1970 to 1980 from Datastream. One limitation of the dataset is that the industry classification of Datastream -Industry Classification Benchmark (ICB)- is different from the one provided by Compustat for US firms -Standard Industrial Classification (SIC)-.

To solve this problem, I do a mapping between the two, based on industry definitions. Unfortunately,information is lost. There are much more industry categories in the four-digit SIC -1009-

[25]The reason to choose the United Kingdom as a comparison is twofold. First, it is an economy very closed to the US, therefore, global shocks are most likely to affect both of them. And second, it is the only country for which I can gather data on firm stock returns for the whole decade 1970 to 1980. Hence, I can perform the closest analysis I carried out in section 2

Table V

Jensen's Alpha Approach for 3 Portfolios

	Alpha	R^m	SMB	HML	Obs.	R-squared
Panel A: Event-Window						
Low Export Intensity	-0.0103	87.6012**	24.4445**	18.0682**	446	0.81
	(0.0119)	(2.0898)	(4.6279)	(4.2745)		
Medium Export Intensity	-0.0260**	106.1564**	-0.1699	-9.2241**	446	0.92
	(0.0089)	(1.5552)	(3.4440)	(3.1810)		
High Export Intensity	-0.0292**	118.5373**	-24.3265**	-25.3001**	446	0.93
	(0.0100)	(1.7507)	(3.8770)	(3.5809)		
Panel B: First Corruption Scandal - Beginning of Event-Window (Apr-75 to Mar-76)						
Low Export Intensity	0.0064	94.4832**	31.6093**	2.064	233	0.85
	(0.0239)	(2.7335)	(6.1657)	(5.4910)		
Medium Export Intensity	0.0046	112.1096**	-5.1696	-9.4073*	233	0.93
	(0.0181)	(2.0759)	(4.6824)	(4.1700)		
High Export Intensity	0.0204	117.4225**	-11.0122*	-11.6964**	233	0.95
	(0.0169)	(1.9348)	(4.3641)	(3.8865)		
Panel C: One Year after FCPA (Dec-77 to Dec-78)						
Low Export Intensity	-0.0129	92.464**	36.2453**	-29.4409**	253	0.88
	(0.0173)	(2.3557)	(4.2546)	(6.5874)		
Medium Export Intensity	-0.0043	108.614**	-9.3422**	-19.5583**	253	0.96
	(0.0115)	(1.5597)	(2.8170)	(4.3616)		
High Export Intensity	0.0190	124.4016**	-18.6286**	-25.999**	253	0.96
	(0.0123)	(1.6796)	(3.0335)	(4.6967)		

Table V shows the regressions of the daily returns of the Low, Medium and High Export Intensity Portfolios against the common risk factors of the Fama-French Model. The constant of these regressions can be interpreted as a measure of the abnormal performance of the Portfolio (Jensen's Alpha approach). Panel A shows the regression for the event-window (Mar-76 to Dec-77). Panel B for a period before the event-window, from the first corruption scandal -April 8, 1975- to the day before the beginning of the event-window -March 10, 1976-. Panel C shows the results of the three regressions for a period extending one year after the FCPA was signed into law -December 20, 1977 to December 20,1978-. Estimated coefficients as well as standard errors are multiplied by 100 for presentational purposes. Standard errors are in parenthesis. Significance levels: ∼: 10%; *: 5%; **: 1%. See the Appendix and the text for further details.

than in the Subsectors ICB -114-. Eventually, I map 369 manufacturing SIC sectors -out of 450- into 40 ICB sectors.[26]

Then, I proceed as before. I divide the 40 manufacturing ICB sectors in three groups according to the US Export Intensity in 1974 and then assign US and UK companies to one group according to their industry. Then, for each group and each country, I build a value-weighted buy-and-hold portfolio. I look at abnormal returns by estimating a Market Model[27] for the period 1970-1974 and then compute out-of-sample abnormal returns. I calculate then the cumulative abnormal returns

[26] This mapping is available upon request.

[27] Due to data limitations regarding UK firms the Market Model only contains as covariates the Market Return

and follow them during the event window -March 11, 1976 to December 19, 1977- and one year before and after, to control for trends.

Figure V shows the evolution of the stock market returns of these portfolios for the US -Panel A- and the UK -Panel B-. Although the classification of firms in rougher due to the smaller number of industries, Panel A of Figure V show that US firms in ICB sectors more opened to international trade experienced a negative return during the event window whereas firms in ICB industries of low exports experienced a near zero return -compare it with Figure I, where four-digit SIC industries were used-.

Panel B of Figure V shows that in United Kingdom there is no difference in cumulative returns between firms in sectors in which the US had different exposure to international trade. The three portfolios perform in a remarkably similar fashion during the whole period of interest.

Figure VI shows for both countries the evolution of the abnormal returns. For the US -Panel A- I find that the abnormal returns are significantly negative for companies in ICB sectors more open to international trade. On the contrary, as we can see in Panel B, in the United Kingdom, the evolution of the cumulative abnormal returns of the portfolios is very noisy and indistinguishable.

Then, it seems that the pattern we observe for the US regarding companies in sectors with different exposure to international trade does not show up in the United Kingdom. Then, I can rule out broad industry shocks or global shocks to trade that can explain the patterns observed.

To compare the evolution of the portfolios for United States and United Kingdom in a more systematic way, I perform a differences-in-differences regression, adding some controls to check for robustness. I run the following regression:

$$\begin{aligned} \hat{\text{CAR}}_i^{jc} &= \beta_0 + \beta_1 \text{US} + \beta_2 \text{Medium}_j + \beta_3 \text{High}_j + \beta_5 \text{US} * \text{Medium}_j + \beta_6 \text{US} * \text{High}_j \\ &\quad + \text{Industry Dummies} + \text{Controls} + \epsilon_i \end{aligned} \tag{5}$$

where $\hat{\text{CAR}}_i^{jc}$ is the cumulative abnormal return[28] during the event window of firm i in sector j in country c; US is a dummy taking value 1 if c equals the United States and Medium and High are dummies taking the value of 1 if ICB industry j is a US medium or a high export sector. I also add Industry Dummies at the level of ICB Supersectors. Controls include the Log of Market Value and the Cost of Energy, taking as of December 31, 1974. Observations are weighted by market value as of December 31, 1974. The weight of a firm is relative to the rest of companies in its country.[29]. Standard errors are clustered at the level of ICB Supersectors.

Columns (1) to (3) of Table VI shows the results. Only the interactions of the US dummy and the Medium and High Export dummies are shown. As we can see, in all specifications firms in high export sectors experience a negative abnormal return compared to firms in the same industries in the United Kingdom. This underperformance is 29.2 percent in the regression with industry dummies and controls.

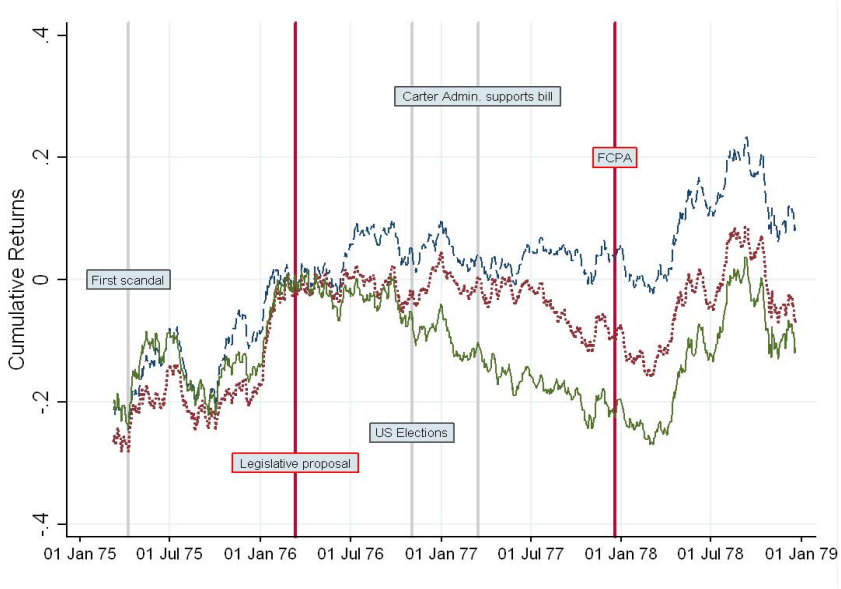
[28] Computed as in Section 2.4 with the difference that the market model only controls for the market return due to data limitations. The market return for UK firms is the FTSE All Shares Index, provided by Datastream

[29] I avoid overweighting of US firms as they tend to be bigger than UK companies.

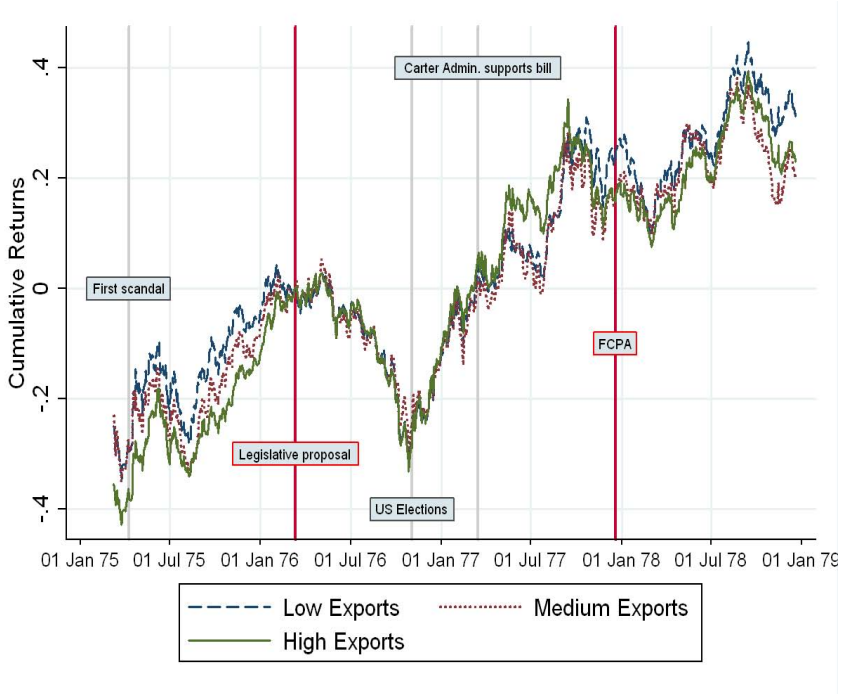
Figure V

US & UK STOCK MARKET EVOLUTION OF PORTFOLIOS DEFINED FROM ICB INDUSTRIES

Panel A: United States



Panel B: United Kingdom



In columns (4) to (6) I perform the same differences-in-differences regression but allowing for a linear relationship. That is, I estimate the following regression:

$$\hat{\text{CAR}}_i^{jc} = \alpha_1 + \alpha_2 X_j + \alpha_3 X_j * \text{US} + \text{Industry Dummies} + \text{Controls} + \xi_i \tag{6}$$

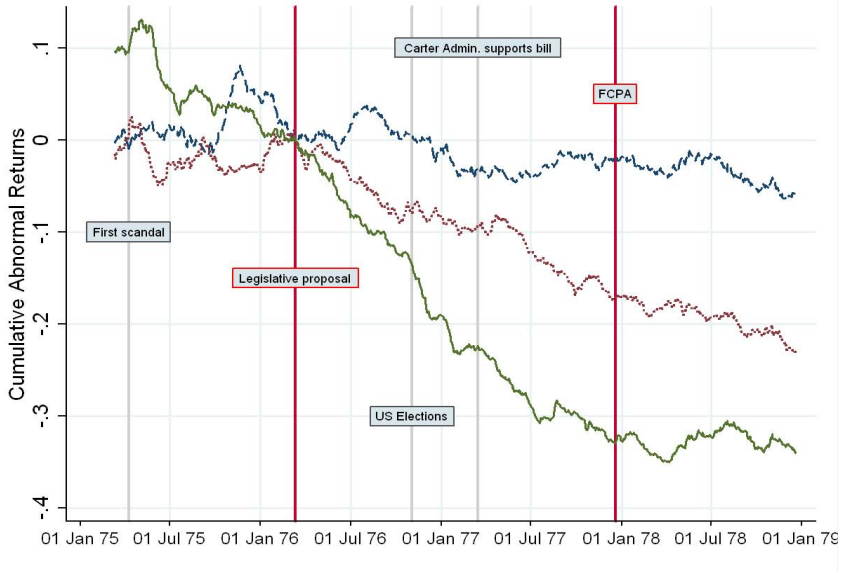
where X_j is the Export Intensity of ICB sector j.

The results show that the additional effect -relative to the United Kingdom- of being a US

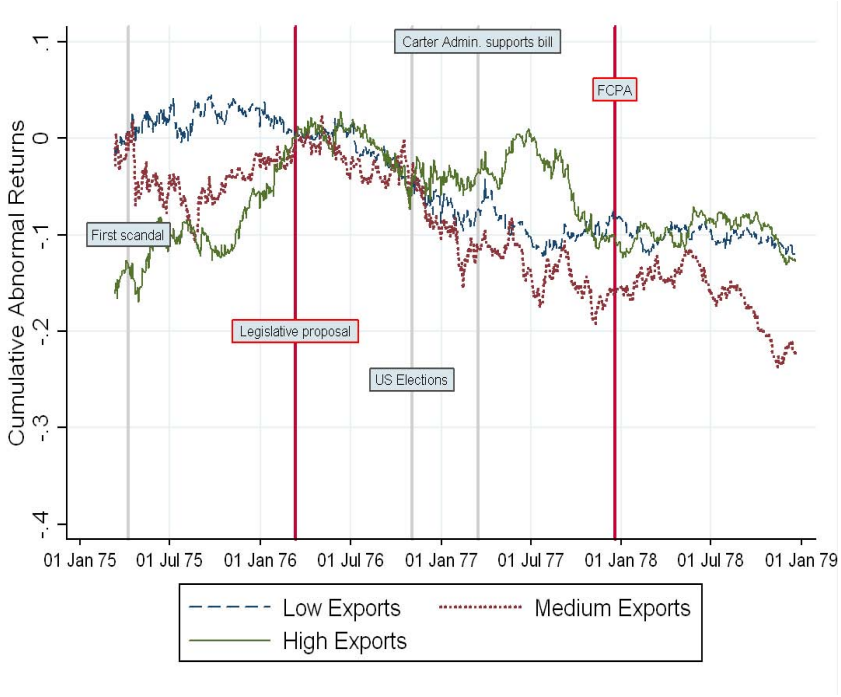
Figure VI

US & UK CUMULATIVE ABNORMAL RETURNS OF PORTFOLIOS DEFINED FROM ICB INDUSTRIES

Panel A: United States



Panel B: United Kingdom



company in a sector with a higher Export Intensity is significantly negative.

4.2 Firms' Exports Data

Compustat provides data on exports at the firm level starting in 1976. However, for this year, only data for 12 firms -out of 356- are available. For 1977, the number of missing values is still large -58

Table VI

US vs. UK: Differences in Differences

	3 Portfolios			Linear		
	(1)	(2)	(3)	(4)	(5)	(6)
Medium Exports * US	-0.0352	-0.0479	-0.1552			
	(0.0863)	(0.1454)	(0.1371)			
High Exports * US	-0.2613**	-0.3563*	-0.2920*			
	(0.0908)	(0.1439)	(0.1170)			
US	0.0527			0.0116		
	(0.0633)			(0.0743)		
Export Intensity * US				-1.3784	-2.3733*	-1.5370~
				(0.9281)	(0.9941)	(0.8867)
Industry Dummies	NO	YES	YES	NO	YES	YES
Controls	NO	NO	YES	NO	NO	YES
Observations	490	490	490	490	490	490
R-squared	0.11	0.27	0.43	0.06	0.24	0.43

Table VI shows the differences-in-differences regression of the US & UK firms' cumulative abnormal returns. Columns (1) to (3) show the results of the differences-in-differences regression of the 3 benchmark portfolios -equation (5) whereas columns (4) to (6) shows the results on the differences-in-differences of the linear specification -equation (6)-. Only the coefficients of the interactions of the export intensity and the US dummy are shown. Controls -and their interactions with the US dummy- include Log of Market Value and Cost of Energy. Observations are weighted by market value as on December 31, 1974. A firm weight is relative to the size of the firms in its country. Control variables are taken from 31 December, 1974. Industry dummies correspond to ICB Supersectors. Robust standard errors in parenthesis, clustered at the ICB sector. Significance levels: ∼: 10%; *: 5%; **: 1%. See the text for further details.

percent of the sample-. Apart from the small sample size, data on firm exports in 1977 poses an additional significant problem. The amount of foreign sales in 1977 can be affected by the foreign corruption scandals of 1975 or the anticipation of a law approval in 1976 and 1977. Moreover, they could be the result of the evolution of the market value of firms during these months. In other words, there could be a simultaneity bias in the relation between firm exports in 1977 and stock market performance in 1976-1977.

For these reasons, in the main body of results I have resorted to industry export data to account for exposure to the US anti-bribery legislation. However, as a robustness check, I test whether results prevail when using the individual export data. I address the two problems with these data in the following way.

First, to account for the simultaneity bias, I adopt an instrumental variables approach. I instrument the exports of the firm in 1977 with sectoral exports in 1974. In the first stage I show that the sector of the firm in 1974 is a significant predictor of the firm exports in 1977. As there are no foreign corruption scandals before 1975, sectoral exports in 1974 are not contaminated by foreign bribery in any respect.

Second, in order to increase the sample size, I use the coefficients of the first stage regression to impute the value of exports in 1977 -net of the rest of the exogenous covariates-. This allows

me to perform the 2SLS regression for the 356 companies of my sample.

Then, I start by defining Firm Export Intensity of firm i in 1977 as:

$$\text{Firm Export Intensity}_i = \frac{\text{Export sales}_i}{\text{Total Sales}_i}$$

That is, I calculate the Export Intensity of a company as the share of total sales that go to foreign countries.

Next, I run the following regression by 2SLS:

$$\hat{\text{CAR}}_i^j = \alpha_1 + \alpha_2 \text{Firm Export Intensity}_i + \text{Industry Dummies} + \text{Controls}_i + \xi_i \tag{7}$$

where I instrument Firm Export Intensity$_i$ with the (Sectoral) Export Intensity$_j$ in 1974.

Table VII shows the results of the first stage regression. In all specifications, with and without industry dummies and controls, the Export Intensity of the firm sector in 1974 is a significant predictor of the firm's exports in 1977.

Table VII
Firms Exports: First Stage Regression

	(1)	(2)	(3)
Sector Export Intensity	0.5639*	0.4821*	0.5553**
	(0.2534)	(0.1893)	(0.1890)
Constant	0.0143~		
	(0.0232)		
Industry Dummies	NO	YES	YES
Controls	NO	NO	YES
Observations	150	150	150
R-squared	0.26	0.57	0.67

Table VII shows the regression of the firms relative exports in 1977 against the Export Intensity of the Sector in 1974 and several controls. These include Cost of Energy, Log Market Value, Log Volume, Tobin's Q, Price Level, Dividend Yield, Last Year Return, Last Year Real Sales Growth. Observations are weighted by market value as on December 31, 1974. Industry dummies correspond to two-digit SIC sectors Robust standard errors in parenthesis, clustered at the four-digit SIC sector. Significance levels: ~: 10%; *: 5%; **: 1%. See the text for further details.

The results of the second-stage are shown in Table VIII. The first three columns show the 2SLS regression of the firm cumulative abnormal return during the event window against the Firm Export Intensity in 1977 and several controls. The Firm Export Intensity in 1977 is instrumented with the sectoral Export Intensity in 1974 -before the first foreign corruption scandals-.

As we can see in columns (1) to (3), I find that a higher Export Intensity of the firm is associated with a lower cumulative abnormal return. The magnitude of these coefficients are lower than the ones I found when controlling directly for the sectoral Export Intensity -see columns (1) to (3) in

Table III-. Precision, however, is lower. The effect is statistically different from zero with a 90 percent confidence level when I add the full set of industry dummies and controls.

In columns (4) to (6) of Table VIII I explore the existence of a non-linear effect. I classify the fitted and imputed values of the first stage regression in three groups, each containing the same number of firms.[30] Then I define three dummy variables that identifies each group -Low, Medium and High Export Firms- and use them as covariates for the second stage regression.

I find that firms with Medium and High Exports perform worse in the event-window although this difference is not statistically different from zero without controls. When I add a set of covariates that can explain abnormal returns, I find that firms that had High Exports in 1977 -instrumented- experienced an negative abnormal return of 17.1 percent on average during the event window compared to a group of firms with Low Exports.

Overall, despite the limitations of the data, the results that firms more engaged in international trade experienced negative abnormal returns during the debate and approval of the FCPA seem to prevail.

5 Conclusions

I provide evidence of a striking stock market underperfomance of firms in industries engaged in international trade during the period March 1976 to December 1977. I find that these companies experienced a significant negative cumulative abnormal return of around 22 to 25 percent during this time.

This period coincides with the debate and approval of a policy in the US that unilaterally prohibited banning foreign officials when conducting international business transactions -the FCPA-. I argue, therefore, that a suitable candidate for the smoking gun is precisely this policy. The market would have interpreted that the unilateral prohibition put US companies in disadvantage with respect to foreign competition.

Since the 1970s a large stream of foreign corruption scandals have shown that foreign bribery is prevalent and widespread when firms engage in international business transactions. The unilateral banning of this practice in the US in 1977 offers an attractive experiment to study the value of these payoffs and how firms were affected by the prohibition.

I conduct a long-run event-study analysis to investigate the stock market performance of firms

[30]This is a different way of proceeding with respect to the results of columns (1) to (3) of Table III in Section 3, where I classified the universe of manufacturing sectors in the US in three equal-sized groups, and then assigned NYSE firms to each group. For this reason, the benchmark portfolios of low, medium and high export did not contain the same number of companies. In current analysis, I classify the fitted values of the first-stage regression in three equal-sized groups. Therefore, the coefficients of columns (4) to (6) of Table VIII are not strictly comparable with those of columns (1) to (3) in Table III, although both group of coefficients take 3 groups as a benchmark. Actually, we would expect the coefficients of Table VIII to be higher, as the measure of exposure -the 3 groups- is relative to just the sample of firms. On the contrary, in Table III exposure is with respect to the whole manufacturing sector in the US economy.

Table VIII

Cumulative abnormal returns vs. Firm exports (Second Stage)

	Linear			3 Portfolios		
	(1)	(2)	(3)	(4)	(5)	(6)
Firm Export Intensity	-1.2529*	-1.7056	-0.9016~			
	(0.5994)	(1.1233)	(0.5080)			
Firm Medium Exports				-0.0334	-0.0202	-0.0582
				(0.0610)	(0.0562)	(0.0503)
Firm High Exports				-0.0481	-0.0821	-0.1708**
				(0.0479)	(0.0591)	(0.0541)
Constant	-0.1501**			-0.1930**		
	(0.0495)			(0.0335)		
Cost of Energy			-1.4976**			-1.4448**
			(0.2401)			(0.1968)
Log Market Value			-0.0681**			-0.0727**
			(0.0217)			(0.0184)
Log Volume			0.0724**			0.0742**
			(0.0132)			(0.0135)
Tobin's Q			-0.0567*			-0.0621*
			(0.0226)			(0.0248)
Price Level			-0.0007			-0.0006
			(0.0012)			(0.0012)
Dividend Yield			1.4553*			1.3920*
			(0.7110)			(0.7003)
Last Year Return			-0.2008*			-0.2390*
			(0.1011)			(0.1007)
Last Year Real Sales Growth			-0.2500			-0.2905
			(0.1919)			(0.1825)
Industry Dummies	NO	YES	YES	NO	YES	YES
Observations	356	356	356	356	356	356

Table VIII shows the regression of the firm cumulative abnormal return for the period March 11, 1976 to December 19, 1977 against the Firm Export Intensity in 1977 instrumented with the Sector Export Intensity in 1974 and several controls. Columns (1) to (3) specify a linear relationship between the abnormal returns and the Firm Export Intensity. Columns (3) to (6) classify the fitted values of the first stage regression in 3 groups and then regress the cumulative abnormal returns -second stage- against dummies of the groups. I use the first stage regression to impute the Firm Export Intensity for companies that do not have data on Firm Export Intensity in 1977. Observations are weighted by market value as on December 31, 1974. Control variables are taken from 31 December, 1974. Industry dummies correspond to two-digit SIC manufacturing sectors. Robust standard errors in parenthesis, clustered at the four-digit SIC sector. Significance levels: ∼: 10%; *: 5%; **: 1%. See the text for further details.

differing in exposure to this policy. As bribes are unobserved, I use exports as a proxy for foreign operations and therefore as a proxy for the likelihood of resorting to questionable payments.

The analysis, however, is difficult in its own nature. The underlying assumption is that during the event-window -March 1976 to December 1977- no other shocks affected systematically firms in heterogeneous sectors regarding foreign trade. The fact that the event-window spans 21 months and that the 1970s is a turbulent decade in the world economy poses some concerns regarding this

assumption.

Moreover, the whole analysis relies on indirect evidence. The fact that bribes both in the intensive and in the extensive margin are unobserved establish a significant limitation. This is a common drawback that papers in the forensic economics literature share. Nevertheless, the issue of foreign bribery is intrinsically linked to the fact of conducting businesses abroad in general and to exports in particular.

Still, the FCPA behaves well as a candidate for explaining the underpeformance of firms opened to international trade during the event-window. I show that the cumulative abnormal returns of these companies start to fall precisely the day the FCPA is introduced in the political debate and keep falling until it is signed into law. I also show that the negative stock market performance is also evident when considering simply raw returns and when using exports at the level of the firm. Moreover, it is also robust to the inclusion of several covariates that could have explanatory power in out-of-sample abnormal returns. Also, the oil shocks of the 1970s are out of the period of interest. Finally, the underpeformance is not present when I apply the same analysis to the United Kingdom, a country that was not affected by the US policy.

Given this evidence, I conclude that the stock market evolution during the event window seems to be explained -at least partly- by the issue of foreign bribery. The fact that US corporations were prohibited from resorting to this practice whereas foreign competition was not seems to have decreased expected profits of the companies most affected.

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Appendix

A Data: Definitions and Sources

TABLE A.1

DATA DEFINITIONS AND SOURCES

VARIABLE	SOURCE	DEFINITION
Exports	Feenstra (1997)	Industry Exports (4-digit SIC)
Total Value of Shipments	Bartelsman and Gray (1996)	Value of Industry Shipments
Export intensity	Feenstra (1997) & Bartelsman and Gray (1996)	Exports over Total Value of Shipments
Fuels & Electrical Energy	Bartelsman and Gray (1996)	Expenditures on purchased fuels and electrical energy
Cost of Materials	Bartelsman and Gray (1996)	Total Cost of Materials
Cost of Energy		Fuels & Electrical Energy over Cost of Materials
Sales	COMPUSTAT item 12	Net Sales
Book Value of Equity	COMPUSTAT items 6 (Assets), 181 (Liabilities), 10 (Preferred Stock Liquidating Value), 35 (Deferred Taxes & Investment Tax Credit), 79 (Debt-convertible) & 56 (Preferred Stock Redemption Value)	Total Assets less Total Liabilities and Preferred Stock plus Deferred Taxes and Convertible Debt. When Preferred Stock is missing, it is replaced with the redemption value of Preferred Stock
Common Shares Outstanding	COMPUSTAT item 25	Net number of all common shares outstanding at year-end
Price or Bid/Ask Average	Center for Research in Securities Prices (CRSP)	Closing price or the bid/ask average
Market Value		Common Shares Outstanding times Price or Bid/Ask Average
Book to Market		Book Value of Equity over Market Value
Volume	CRSP	Volume traded, adjusted for splits
Market Value of Assets		Assets plus Market Value less Book Value of Equity

Table A.1

Data Definitions and Sources (Continued)

VARIABLE	SOURCE	DEFINITION
Tobin's q		Market Value of Assets over Assets
Dividends	COMPUSTAT item 21	Total dollar amount of dividends declared on the stock of the company during the year
Dividend Yield		Dividends over Market Value
Adjusted Price -US companies-	CRSP	Stock price close, adjusted for distributions.
Yearly Return		Adjusted Price one-year return rate
Industry Deflator	Bartelsman and Gray (1996)	Price deflator for value of shipments
Real Sales		Sales over Industry Deflator
Real Sales Growth		Real Sales one-year growth rate
US Risk-Free Interest Rate	Federal Reserve	Federal Funds Effective Rate over 365
US Market Return	CRSP	NYSE Total Return on Index
Exchange Rate	Federal Reserve	Nominal Major Currencies Dollar Index
Oil Prices	Dow Jones & Company	Spot Oil Price: West Texas Intermediate
Export Sales	Compustat Business Information Files item 20	Revenue generated by domestically produced goods or services sold outside the domestic country.
Firm Export Intensity		Export Sales over Total Sales
UK Risk-Free Interest Rate	Bank of England	Annual Policy Rate over 365
UK Market Return	Datastream	Daily return on the FTSE All Shares Index
Adjusted Price -UK companies-	Datastream	Stock price, adjusted for changes in capital structure and dividends.
Market Value -UK companies-	Datastream	Share price times the number of ordinary shares in issue.

B Estimates of the Fama French Three Factor Model

TABLE B.1

PORTFOLIO REGRESSIONS. FAMA-FRENCH TRHEE-FACTOR MODEL.

	Low Exp.	Med. Exp.	High Exp.
	(1)	(2)	(3)
R^m	0.8979**	1.0144**	1.1504**
	(0.0109)	(0.0079)	(0.0095)
SMB	0.3514**	-0.072**	-0.1466**
	(0.0259)	(0.0187)	(0.0225)
HML	0.0386~	-0.1183**	-0.1792**
	(0.0229)	(0.0165)	(0.0199)
Constant	-0.0000	0.0002**	0.0003**
	(0.0001)	(0.0001)	(0.0001)
Observations	1,251	1,251	1,251
R-squared	0.85	0.94	0.93

Table B.1 shows the estimation of the Fama-French Three-Factor Model for the low, medium and high exports portfolios. The dependent variable is the return on each portfolio. The sample period includes the 1,251 trading days between January 2, 1970 to December 31, 1974. Robust standard errors in parenthesis. Significance levels: ~: 10%; *: 5%; **: 1%. See the text for further details.

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