Who Gets Caught for Corruption When Corruption is Pervasive?
Evidence from China's Anti-Bribery Blacklist[*]

Liming Zhou [a], Zhangfeng Jin [b], Zheng Wang [c,d,†]

[a] School of Economics, Zhejiang University, 38 Zheda Road, Hangzhou, China.

[b] School of Economics, University of Nottingham Ningbo China, 199 Taikang East Road, Ningbo, China

[c] Hull University Business School, Hull, HU6 7RX, United Kingdom

[d] GEP, University of Nottingham, Nottingham, NG7 2RD, United Kingdom

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Abstract

This paper empirically investigates why in a corruption-pervasive country only a minority of the firms get caught for bribery while the majority get away with it. By matching manufacturing firms to a blacklist of bribers in the healthcare sector of a province in China, we show that the government-led blacklisting is selective: while economically more visible firms are slightly more likely to be blacklisted, state-controlled firms are the most protected compared to their private and foreign competitors. Our finding points to the fact that a government can use regulations to impose its preferences when the rule of law is weak and the rule of government is strong.

Key Words: Corruption; Bribery; Healthcare; China

JEL Classifications: D73, D78, P26

Running Title: Who Gets Blacklisted in China's Anti-Bribery Blacklist

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1   Introduction

In many countries where bribery is pervasive, government-led anti-corruption commissions often fail to reduce corruption (Heilbrunn, 2000). While the causes of such failure have been discussed extensively, a remaining puzzle is why in these countries some bribers become the 'unlucky' few that get punished whilst others manage to get away with their illegal payments.

This paper endeavors to find clues to this puzzle by looking for factors that are most likely to make bribers the target of punishment. We do so by analyzing the features of firms who were blacklisted for bribery in the healthcare sector in a Chinese province, in comparison to those not in the list. Under the assumption of pervasive corruption, our evidence shows that, other things equal, bigger firms (in terms of sales or employment) are slightly more likely to fall victim to the anti-bribery blacklisting than smaller firms, and state-owned firms are in an invariably safer position than private firms. This finding points to the existence of selectivity in blacklisting, and reveals patterns aligned with the interest of local governments who seek to impose their preferences by exploiting anti-bribery regulations.

Our research complements the recent micro-level studies on corruption (e.g. Svensson, 2003; Fisman and Svensson, 2007; Rand and Tarp, 2012; Sequeira and Djankov, 2014). While this literature mainly looks at the firm-level determinants or effects of bribery, we investigate a distinctively different question, i.e. given the facts of bribery why do some firms get caught but others do not? In other words, we examine the behavior of governments in anti-bribery activities instead of firms in bribery activities, and to the best of our knowledge, present the first empirical evidence in this regard. Our research also adds to the political economy literature on regional competition in China. Theories and evidence show that local protectionism exists within China due to the decentralized fiscal system which induces local governments to protect local stakeholders (Qian and Roland, 1998; Cai and Treisman, 2004; Jin *et al.*, 2005; Bai *et al.*, 2014; Eberhardt *et al.*, forthcoming), and due to the political promotion within the Communist Party which is linked to local economic performance (Chen *et al.*, 2005; Li and Zhou, 2005; Jia *et al.*, 2015). Findings from this research accord with this rationalization but offer a fresh new angle: anti-bribery blacklisting as a regulatory tool can be used to protect local governments' politico-economic interests in certain firms.

2   Background and Data

Corruption is notoriously endemic in China's healthcare sector. It is observed that illicit payment is 'common knowledge' in this sector (Daily Mail, 2014), 'taking bribery from drug companies...is a common hidden rule among doctors' (ABC News, 2014), and 'giving kickbacks to doctors is standard practice for phama companies' (Financial Times, 2013). An editorial of the medical journal *Lancet* comments that 'bribing doctors to boost drug prescriptions by some drug companies is an open secret [in China]' (Lancet, 2013). Even the Chinese state media acknowledge the universality and severity of corruption in this sector. For example, *China Daily* admits that 'corruption in China's healthcare industry is nothing new', and 'pharmaceutical companies regularly offer kickbacks or free overseas trips to doctors and hospital executives' (China Daily, 2013). The state news agency *Xinhua Net* recognizes that 'China has a well-established chain of impropriety that stretches from the pharmaceutical manufacturers directly to hospitals and even government authorities', and gives an estimate that 'rebates from drugs associated with commercial bribery cost the country 772 million yuan (US$121 million) every year, accounting for 16% of the annual tax revenue of the domestic pharmaceutical industry' (Xinhua Net, 2006). Most observers attribute the above-described universal corruption to the dysfunctional health system in China especially in terms of low salaries of doctors and weak implementation of prescription guidelines.[1]

Based on the above evidence, we maintain the assumption of the prevalence of bribery in China's healthcare sector for this research. The widespread corruption gives the government pressure to come up with solutions. In response to the reality, the anti-bribery blacklist was first introduced as an experimental anti-corruption measure in 2002 in a district of Ningbo, a major city in Zhejiang Province along the eastern coastline, for construction industry. The blacklist was then extended to five provinces (Jiangsu, Zhejiang, Sichuan, Chongqing, and Guangxi) in 2004 for construction industry and further extended to the whole country in 2006 for five sectors (construction, finance, health, education, and government procurement). In 2009, all sectors and all provinces adopted the blacklist system. Individual cases in the blacklist can be accessed by the public upon

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[1]Some of the media investigations of the causes of bribery in the healthcare sector are summarized as follows. China Daily (2011) reports that 'the average salary of doctors is only 1.19 times greater than what is made on average by people in the rest of society'. Financial Times (2013) reveals that '[m]ost doctors only make 5,000 to 6,000 yuan (US$812 or US$974) a month in salary, but they are making hundreds of thousands of dollars a year in kickbacks'. Daily Mail (2014) points out that '[l]ow salaries and skimpy budgets drive doctors, nurses and administrators to make ends meet by accepting money from patients, drug suppliers and others'. Yang and Fan (2012), a doctor from a public hospital and the chief editor of Chinese Edition of *Lancet* respectively, write in a column that 'many physicians and surgeons consider kickbacks and bribes from drug companies as compensation for their high training costs and high professional risks' and that the severe lack of 'the implementation of existing [prescription] guidelines' makes it easier for doctors to improperly 'prescribe for financial gain'.

request on an *ad hoc* basis since 2012.

The anti-bribery blacklist used in this research was obtained from the Health Bureau of Zhejiang Province in 2011. Firms and individuals included in the list are originally from legally, administratively, and politically determined bribery cases in the region.[2] The list consists of 144 firms with complete information on the name of bribing firm and value and frequency of bribe in the healthcare sector in the province. The consequence of being blacklisted is to face a procurement ban: public hospitals and other institutions in the healthcare sector are barred from purchasing medicines or medical equipments from these firms and individuals. However, once a firm or individual has been in the list for two years without being caught for bribery again, it will be deleted from the list. Since the year of blacklisting is not available, we assume that none of the blacklisted firms were repeat offenders so that they all entered the blacklist only after 2009.

The blacklisted firms are combined with two micro data sets for more firm-level information for the period 2001-2008: (1) China Annual Surveys of Industrial Firms (CASIF) which covers state-owned firms of all sizes and other firms with annual sales above 5 million yuan (around US$700,000 in 2009 value) in manufacturing industries, and (2) QIN, a database provided by Bureau van Dijk, which contains similar firm information for wholesalers in medicine and medical equipments. Matching firms in CASIF-QIN to the blacklist allows us to identify both blacklisted and non-blacklisted firms. Since we do not know which firms have sales in Zhejiang, we restrict the sample to firms that are registered in Zhejiang, who presumably all have sales in this market. We keep 12 three-digit industries that contain at least one blacklisted firm and these industries are mainly related to the production and sales of medicines or medical equipments. We only keep firms which existed through 2008 as this is the year in which all blacklisted firms existed. We end up with a sample of 3,839 firms for the period 2001-2008, of which 24 were blacklisted bribers after 2009.

3   Results

The key question of this research is what kinds of features would increase the risk of a firm being blacklisted. Before formally investigating this question, some statistical description of the data may provide some clues. To better visualize the result, we present the comparisons between blacklisted and non-blacklisted firms in Figure 1. The data points are recovered from regressions where industry specific effects are controlled for to

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[2]The sources include People's Procuratorates, public health departments of governments, and Commissions for Discipline Inspection of the Communist Party.

ensure comparability of firms. It looks obvious that the blacklisted firms are significantly and consistently bigger than non-blacklisted firms in terms of sales and employment. Their premiums in tax contribution and profit are less marked but still visible in most of the years before they were blacklisted.

[Figure 1 about here]

A major concern about these observed premiums is that the relationship between firm size and blacklist status could be driven by some other confounding factors that would lead to a firm being caught. A most compelling suspicion is that bigger firms are financially more capable of paying bigger bribes (Svensson, 2003) and thus are more likely to be caught. Unfortunately, since we do not have data on the bribes paid by non-blacklisted firms, we cannot test the suspicion across all firms. However, since the blacklist database has information on the values of bribes paid by blacklisted firms, we can examine this suspicion on blacklisted firms. Figure 2 gives the distribution of value of bribe paid by blacklisted firms. It shows that the distribution is heavily skewed towards the left end with the mean (median) being 23 (10) thousand yuan, and, interestingly, the minimum value of bribe recorded is only 600 yuan (about 90 US$). Given the evidence-based assumption that every firm has made underground payments, this skewed distribution suggests that the blacklisting is selective and not monotonically based on the value of bribe: some firms get caught despite their extremely small bribes, while many others stay safe although they probably paid more.

[Figure 2 about here]

In Figure 3 we look directly at the relationship between the value of bribe and firm size. With all blacklisted firms included, there exists a negative correlation significant at the 5% level. However, this relationship is driven by an obvious outlier in the figure which is a very small firm who paid nearly 160 thousand yuan, more than twice as much as the second highest value. However, once this extreme value is excluded, the value of bribe seems to bear no definite relation with firm size, at least for the blacklisted firms. Combined with the above evidence, omitting bribe payments due to lack of data is not likely to be a source of bias.

[Figure 3 about here]

To more precisely depict the distinguishing features of blacklisted firms, we estimate linear probability models based on a cross section of firms as follows:[3]

$$Blacklist_{i,2009} = \alpha + \mathbf{X}_{i,\overline{2001,...,2008}}\boldsymbol{\beta} + \epsilon_i, \qquad (1)$$

where the dependent variable $Blacklist_{i,2009}$ is the indicator of whether firm i was blacklisted after 2009, $\mathbf{X}_{i,\overline{2001,...,2008}}$ is a vector of firm characteristics averaged across all years of 2001-2008, and the ϵ_i is the error term, assumed to be idiosyncratic white noise.

The baseline results are reported in Table 1, where four alternative variables are adopted as proxies for firm size or financial status: sales, employment, tax contribution, and profit. They are included separately to avoid multicollinearity. We include firm ownership dummies (state- and foreign-controlled) with private firms being the reference group. Firm age is added to capture any possible effect of firm's market experience on the propensity of getting blacklisted (or rather, avoiding getting blacklisted). Industry fixed effects are controlled for throughout all specifications to net out any unobserved industry-specific time-invariant effects on the chance of getting caught. The estimated effects of sales and employment turn out to be significantly positive but economically small, whereas the effect of tax contribution or profit is indistinguishable from zero. Our interpretation is that the local government tends to blacklist some of the big firms but not financially well-performing ones. A robust pattern that emerges from all specifications is that state-controlled firms are 6%-8% less likely to be blacklisted than private players in the market, thus in a significantly safer position. Firm age only has a marginal impact.

[Table 1 about here]

Given that bribery is commonplace, the above findings imply that firms are not targeted on a level ground. Bigger firms seem to be in a slightly riskier position because the local government deliberately picks some visible players to perhaps demonstrate its intention of cracking down on corruption. Meanwhile, state-controlled enterprises appear to be more protected than private firms because of their political and economic importance to the government. Together, the findings probably suggest a trade-off faced by an autocratic government, i.e. between "pretending" to be intolerant on corruption and maintaining a stake in the economy through its business agents.

We then further investigate whether the effects of firm size and performance differ across firms of different ownership types. The differential effects are estimated from the interaction terms between the size or performance variables and ownership dummies. The

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[3]We also tried using probit and logit models and the results remained similar.

results are reported in Table 2. It is clearly shown that as found earlier state ownership has an invariably protecting role for firms. The effect of firm size or performance on the propensity of getting blacklisted is virtually identical to previously estimated, and the effect does not differ across ownership types. To be precise, for all ownership types firm size increases the risk of being blacklisted while tax contribution or profit has no effect.

[Table 2 about here]

More intriguingly, state ownership seems to protect firms from getting blacklisted, a finding consistent with Fisman and Wang (forthcoming) and Eberhardt *et al*. (forthcoming) who show that under various circumstances political connections to the state power in China offer a shelter against regulations. A take-away implication is that in a business environment characterized by a weak rule of law and a strong rule of government, excessive regulations may come at a welfare cost: regulations can be used as a protectionist tool to shield inefficient players from competition and thus beget more distortions.

4   Concluding Remarks

In this paper we present the first evidence on why in a corruption-pervasive country only some firms get caught for bribery while others get away with it. Combining a sample of manufacturing firms and a blacklist of bribers in the healthcare sector of a province in China, we show that, instead of being based on bribery facts, the government-led blacklisting is selective: while economically visible (bigger) players are more likely to be blacklisted, state-controlled firms are more protected than private and foreign counterparts. This finding can be rationalized by the argument that the government can use regulations in a delicate and subtle way to impose its preferences when the rule of law is weak and the rule of government is strong, and thus creates additional distortions in a partially reformed economy.

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**Table 1**. Firm characteristics and propensity of getting blacklisted

	LHS: 1(blacklisted after 2009)			
	(1)	(2)	(3)	(4)
Sales	0.006***			
	(0.001)			
Employment		0.006***		
		(0.001)		
Tax			0.001	
			(0.001)	
Profit				0.000
				(0.000)
State	-0.067***	-0.068***	-0.082***	-0.064***
	(0.021)	(0.021)	(0.025)	(0.021)
Foreign	-0.003	-0.003	-0.002	0.002
	(0.004)	(0.004)	(0.005)	(0.004)
Age	$5\times$E-04***	$4\times$E-04**	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)
Industry specific effects	Yes	Yes	Yes	Yes
Observations	3,706	3,705	2,782	3,707
Adjusted R-squared	0.116	0.112	0.117	0.108

Note. ***, **, and * indicate significance at the 1%, 5% and 10% levels respectively. Standard errors are in parentheses.

Table 2. Interactions of firm characteristics and ownership types

	LHS: 1(blacklisted after 2009)			
	(1) X=Sales	(2) X=Employment	(3) X=Tax	(4) X=Profit
X	0.006*** (0.001)	0.006*** (0.001)	0.001 (0.001)	0.000 (0.000)
State*X	0.004 (0.019)	-0.013 (0.017)	0.011 (0.016)	-0.001 (0.003)
Foreign*X	-0.000 (0.003)	0.004 (0.004)	0.000 (0.002)	0.001 (0.001)
State	-0.064** (0.026)	-0.070*** (0.021)	-0.066* (0.035)	-0.074** (0.030)
Foreign	-0.003 (0.004)	-0.001 (0.004)	-0.002 (0.005)	0.004 (0.005)
Age	$5\times$E-04*** (0.000)	$4\times$E-04** (0.000)	0.001*** (0.000)	0.001*** (0.000)
Industry specific effects	Yes	Yes	Yes	Yes
Observations	3,706	3,705	2,782	3,707
Adjusted R-squared	0.116	0.113	0.118	0.108

Note. ***, **, and * indicate significance at the 1%, 5% and 10% levels respectively. Standard errors are in parentheses.
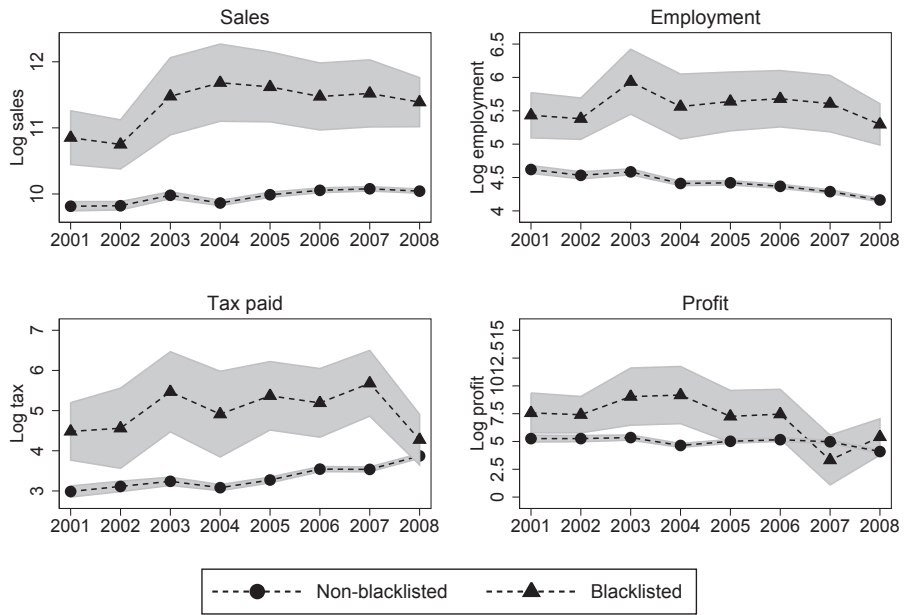
Note: shaded areas represent 95% confidence intervals. Data source: CASIF-QIN and the Blacklist.

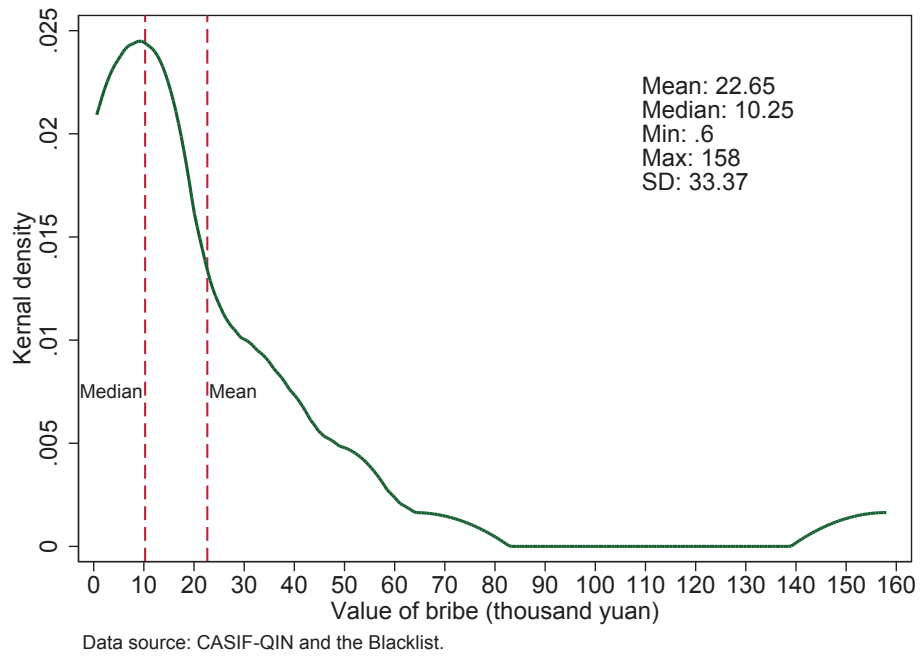**Figure 1**. Differences between blacklisted and non-blacklisted firms

Mean: 22.65
Median: 10.25
Min: .6
Max: 158
SD: 33.37

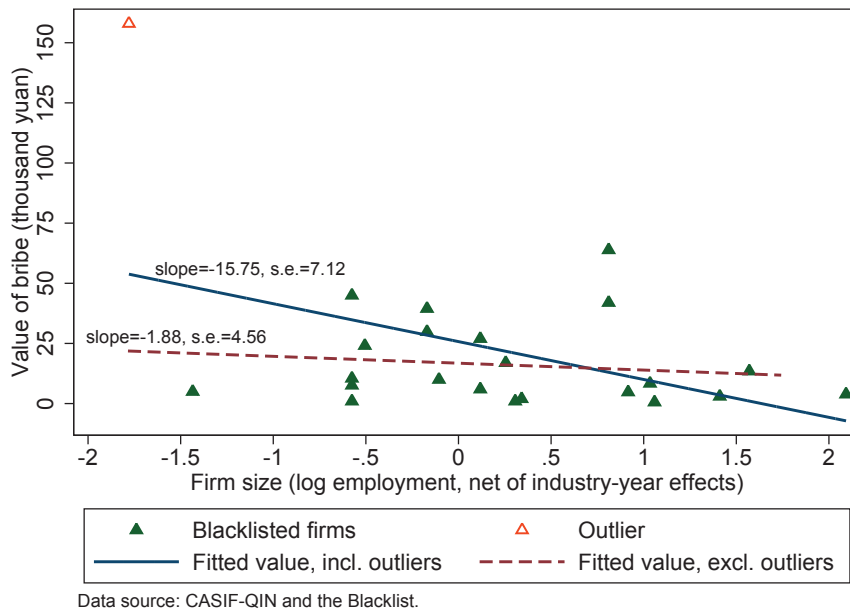Data source: CASIF-QIN and the Blacklist.

Figure 2. Distribution of value of bribe

Figure 3. Value of bribe and firm size