



Press freedom and corruption in business-state interactions

Nouf Binhadab^{a,b}, Michael Breen^{b,*}, Robert Gillanders^b

^a Princess Nourah Bint Abdulrahman University, Saudi Arabia

^b Dublin City University, Ireland

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ABSTRACT

We show that press freedom has a role in constraining business corruption. Using firm-level data, we find that countries with greater press freedom have significantly fewer incidences of bribery involving public officials. In particular, we find that a free press is associated with a substantial reduction in the percentage of firms that report corruption during interactions with tax officials and when obtaining construction permits. Furthermore, we find that fewer businesses in these countries report that corruption is the biggest problem that they face. These findings highlight the role of an independent media in combating corruption.

1. Introduction

In 2017, Telia Company agreed to pay penalties of at least \$965 million to the United States and international authorities after the media uncovered corrupt payments involving telecom contracts in Uzbekistan (Schoenberg and Dolmetsch, 2017). In 2016, VimpelCom agreed to pay \$835 million to settle a case following a media investigation of corrupt payments (Scannell, 2016). Cases of this kind illustrate the important role that the media and investigative journalists play in helping societies to detect and punish corruption. Existing studies confirm this role, finding that press freedom is associated with perceived corruption and that media attention can plausibly reduce corruption through several channels, including enhanced corporate governance.

We find that a free press reduces business corruption across multiple indicators of both press freedom and corruption. Using the percentage of firm-state interactions in which a bribe was expected or requested as a proxy for firms' engagement with corruption, we show that firms in countries with a free press report substantially less corruption. Moreover, we show that a free press is associated with having fewer businesses in these countries report that corruption is the biggest problem that they face. Additionally, we find that a free press is associated with a substantial reduction in the percentage of firms that say a bribe was expected or requested during interactions with tax officials. The latter finding is in line with the content of the Panama and Paradise papers, which revealed the use of offshore financial centers for illegal purposes, such as tax evasion and fraud.¹

* Corresponding author.

E-mail address: michael.breen@dcu.ie (M. Breen).

¹ These papers were released by *Süddeutsche Zeitung* (SZ), a German newspaper, with the cooperation of the International Consortium of Investigative Journalists (ICIJ). They contain confidential information related to offshore investments by people and companies, including politicians and top government officials.

Our findings have several implications. First, they suggest that a free press can significantly reduce the cost of doing business, as previous studies find that bribery imposes large costs on a business (Kaufmann and Wei, 1999).² Second, our findings add to the substantial literature on the importance of a free press in combating corruption in other contexts (see, e.g., Flavin and Montgomery, 2019), by showing that this association is evident when we measure corruption using firms' experiences. Finally, our results highlight the importance of understanding the media environment for firms that engage in cross-border activities.

This article is organized as follows. In Section 2, we review the literature on the role of the media as a monitor of corruption. In Section 3, we outline our data and method. Section 4 describes our findings regarding the overall association between corruption and the press freedom index. Section 5 describes our findings from models that interact the press freedom index with the level of democracy. Section 6 concludes this article with a discussion of the implications of our findings for research and policy.

2. The media as a monitor of corruption

2.1. Theory

The notion that an independent media can play an important role in controlling corruption has good theoretical support. The Becker (1968) model of crime suggests that would-be criminals weigh the expected costs of crimes against their expected benefits. The model finds that would-be criminals are dissuaded from committing a crime if the punishment or likelihood of detection increases. To the extent that an independent media increases the likelihood of being caught (and imposes reputational cost), a free press should act as a deterrent to individuals who are contemplating the commission of a crime. In our study, these individuals are either public officials who elicit bribes from businesses through *extortive corruption* or businesses that offer bribes to obtain favorable treatment, whether through collusion with public officials—*collusive corruption*—or in response to extortive corruption. The role of the press in moderating corruption rests critically on the assumption that these individuals are sensitive to relatively small changes in the odds of detection. In an experimental bribery game, Abbink et al. (2002) present findings that support this assumption, showing that a very low chance of being caught, combined with severe punishment, significantly reduces the likelihood of offering or accepting a bribe. Because giving or receiving a bribe is a criminal act in most jurisdictions, the more that the media increases the odds of detection, the less that firms engage in corruption.

Two relevant streams of literature support the link between press freedom and corruption in business. The first stream finds a strong relationship between press freedom and the perception of corruption.³ Brunetti and Weder (2003), for example, argue that press freedom can be used as an external control on corruption and test this argument using cross-country data on 125 countries over the period 1994–1998. They find that an improvement in press freedom of one standard deviation reduces corruption by 0.4–0.9 points (on a scale from 0 to 6). Adsera et al. (2003) find that a well-informed electorate, as captured by the interaction of newspaper circulation and democracy, explains between half and two-thirds of the variance in the levels of government performance and corruption, using panel data on 100 countries over the period 1980–1995 and a cross-national analysis of indicators of corruption and governance effectiveness in 1997–1998. Lindstedt and Naurin (2010) test whether transparency, such as press freedom, is enough to change outcomes, finding that transparency requirements that are implemented by an agent are less effective than transparency institutions without control by an agent, such as a free press. Tang et al. (2019) find that the level of social media use in a country affects the level of perceived corruption there. Further studies have extended the literature to incorporate alternative estimation strategies (Freille et al., 2007). Lima and Delen (2020) take a machine learning approach and do not find evidence that the media are likely to reduce corruption but find that government integrity and property rights are among the best predictors. Charron (2009) considers the role of sociopolitical integration, and Chowdhury (2004) and Kalenborn and Lessmann (2013) examine the joint impact of democracy and press freedom on corruption. We consider the democracy strand of the literature in further detail in Section 5.

The second relevant strand highlights the relationship between the media and firm behavior. These papers suggest that media attention can reduce business corruption through several channels. First, it can put pressure on directors and managers to act in line with acceptable social norms, such as honesty and integrity. Dyck et al. (2008), for example, find that coverage in the Anglo-American press increases the probability that a Russian firm's corporate governance violation will be reversed. Jaakson et al. (2019) find that business managers' opinions regarding corruption are influenced by normative concerns. Although these studies link media attention to corruption, many other studies highlight its link to other relevant dimensions of firm behavior that often feature in corruption-related scandals. Bednar (2012), for instance, shows that media attention is an important determinant of job security for chief executive officers, executive compensation, and board membership.

Second, media attention has been shown to have a remarkable impact on firms' practices and corporate policies. El Ghouli et al. (2016) show that firms located in countries where the media have more freedom engage in more corporate social responsibility (CSR) activities. Krishnamurti et al. (2018) find that firms that are more engaged in CSR activities are less exposed to corruption risk. Furthermore, they find that, in emerging countries, CSR engagement reduces corruption risk only when press freedom is in place. Kanagaretnam et al. (2018) demonstrate that a privately owned and competitive media sector is associated with a lower probability of

² In addition to these direct costs, recent studies also find that corruption affects the business environment through excessive red tape (Breen and Gillanders, 2012), less efficient public investment (Del Monte and Papagni, 2001), and poor infrastructure (Gillanders, 2014; Kenny, 2009; Tanzi and Davoodi, 1997), not to mention broader negative effects on society.

³ The empirical literature is largely consistent on this point. However, Vaidya (2005) presents a theoretical model that allows for collusion between an independent media and the government. The model suggests that perverse incentives are possible that favor corruption.

aggressive tax behavior. Collins et al. (2009) find that some executives rationalize acts of corruption; thus to the extent that a free press exposes the damage from corruption, it could make such rationalization more difficult.

Finally, media attention and its attendant impact on public pressure is often critical in catalyzing support for anticorruption initiatives. For example, the Financial Aspects of Corporate Governance Committee was created in response to media and public opinion after several financial scandals in the United Kingdom, such as the collapse of Maxwell Group and the Bank of Credit and Commerce International in the 1980s.⁴

2.2. The problem with perceptions of corruption

All the studies that explore the relationship between press freedom and corruption use indices based on expert opinions of country-level corruption such as the *International Country Risk Guide* (ICRG) or Transparency International's Corruption Perceptions Index (CPI). Although the CPI and other indicators are useful resources, many researchers argue that they are potentially misleading in some contexts. Svensson (2003), Reinikka and Svensson (2006), Treisman (2007), and Fan et al. (2009) claim that they suffer from perception biases. Knack (2007) and Kenny (2009) believe that they have not kept up with reality. Finally, Razafindrakoto and Roubaud (2010) find ideological and cultural biases in experts' evaluations of corruption in sub-Saharan Africa.

In addition to these known biases, expert indices are particularly problematic in the context of our study—that is, the expert opinions that make up the CPI might respond to press freedom independently of actual corruption levels, predisposing the index to correlation with press freedom. This is because experts rely on information to form opinions and might perceive the absence of a free press, along with other restrictions on information, as evidence of malfeasance, regardless of actual corruption levels. Without recourse to data on actual corruption levels, we cannot be certain that a free press reduces corruption. A free press might influence corruption perceptions even if the media are ineffective at curbing real corruption. Indeed, there is no shortage of studies that question whether the media are doing a good job, particularly in societies that are highly polarized and tend to value hypercritical infotainment over critical impartiality and investigative journalism (Hallin and Mancini, 2004).

Finally, even if one considers the CPI a valid indicator of actual corruption, it is not ideal for studying corruption in business because it does not distinguish between grand and petty corruption. The media might direct their gaze disproportionately on grand corruption or corruption that preys on particular individuals, while neglecting less sensational types of everyday corruption. An association between press freedom and one type of corruption does not imply an association with another.

2.3. Firms' corruption experiences

Scholars are increasingly turning to survey-based approaches to measure the level of corruption in different contexts. An appropriately designed survey of households or firms can, according to Knack (2007: 257), "place a greater emphasis on experience and less on perceptions." These survey data inspired a plethora of new studies that explore corruption in business, including the determinants of bribery at Asian firms (Wu, 2009), how the gender of owners and managers affects bribery (Breen et al., 2017), and how bribery affects firm growth (Fisman and Svensson, 2007). Furthermore, these data enable us to consider how press freedom affects corruption in the different contexts in which a business may have dealings with the state. In some contexts, acts of corruption are more likely to be extortive than collusive. Brunetti and Weder (2003) argue that the free press is the most effective institution for combating collusive corruption because internal control agencies, such as the police or another branch of the public service, could be vulnerable to capture or to being paid off. Not only does the press have a particular role to play in principle but competitive forces might drive it to play this role in practice. The incentives of journalists to investigate different types of corruption vary. It might be the case that a story about the solicitation of bribes for electricity connections is less newsworthy and valuable than a story about a conspiracy to reduce tax payments or bypass construction regulations.

By studying corruption across different contexts in business, we can observe whether press freedom reduces corruption across the board or helps only in the more newsworthy cases of collusive corruption. Again, the ICRG and the CPI do not distinguish between these types of corruption whereas the data that we employ enable us to look at corruption in different contexts, some of which are more likely to be cases of collusion than others.

In summary, many studies find a strong link between press freedom and corruption perceptions, but no previous work examines this topic from the perspective of firms' experiences. On the one hand, the existing literature provides a clear mechanism through which business corruption should be reduced by a free press, through its disciplining of businesses and public officials. On the other hand, the inherent problems with the CPI and other perception indicators suggest that the role of press freedom may have been overstated. By using arguably more objective measures of corruption and exploring business corruption across several contexts, we demonstrate that this fear is largely unfounded.

⁴ This argument is in line with the implications from an emerging literature that sees the business press as an information intermediary (Bushee et al., 2010).

3. Data and variables

3.1. Measuring corruption

We measure corruption using the World Bank Enterprise surveys, which are representative surveys of formal firms in the manufacturing and services sectors. We use two measures in these surveys of firm involvement in corruption. The first, *Bribe*, is the percentage of transactions in which a gift or informal payment was requested or expected by a public official. The survey questions on which this percentage is based take the following form: “In reference to X, was an informal gift or payment expected or requested?” when X is seeking access to utilities, permits, or licenses or during tax inspections. The question is worded so as not to incriminate the respondent or the firm. As such, it serves as a better proxy for firms’ engagement in corruption than survey questions that use language explicitly related to bribery.

The second measure of corruption (*Obstacle*) is the percentage of firms that identify corruption as the biggest obstacle they face. Whereas the first measure captures firms’ broad experience of corruption more directly, the second measure is useful because it asks firms to locate corruption within a hierarchy of difficulties, rather than simply stating that corruption is a problem. The validity of *Obstacle* as a measure of corruption is supported by Mawejje and Sebudde (2019), who study Ugandan firms and find a negative correlation between a firm’s perception that corruption is a constraint and its expectation about future performance.

3.2. Measuring press freedom

Our primary measure of press freedom comes from Freedom House, which compiles an index based on expert assessments and an in-house analysis of newspapers and a variety of government and nongovernment sources.⁵ The index ranges between 0 (best) and 100 (worst). Furthermore, Freedom House uses a categorical approach based on the value of the index, dividing countries into groups whose press is considered “free,” “partly free,” and “not free.” We employ both the raw index and these distinctions in our analysis. In addition, we use an alternative measure of press freedom produced by Reporters Without Borders (RWB), which produces a global ranking of press freedom based on an expert questionnaire and data on abuses and acts of violence against journalists during the period of assessment.

3.3. Summary statistics

As the Enterprise Surveys are not carried out in every country every year, we have an unbalanced panel. Our combined dataset consists of 110 countries over the period 2006–2016. The summary statistics and definitions of our main variables of interest are in Appendix Table A1. On average, 15.28 percent of transactions involved a bribe request, but with great variation: from 0 percent of firms in Estonia to 65.2 percent in the Republic of Yemen. Interestingly, although Yemen is considered a corrupt country and is generally perceived as such, some other countries that are often ranked as highly corrupt perform well on this metric. For example, the data for Eritrea suggest that no firms paid bribes. This might indicate that firms in some autocracies might be less willing to answer honestly out of fear of reprisal (Shockley et al., 2017), reinforcing the need to control for democracy and political freedoms and supporting our decision to use a corruption outcome (*Obstacle*) that does not refer explicitly to firms’ involvement in bribery.⁶ On average, 7.39 percent of firms view corruption as their biggest obstacle, ranging from zero in some countries to 32.5 percent in Panama. Thus, the corruption outcomes cover a broad range across the world.

Similarly, we see considerable variation in press freedom. From 2005 to 2016, the country with the best press freedom score is Norway, with an average of 10. North Korea has the worst score, averaging 97 for this period. Overall, the average value of press freedom in our dataset is 53, varying substantially across groups of countries: the average score is 22 for countries that are members of the Organization for Economic Cooperation and Development (OECD), 58 for sub-Saharan Africa, 41 for Latin America and the Caribbean, 67 for the Middle East and North Africa, and 59 for South Asia.

3.4. Empirical approach

In this study, we estimate equations of the following form:

$$\text{Corruption}_{it} = \beta_0 + \beta_1 \text{Press}_{it} + \beta x_{it} + \varepsilon_{it}$$

where Corruption_{it} reflects the average corruption experience of firms in country i and time t , Press_{it} is a measure of press freedom, x_{it} is a vector of control variables, and ε_{it} is an error of the usual type. In addition, we control for a variety of factors that have been identified in the previous literature on corruption and press freedom, namely, democracy (using the Polity IV index), gross domestic product

⁵ The full methodology is available at <https://freedomhouse.org/report/freedom-press-2017-methodology/>.

⁶ Our results are robust to dropping the three countries—Eritrea, Estonia, and Israel—in which no firms report any bribery.

Table 1
Corruption and Press Freedom.

	(1) OLS <i>Bribe</i>	(2) RE <i>Bribe</i>	(3) OLS <i>Bribe</i>	(4) OLS <i>Obstacle</i>	(5) RE <i>Obstacle</i>	(6) OLS <i>Obstacle</i>
Press Freedom Index	0.21*** (0.076)	0.18** (0.087)	0.17** (0.077)	0.10*** (0.035)	0.09** (0.037)	0.09** (0.036)
Democracy	-0.00 (0.281)	-0.01 (0.318)	0.07 (0.284)	0.21 (0.132)	0.18 (0.146)	0.18 (0.132)
GDP per capita (log)	-5.14*** (0.907)	-4.72*** (1.082)	-5.81*** (1.134)	0.01 (0.419)	-0.18 (0.436)	0.05 (0.541)
Openness (log)	3.71 (2.262)	3.37 (2.575)	2.48 (2.214)	2.03** (1.021)	1.99* (1.128)	2.12** (1.015)
OECD			-1.69 (2.194)			-2.97* (1.532)
Sub-Saharan Africa			-7.80** (3.181)			-0.90 (1.387)
Latin America and the Caribbean			-13.83*** (4.727)			0.40 (2.453)
Constant	43.37*** (9.291)	44.37*** (10.162)	43.40*** (11.574)	1.47 (4.239)	4.34 (4.448)	-2.22 (5.899)
Observations	193	193	193	193	193	193
R-squared	0.364	0.349	0.415	0.100	0.091	0.119
Year dummies	YES	YES	YES	YES	YES	YES

Notes: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

(GDP) per capita, and openness to international trade (defined as exports plus imports as a share of GDP). The last two variables come from the World Development Indicators.⁷

The correlation of press freedom with its lag is 0.9944; so, given the time invariance of our main variable of interest, we do not estimate fixed effects models, using pooled ordinary least squares (OLS), instead, as our main estimation method.⁸ Following existing studies (Brunetti and Weder, 2003; Chowdhury, 2004; Kalenborn and Lessmann, 2013), we also estimate random effects models to account for unobserved heterogeneity, though we acknowledge that the random effects assumption might not be valid, as the country-specific effect is plausibly correlated with the independent variables.⁹ Our preferred specification, therefore, includes dummies for sub-Saharan Africa, Latin America and the Caribbean, OECD member countries, and year dummies. They capture broad cultural, historical, political, and economic characteristics and trends. These characteristics surely matter, as Scholtens and Dam (2007) find that cultural values are associated with business ethics—in particular, that firms in countries with high individualism scores pay more attention to their ethical policies, including governance of corruption and bribery. To capture the cultural variation within these broad regional groupings, we included the Konjunkturforschungsstelle (KOF) Globalization Index, indicator of social globalization in additional tests, as it is an indicator that includes information on cultural globalization. We find that it is a statistically significant predictor but does not alter our findings with respect to corruption.¹⁰

Several previous studies have employed instrumental variable strategies to address concerns regarding endogeneity. Instruments such as the share of the population that is Protestant and the share that speak a major European language have been used (Brunetti and Weder, 2003) and so have ethnic fractionalization and legal origin (Chowdhury, 2004). The notion that these country characteristics influence corruption only through an effect on press freedom is highly debatable, and, in any event, these instruments fail standard diagnostic tests in the case of our corruption measures, which are based on experience with corruption. Indeed, it is very difficult to envision an instrument that would satisfy the exclusion restriction. Essentially, one would need to think of a historical or cultural variable that had no plausible direct effect on corruption.

⁷ We do not include standard Worldwide Governance Indicators (WGI), such as the rule of law and government effectiveness, in our specifications because they are highly correlated with measures of corruption. For example, the correlation between the WGI's rule of law and control of corruption is 0.94. Thus, any of these indicators tend to overwhelm the significance of press freedom, as one measure of corruption is explaining another.

⁸ In fixed effects models, we do not find evidence of a significant association; however, the high degree of serial correlation evident in our data (the correlation of press freedom with its tenth lag is 0.94) and the Hausman test both suggest that the fixed effects model is not appropriate for our data. To perform the test, we used the Hausman command in Stata 16, obtaining a test statistic of 1.55, with a p -value of 0.8173, suggesting that a fixed effects model is not appropriate.

⁹ We conducted a likelihood-ratio test for the random effects model to probe the significance of the unobserved country-level heterogeneity. The test returns a value of 39.75 ($p = 0.000$). Although it indicates that the unobserved heterogeneity has predictive power, according to Wooldridge (2010, 469–524), it is not advisable to conduct this test if any kind of clustering or robust standard errors are used. Therefore, we argue that the test does not change our conclusions regarding the importance of press freedom and the other covariates. It also remains the case that the results of the random effects model are in line with our preferred specification.

¹⁰ Additional test results are available from the authors on request as part of the replication set for this paper.

Table 2
Robustness.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	<i>Bribe</i>	<i>Obstacle</i>	<i>Bribe</i>	<i>Obstacle</i>	<i>Gift</i>	<i>Gift</i>	<i>Gift</i>
Freedom House “not free”	10.05*** (3.417)	8.12*** (1.502)					13.85*** (4.764)
Freedom House “partly free”	0.08 (1.823)	5.65*** (1.213)					6.11** (2.931)
Reporters Without Borders Press Rank			0.08*** (0.027)	0.04*** (0.014)		0.10** (0.041)	
Press Freedom Index					0.17 (0.120)		
Democracy	0.22 (0.301)	0.18 (0.114)	0.05 (0.241)	0.17 (0.120)	-0.35 (0.431)	-0.31 (0.355)	-0.24 (0.434)
GDP per capita (log)	-5.88*** (1.105)	0.48 (0.534)	-5.65*** (1.158)	0.19 (0.540)	-6.22*** (1.566)	-5.93*** (1.572)	-5.69*** (1.489)
Openness (log)	2.03 (2.141)	2.42** (0.964)	3.78 (2.347)	2.80*** (1.053)	5.16 (3.273)	6.83* (3.513)	5.30 (3.240)
OECD	-3.75 (2.328)	-1.68 (1.490)	-2.67 (2.019)	-3.52** (1.433)	1.55 (2.896)	0.59 (2.989)	1.94 (3.163)
Sub-Saharan Africa	-7.29** (3.068)	-0.18 (1.385)	-6.28* (3.324)	0.09 (1.467)	-5.79 (4.368)	-3.71 (4.726)	-4.64 (4.281)
Latin America and the Caribbean	-12.63*** (4.737)	0.38 (2.361)	-12.13** (4.679)	1.39 (2.426)	-15.46*** (5.766)	-13.64** (5.837)	-14.78*** (5.669)
Constant	46.06*** (9.935)	-7.22 (5.226)	60.34*** (11.770)	1.52 (5.384)	88.48*** (18.506)	85.16*** (17.362)	62.73*** (14.455)
Year dummies	YES	YES	YES	YES	YES	YES	YES
Observations	193	193	193	193	191	191	191
R-squared	0.452	0.197	0.418	0.128	0.373	0.387	0.391

Notes: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Furthermore, the time invariance of press freedom limits the range of alternative empirical approaches that we can use to test the robustness of our findings. For example, when *Bribe* is the dependent variable, we obtain a coefficient of 0.16 on the lagged press freedom index, whereas the contemporaneous index yields 0.17. Likewise, using the lag of *Obstacle*, we obtain a coefficient of 0.08, but when we use contemporaneous values, the coefficient is 0.09. All the aforementioned coefficients are statistically significant at the $p < 0.05$ level. As such, alternative estimators such as the generalized method of moments are not reliable, as lagged values of press freedom are correlated with the endogenous regressors but are not plausibly orthogonal to the error.

4. Results

4.1. Main results

Our main findings are presented in Table 1. Columns 1–3 report the estimates for our main dependent variable of interest, *Bribe*, the percentage of transactions in which a gift or informal payment was requested by a public official. Column 1 is our base specification; column 2 presents estimates from a random effects model, and column 3 adds dummy variables to our base specification that capture broad global heterogeneity. Columns 4–6 repeat these specifications using *Obstacle*, the percentage of firms that identify corruption as their biggest obstacle.

With regard to our first dependent variable, we find that a free press is associated with a statistically significant reduction in *Bribe*. This relationship holds in our random effects model, which allows for unobserved heterogeneity and when global dummy variables are added to our base specification. Moreover, the effect of press freedom is substantial: an improvement in press freedom of a one standard deviation (19.63) is associated with an average reduction in the proportion of public interactions in which a bribe was requested of 4.1 percent, a substantial change when one considers that the mean bribe in our sample is approximately 15 percent (with a standard deviation of 14 percent).

For our second dependent variable, we find a strong association between a free press and *Obstacle*. We find that fewer firms in countries with press freedom report that corruption is their biggest constraint and that this association holds across all our alternative specifications. Our findings, therefore, support the notion that a free press serves as an effective deterrent to corruption in business.

Table 2 presents estimates using alternative measures of press freedom and corruption. Columns 1–2 report estimates using *Bribe* and *Obstacle* as dependent variables and Freedom House’s categories of press freedom as explanatory variables. This scale ranks

Table 3
Corruption in All Contexts.

	(1) Collusive Tax	(2) Collusive Construction	(3) Extortive Water	(4) Extortive Electric	(5) Extortive Import	(6) Extortive Operating	(7) Procurement Government contract
Panel A: Continuous Press Freedom							
Press Freedom Index	0.19** (0.082)	0.19* (0.108)	0.11 (0.118)	0.05 (0.079)	0.00 (0.123)	0.11 (0.102)	0.15 (0.129)
Constant	59.89*** (13.219)	76.28*** (16.702)	78.73*** (18.691)	79.36*** (13.109)	74.41*** (19.090)	73.41*** (15.988)	80.00*** (20.030)
R-squared	0.411	0.352	0.321	0.427	0.250	0.282	0.269
Panel B: Categorical Press Freedom							
FH “not free”	10.78*** (3.544)	10.09** (4.956)	6.94 (5.305)	6.06 (3.763)	4.58 (5.107)	11.09** (4.366)	9.74 (6.574)
FH “partly free”	0.34 (1.820)	-2.02 (3.497)	-1.36 (3.543)	-0.87 (2.157)	-4.45 (2.861)	-0.94 (3.399)	4.90 (4.589)
Constant	46.50*** (10.444)	66.49*** (15.225)	73.67*** (14.664)	80.06*** (12.496)	47.70*** (16.046)	61.06*** (12.966)	79.01*** (19.796)
R-squared	0.446	0.383	0.338	0.445	0.279	0.324	0.274
Observations	193	193	182	191	191	191	190
Year dumm.	YES	YES	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES	YES	YES

Notes: All models contain controls for democracy, GDP per capita, openness to international trade, and global region. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

countries as free (0–30), partly free (31–60), and not free (61–100). This is a worthwhile exercise, as small changes in the score might not be meaningful and there could conceivably be threshold levels of press freedom required for the relationship with corruption to become meaningful. In this exercise, we use dummy variables for not free and partially free—the base category is free. Column 1 demonstrates that being not free, compared to free, is associated with an increase in *Bribe*. More specifically, *Bribe* is 10 percent higher in countries considered not free relative to those that are free. Interestingly, no statistically significant difference is found between countries that are partly free as opposed to those with full press freedom. Countries that lack a free press or have a partly free press do appreciably worse on *Obstacle*. Columns 3–4 repeat these specifications, substituting Freedom House’s indicator of press freedom with the Reporters Without Borders’ indicator. These tests show that an increase in press freedom is associated with less corruption across both measures of corruption.

Columns 5–7 present estimates using an alternative measure of corruption: the percentage of firms expected to give gifts to public officials “to get things done.” The underlying survey question is:

We’ve heard that establishments are sometimes required to make gifts or informal payments to public officials to “get things done” with regard to customs, taxes, licenses, regulations, services, etc. On average, what percentage of total annual sales, or estimated total annual value, do establishments like this one pay in informal payments or gifts to public officials for this purpose?

The question is worded so that respondents will not incriminate themselves; instead of being asked whether their firm is expected to give gifts, it refers to “establishments like this one.” Our central result is robust to several of these alternative indicators of corruption and press freedom. In column 5, our continuous measure of press freedom is not associated with corruption, as measured by informal gifts. However, the association is strong in columns 6 and 7, which use the categorical indicators from Reporters Without Borders and Freedom House, respectively. Together, these findings suggest the existence of a meaningful association between corruption in business and press freedom across multiple indicators.

We performed two additional robustness checks. First, we present estimates using the individual political, legal, and economic components of the press freedom index. The results, presented in Appendix Table A2, show that the political and legal components are associated with *Bribe* and *Obstacle*, whereas the economic component is not. In a final robustness check, we clustered the standard errors at the country level to enable the correlation of error terms within a given country.¹¹ This is problematic, given these particular data, as we have 193 observations spread across 110 countries. Because the number of observations for each country is low (one or two, occasionally three), there is not much clustering and thus no need for robust standard errors.¹² However, if we cluster in this way, our main result with respect to *Bribe* remains significant at the $p < 0.1$ level, and our conclusions regarding *Obstacle* are unchanged.

¹¹ The results from this test are available from the authors on request as part of the replication set.

¹² In addition, we repeated our main specifications in Table 1 (columns 1, 3, 4, and 6) with a single observation per country, and our results remain statistically significant across these specifications. The results and replication set are available from the authors on request.

Table 4
Democracy, Press Freedom, and Corruption.

	(1) <i>Bribe</i>	(2) <i>Obstacle</i>	(3) <i>Tax</i>
Press Freedom Index	0.01 (0.117)	-0.00 (0.049)	0.04 (0.092)
Democracy	-1.92** (0.968)	-0.90** (0.416)	-0.99** (0.412)
Press freedom*Democracy	0.03** (0.013)	0.01*** (0.005)	1.55*** (0.525)
GDP per capita (log)	-5.10*** (1.134)	0.43 (0.569)	-5.16*** (1.087)
Openness (log)	3.16 (2.222)	2.49** (1.011)	2.82 (2.233)
OECD	-1.01 (2.227)	-2.60* (1.461)	-3.73 (2.392)
Sub-Saharan Africa	-8.80*** (3.124)	-1.44 (1.393)	-9.02*** (3.218)
Latin America and the Caribbean	-14.11*** (4.690)	0.24 (2.440)	-13.17*** (4.839)
Constant	68.95*** (12.781)	6.86 (5.979)	68.38*** (13.359)
Year dummies	YES	YES	YES
Observations	193	193	193
R-squared	0.436	0.154	0.453

Notes: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

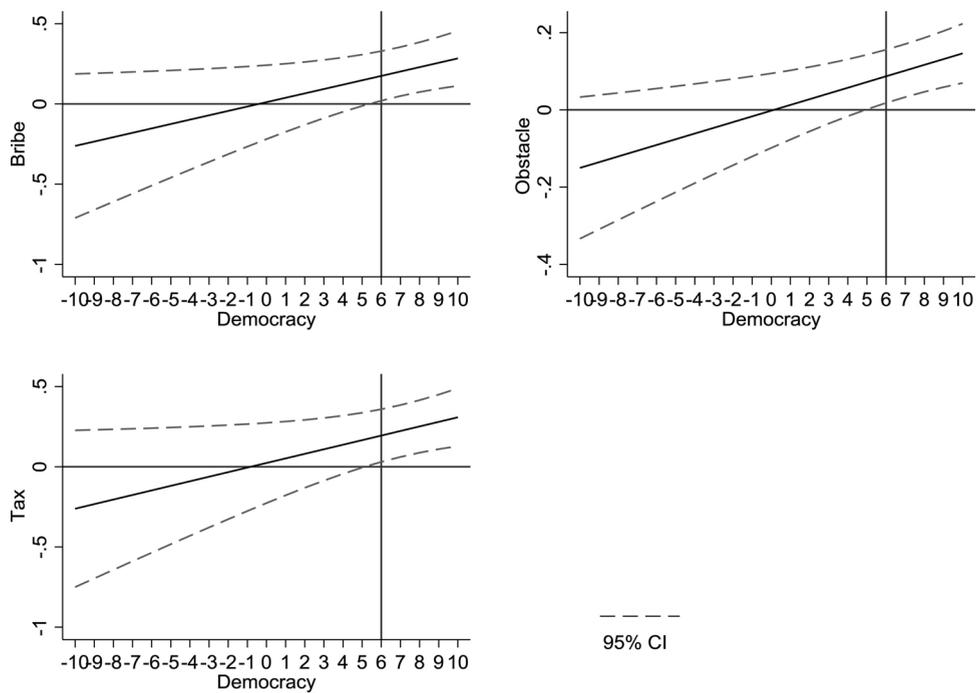


Fig. 2. The Marginal Effect of Press Freedom on Corruption at Varying Levels of Democracy.

construction are more salient to media consumers, and therefore the press has a stronger incentive to investigate these types of interactions between firms and the state, irrespective of their collusive or extortive character. In either case, we conclude that the press is an effective deterrent against only certain types of corruption.

5. Democracy

One might suspect that only democracies have a free press. From this perspective, our measure of press freedom simply captures the effect of democratic institutions and is correlated too highly with our measure of democracy. Fig. 1 illustrates the association between press freedom and democracy. The solid reference lines denote the generally accepted thresholds for full democracy (Polity IV score > 6) and press freedom (Freedom House free category = [0, 30]) and thus enable us to divide our data into democracies and non-democracies that do or do not have a free press. The dashed reference line indicates the threshold separating Freedom House's free and partly free press freedom categories. The results of this exercise confirm that democracy and press freedom often go together and that the co-occurrence of autocracy and press freedom is extremely rare. In fact, we find only one case—Suriname, which technically qualifies as a nondemocracy with a free press. Interestingly, we observe that some full democracies, such as Turkey and Pakistan, are ranked as not free in Freedom House's categorization. In addition, a substantial number of countries have a democratic government but only a partly free press. In summary, any combination of democracy and press freedom is technically possible.

One might also ask whether a free press is particularly effective in countries with democratic—that is, accountable—institutions. This is important from a policy-making standpoint, as efforts to promote a free press might combat corruption only in such environments—perhaps as the press has the power only to expose, but not to punish. Businesses might also benefit from an appreciation of the interactions between various institutions before undertaking activities in a country. The hypothesis that democracy moderates the effect of press freedom on corruption has considerable support in the literature that measures corruption using the CPI and other perception-based indices. Examining a panel of 129 countries from 1980 to 2007, [Bhattacharyya and Hodler \(2015\)](#), for example, develop and test a model of the role of media freedom and democratic institutions, finding that they are complementary in the fight against corruption. [Kalenborn and Lessmann \(2013\)](#) study a cross section of 170 countries from 2005 to 2010 as well as a panel of 175 countries from 1996 to 2010 to analyze the joint impact of democracy and press freedom on corruption, finding that they are complements, rather than substitutes. A further study finds that the association between a free press and corruption is moderated by the level of political and social openness, often, but not exclusively, a feature of democracy ([Charron, 2009](#)).

Table 4 introduces an interaction term between democracy and press freedom to our main specification. When we considered the additive effects of these variables in Table 1, only press freedom is associated with corruption; the level of democracy is statistically insignificant. When interacted, however, the interaction term captures the possibility that different combinations of press freedom and democracy have compound effects that are greater than the sum of their separate effects. Columns 1–3 present estimates for our main dependent variables, *Bribe*, *Obstacle*, and *Tax*. We include the latter variable in our tests because of our previous finding, which suggests that press freedom is more likely to play a role in this specific context.¹⁵

We find that the interaction term is statistically significant in all models where it is included, suggesting that the effect of press freedom is moderated by the level of democracy. Fig. 2 graphs the marginal effect of press freedom at different levels of democracy across our three corruption indicators, holding our control variables constant at mean values. The vertical reference line marks the accepted threshold for democracy on the Polity IV scale. Fig. 2 shows that the interaction is significant only above the democratic threshold of 6, where the vertical reference line with 95 percent confidence interval no longer crosses the zero horizontal line. The only exception is for *Obstacle*, for which it is significant above 5. What these panels suggest is that the statistical relationship we observe is evident only at higher levels of democracy. In other words, the effect of improvements in press freedom becomes stronger as we move along the democratic axis, but only at or very near the threshold for full democracy. By contrast, at lower Polity IV scores, press freedom has no statistically significant effect on corruption.

Therefore, on average, press freedom plays an important role in democratic countries and in those transitioning to democracy or backsliding to nondemocratic government. People and firms pursuing opportunities in nondemocratic countries might find it useful to consider the level of press freedom there. Even if our association of interest is evident only in democracies, it is still the case that it is evident for the majority of our observations. Specifically, freedom of the press is associated with a reduction in corruption in 116 out of 193 of our observations. This exercise confirms that our main results are not applicable only to a few democratic countries that happen to enjoy press freedom.

6. Conclusion

The important role of an independent media in combating corruption will come as no surprise to scholars of corruption. Many studies have demonstrated a strong link between media attention and corporate governance. The role of the media is evident in cases such as the release of the Panama Papers and the Paradise papers, which revealed the widespread use of offshore financial centers for illegal purposes. This investigative journalism often comes at a high price: According to [Transparency International \(2018\)](#), between 2012 and 2017, 368 journalists were murdered, at least 70 of whom were investigating corruption-related cases.

What has received less attention is the role of an independent media in constraining less sensational types of corruption in business,

¹⁵ We find no statistically significant association in the other contexts in business in which we tested the interaction of democracy and press freedom.

such as small bribes to obtain licenses and permits. Previous work presents strong evidence that the media shape perceptions of corruption, but no previous studies consider their role in shaping everyday corruption, as seen through the eyes of ordinary businesses. Furthermore, previous studies do not show which type of corrupt acts—extortive or collusive—the media are better at exposing. Our findings suggest that press freedom helps to combat everyday corruption in business-state interactions. Countries with greater press freedom have significantly fewer instances of bribery involving public officials, and fewer businesses in these countries report that corruption is the biggest problem they face. Moreover, a free press is associated with a substantial reduction in the percentage of firms that say a bribe was expected or requested during interactions with tax officials and in pursuit of construction permits. Finally, it appears that press freedom is most effective in combating collusive corruption and that its impact is highly concentrated in democracies and near-democratic societies.

Corruption provides some businesses with unfair advantages while raising the cost of doing business for all. It is possible that larger firms are targeted for bribes and are better able to absorb such costs. Therefore, our findings suggest that press freedom may help to ensure a level playing field and significantly reduce the cost of doing business. For businesses, our findings suggest that understanding the media environment should be essential for firms engaging in cross-border activities. For governments and policy makers, our findings suggest that press freedom is an important weapon in the fight against corruption domestically and globally. International efforts to control corruption, such as the OECD's Anti-Bribery Convention, should be matched by efforts to promote press freedom; although it is considered a fundamental human right in several international treaties, press freedom is continually under threat around the world.¹⁶

Declaration of Competing Interest

The authors report no declarations of interest.

Appendix A

Table A1
Summary Statistics.

Variable	Definition	Source	N	Mean	Min	Max	SD
Bribe	Bribery index (the percentage of transactions in which a gift or informal payment was requested by a public official)	(1)	193	15.28	0.00	65.20	14.39
Obstacle	Percentage of firms choosing corruption as their biggest obstacle	(1)	193	7.39	0.00	32.50	5.98
Press Freedom Index	Freedom House Score; from 0 (best) to 100 (worst)	(2)	193	52.90	10.00	95.00	19.63
Tax	Percentage of firms expected to give gifts in meetings with tax officials	(1)	193	14.75	0.00	66.70	14.89
Construction	Percentage of firms expected to give gifts to get a construction permit	(1)	193	24.36	0.00	91.60	19.39
Water	Percentage of firms expected to give gifts to get a water connection	(1)	182	15.99	0.00	79.30	18.77
Electricity	Percentage of firms expected to give gifts to get an electrical connection	(1)	191	16.58	0.00	71.10	16.64
Import	Percentage of firms expected to give gifts to get an import license	(1)	191	15.12	0.00	87.70	18.79
Operating	Percentage of firms expected to give gifts to get an operating license	(1)	191	16.58	0.00	100.00	18.41
Gift	Percentage of firms expected to give gifts to public officials "to get things done"	(1)	191	26.05	0.00	90.70	20.44
Government contract	Percent of firms expected to give gifts to secure government contract	(1)	190	31.30	0.00	99.10	21.79
Democracy	Polity score; "autocracies" (-10 to -6) and "democracies" (+6 to +10).	(3)	193	4.46	-9.00	10.00	5.44
GDP per capita	GDP per capita (constant 2010 US\$) (log)	(4)	193	7.92	5.41	10.89	1.19
Openness	Exports and imports as a ratio of GDP	(4)	193	0.84	0.20	2.12	0.37

Sources: (1) World Bank Enterprise Surveys (2005–2017); (2) Freedom House (2005–2017); (3) Marshall, M.G., Jaggers, K. and Gurr, T.R., 2002. Polity IV project: Political regime characteristics and transitions, 1800–2002; (4) World Development Indicators.

¹⁶ See Article 19 of the United Nations Universal Declaration of Human Rights (1948), Article 19 of the International Covenant on Civil and Political Rights (1966), and Article 10 of the European Convention on Human Rights (1950).

Table A2
Political, Legal, and Economic Components of Press Freedom.

	(1) Bribe	(2) Bribe	(3) Bribe	(5) Obstacle	(6) Obstacle	(7) Obstacle
FH Legal	0.45** (0.199)			0.22** (0.110)		
FH Political		0.39** (0.175)			0.19** (0.082)	
FH Economic			0.43* (0.256)			0.23* (0.121)
Democracy	0.04 (0.281)	0.02 (0.271)	-0.10 (0.253)	0.16 (0.134)	0.15 (0.132)	0.10 (0.121)
GDP per capita (log)	-5.98*** (1.134)	-5.79*** (1.150)	-6.15*** (1.169)	-0.04 (0.546)	0.05 (0.544)	-0.10 (0.529)
Openness (log)	2.20 (2.199)	2.92 (2.266)	1.81 (2.166)	1.98* (1.009)	2.33** (1.030)	1.79* (0.995)
OECD	-2.07 (2.243)	-2.29 (2.141)	-1.31 (2.280)	-3.17** (1.553)	-3.28** (1.508)	-2.73* (1.645)
Sub-Saharan Africa	-8.00** (3.135)	-7.54** (3.244)	-8.71*** (3.215)	-1.01 (1.390)	-0.79 (1.418)	-1.33 (1.380)
Latin America, Caribbean	-13.64*** (4.715)	-14.48*** (4.856)	-13.32*** (4.727)	0.49 (2.464)	0.08 (2.484)	0.67 (2.420)
Constant	64.34*** (11.718)	62.44*** (12.169)	66.78*** (12.347)	4.33 (5.806)	3.44 (5.569)	5.03 (5.468)
Observations	193	193	193	193	193	193
Year dummies	YES	YES	YES	YES	YES	YES
R-squared	0.413	0.414	0.408	0.115	0.117	0.111

Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

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