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Transparency Pays? Evaluating the Effects of the Freedom of Information Laws on Perceived Government Corruption

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ABSTRACT *About 90 countries have adopted Freedom of Information (FOI) laws with the objective of facilitating citizens' right to access information on government activities expeditiously. It is argued that FOI laws increase transparency and fix accountability of the government. We provide quantitative evidence on the impact of FOI laws on perceived government corruption. Using panel data for 132 countries over the 1990–2011 period, we find that adopting FOI laws after controlling for self-section bias, is associated with an increase in perceived government corruption driven by an increase in detection of corrupt acts. In fact, FOI laws appear to increase the perception of government corruption if combined with a higher degree of media freedom, presence of NGO activism and political competition. However, the perception of government corruption tends to decline with the duration of FOI law adoption. These findings are robust to controlling for endogeneity using instrumental variables, alternative samples and estimation methods.*

1. Introduction

Does the adoption of Freedom of Information (FOI) laws designed to provide information on government activities to the public, curb government corruption? Why do countries adopt FOI laws in the first place? While there is much anecdotal evidence to suggest that FOI laws, at least among developed countries, help unearth government corruption, empirical evidence remains scant.[1] However, in a study focusing on the United States, Cordis and Warren (2014) find that strengthening FOI laws by state governments helps detect more corrupt events, and thus lower corruption in years to come. To the best of our knowledge, the only study apart from the current one which examines this question at the cross country level is the study of Costa (2013), who finds that implementing FOI laws actually increases corruption. However, the exact causal mechanism of how specifically adopting FOI laws increase corruption is not clear. Moreover, Costa (2013) does not address selection bias and identification issues. Our study differs from Costa (2013) on three counts. First, adopting FOI laws is not purely a random event. The factors which explain variation among countries in adopting FOI laws is not clear. This is the gap in the literature the present paper attempts to fill, by examining whether adopting FOI laws reduces or increases the perception of the public on government corruption after taking into account selection bias. Second, we explore causal transmission mechanisms such as free media, presence of Non-Governmental Organisation (NGO) activity and a politically competitive

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system which explains why FOI laws have a considerable impact on perceived government corruption.[2] Furthermore, we compare short run versus long run effects of FOI laws. More precisely, we test whether the perception of government corruption declines as the duration of adopting FOI laws increases. Finally, we design an identification strategy to derive exogenous instrumental variables based on the idea of spatial diffusion of transparency laws to pin down the causal effects of FOI laws on government corruption. We use the share of neighbouring countries in the geographic region and share of countries with a common language with FOI laws that are likely to be correlated with the adoption of FOI laws but may not be correlated with corruption in the country in question.

Evidence suggests that corruption is rampant in developing countries (Svensson, 2005). Jain (2001) provides an extensive review on the causes and consequences of corruption. While there is plenty of research on both the causes and consequences of corruption (Jain, 2001), little is known about the impact of FOI laws intended to provide information to the public on various government activities with regard to corruption. About 90 countries as of 2015, have adopted FOI laws with the intention of facilitating their citizens' access to various types of governmental information required to be provided expeditiously by government agencies. This provides the basis for a natural experiment to examine the impact of FOI laws on corruption. Anecdotal evidence suggests that such laws improve transparency, increase government accountability and lift the performance of bureaucratic machinery. While some argue that adopting an FOI law can curtail corruption at the top (Transparency International, 2006), others find that implementing FOI laws can actually increase corruption (Costa, 2013). It is true that adopting an FOI law to promote transparency and make government information accessible might actually increase public perception on corruption because it raises the probability of unearthing actual corruption driven by greater reporting. However, if this is true then the long run effects of this transparency should witness lower levels of actual corruption and thus lower perceived corruption.

The literature on corruption at the cross-country level so far has relied on indices that measure perceptions of corruption. These indices are less objective than data measuring the actual level of corruption in a country. Due to lack of measures gauging actual corruption, the present study makes use of perceived corruption developed by the International Country Risk Guide (ICRG) based on dimensions of political patronage, nepotism and closer ties between business and politics in the country. In spite of this drawback, it would be interesting to examine whether adopting FOI laws changes public perception on government corruption. If FOI laws infuse greater transparency into the system, the perception on corruption is expected to go down. Our panel data treatment regression analysis covering 132 countries during the 1990–2011 periods finds that FOI laws are associated with an increase in perception of government corruption, after controlling for self-section bias. This contrary finding is actually not a worrying sign and is indeed good news as it suggests that FOI laws result in more observed corruption driven by greater reporting. In fact, our interaction effects show that FOI laws appear to be more effective at increasing perceived government corruption if combined with a higher degree of media freedom, presence of NGOs and competitiveness in political participation. However, we find that the perception of government corruption falls when countries spend more time under FOI laws, suggesting a decline in the probability of actual corruption due to an increase in transparency. Our results survive a wide variety of robustness checks.

The rest of the paper is structured as follows: we present an overview of the related corruption literature and present our testable hypotheses in Section 2. Section 3 describes the panel data, and estimation strategy. Section 4 presents our results, and Section 5 concludes.

2. Hypotheses

Corruption occurs when public office is misused for private gain. Jain (2001) identifies discretionary power, economic rents associated with discretionary power, and an ineffective legal system as factors that sustain corruption. Discretionary power is the ability to implement and manage policy which is associated with economic rents, while a weak legal system is the low likelihood of detection and consequent punishment. The greater the discretionary powers of political elites, the higher the levels of corruption

will be (Johnson, Kaufmann, & Zoido-Lobaton, 1998). Corruption can be destabilising for an economy and has been found to reduce growth (Mauro, 1995; Mo, 2001). For instance, Mo (2001) finds that a 1 per cent increase in the corruption level reduces the growth rate by about 0.72 per cent and that the relationship between corruption and GDP is downward sloping. Studies also find that corruption propels the informal sector (Dreher & Schneider, 2010), discourages investments (Mauro, 1995), reduces foreign direct investment (Wei, 2000), international and domestic trade (Bjørnskov, 2012), and hampers productivity (Lambsdorff, 2003).[3] Studies also show that more corrupt countries increase the size of the shadow economy (Friedman, Johnson, Kaufmann, & Zoido-Lobaton, 2000), and lower expenditure on education and health (Mauro, 1998). Corruption can also change the composition of public expenditure away from vital sectors such as health and education (Mauro, 1998) towards sectors which involve greater secrecy and less transparency, thus entrapping a country in poverty in the long run.

Although most of these studies have focused extensively on the consequences of corruption, the determinants of corruption are plenty. While the causes of petty corruption or harassment bribes could be many, political corruption or corruption at the government level could be attributed to lack of accountability (Transparency International, 2006). Right to access government information by the public becomes critical because such access related to governmental activities, decisions, procurement and bidding decisions, allotment of public goods and services can fix the accountability of the government and its bureaucratic machinery. The right of citizens to know what their governments are doing with respect to their taxes and allocation of public and natural resources, directly reflects the anti-corruption concerns of the public. Thus, according to Costa (2013, p. 3), 'if access to information on governmental activities is denied, then elected officials will not have the threat of being voted out of office in case of a misuse of public office as a deterrent'. With the intention of promoting transparency and accountability, about 90 countries as on 2015 have adopted FOI laws which facilitate its citizens' right to access information on various governmental activities. Anecdotal evidence suggests that such laws increase transparency and fix accountability of the government. But theory provides no guidance on the direction of causality and empirical evidence on this remains not only scant but also contentious. On the one hand, Islam (2006) finds that countries which intend to promote transparency have lower levels of corruption, while on the other, Costa (2013) shows that countries that have adopted FOI laws witnessed an increase in corruption.

Those in favour of FOI laws illustrate a number of channels through which such laws can reduce corruption. First, by increasing transparency, FOI laws increase public awareness of the prevalence, causes and adverse effects of corruption. This is supported by Article 10 of the UN convention on anti-corruption which states that 'public reporting' promotes transparency as public access to information improves fighting corruption. In fact, shady corruption deals at the higher echelons of government are often made behind the scenes and therefore any attempt towards making governments available to public scrutiny is only likely to strengthen anti-corruption activities. Second, FOI laws increase political accountability by encouraging the participation of individuals and other non-governmental groups outside of the public sector. Lederman, Loayza, and Soares (2005) show that political accountability is increased by encouraging punishment of corrupt persons or by increasing information related to government activities. Islam (2006) developed a new transparency index, which measures the frequency with which governments update economic data that is made available to the public. Using the Freedom of Information Act and the length of time for which it has been in existence, Islam finds that countries which provide greater information have better governance. Third, FOI laws, by making the decision-making process more open to inspection, can improve the efficiency of, and impose greater discipline on government bodies (Banisar, 2006). The access to information is protected through a number of mechanisms ranging from constitutional provisions to instructions to various government departments. In many countries, FOI laws entail requiring government departments to provide statements through the media. In Poland, for example, the Law on Access to Public Information necessitates that public organisations publish comprehensive information on their policies and activities. Similarly, Estonia's Public Information Act requires national and local government departments to provide information and statistics on crime and economics and maintain websites to keep the public informed of their activities (World Bank, 2010). Public accessibility to government activity thus leads to increased inspection and inquiry enforcing greater discipline. Fourth, FOI laws

can lead to the design of anti-corruption measures by making the public more aware of their rights. Disclosure procedures implemented by government departments in response to FOI laws provide greater access to information for marginalised groups that do not have the resources or understanding required to obtain such information (Transparency International, 2009). These disclosure procedures have in some cases assisted investigation into corrupt practices. In South Africa for example, private access provisions of the Promotion of Access to Information Act have led individuals whose loan applications are denied on the basis of discrimination to take action against banks (Banisar, 2006). Fifth, FOI laws can contribute to reducing corruption by lowering the cost of accessing information (Djankov, McLiesh, Nenova, & Shleifer, 2003). Legal provision to disclose information through websites minimises the opportunity for indiscriminate action by government officials. As the likelihood of exposure of offence is increased due to the disclosure of information, it can restrain corrupt practices.

Increased access to information can also have the opposite effect by increasing corruption. Increased access to information can increase individuals' knowledge of whom to bribe, and permit establishing connections with those individuals. If so, additional information could in fact increase corruption (Costa, 2013). FOI laws could also reduce the quality of government officials by impinging upon their privacy and generating reputational costs (2013). A higher reputational cost can make the bureaucratic machinery risk averse thus stalling the decision making process resulting in economic policy paralyses. Therefore, FOI laws need to be accompanied by well-trained public officers, and proper institutions. For instance, FOI laws did not yield the desired results in Bosnia due to the absence of well-trained public officers and in Serbia due to time lags in information transmission (see Transparency International, 2006). Costa (2013), examining the relationship between FOI legislation and corruption, finds that countries which have adopted FOI laws experienced an increase rather than decrease in corruption, particularly in the first five years in which the laws were introduced, due to the difficulty in gaining access to information. However, Costa's (2013) findings do not suggest that FOI laws per se increase corruption. Rather, what FOI laws do is strengthen anti-corruption efforts which help unearth corruption at the higher levels of government. For instance, since the adoption of the Right to Information Act (RTI) in India, several corrupt acts have been unearthed and as a result the country has seen a dramatic increase in corruption related cases. Similarly, Cordis and Warren (2014) find in the case of the United States, that strengthening the Freedom of Information Act (FOIA), increased the probability of the detection of corrupt acts. They find that conviction rates on corruption charges approximately double after strengthening FOIA, suggesting an increase in detection probabilities. This evidence suggests that adopting FOI laws result in more observed corruption driven by greater reporting. Because more corrupt events come to light due to transparency introduced by FOI laws it is all the more likely that perception about corruption in general will increase. We therefore hypothesise that: **adopting FOI laws increases perceived government corruption**.

However, adopting FOI laws alone may not fully explain the increase in perceived government corruption. For instance, autocratic regimes might well introduce FOI laws which are weak to stave off criticism from the international community after committing to the United Nations General Assembly (UNGA) adopted resolution on the UN convention against corruption. We argue that FOI laws will be more effective when combined with press and media freedom, presence of NGO activism and political competition. Lederman et al. (2005) argue that greater political accountability, in the form of press freedom, tends to reduce corruption. Similarly, Brunetti and Weder (2003) find strong evidence of a significant relationship between media freedom and reduced corruption. Furthermore, the Transparency International report (2006) on Right to Information highlights the role of NGOs in pushing governments to strengthen the adopted FOI laws by launching campaigns to promote awareness among the public, and monitoring the functioning of such laws through questionnaires and by filing requests to test levels of responsiveness. Political competition also acts as a deterrent as opposition political groups can use FOI laws to obtain information on government contracts, allocation of natural resources and other suspected areas of political corruption to garner public support in their favour. This leads to our second hypothesis that: **adopting FOI laws will increase perceived**

government corruption when combined with a higher degree of media freedom, presence of NGOs and competitiveness of political participation.

If adopting FOI laws increases perceived corruption because the probability of detecting corrupt acts rises, then one would expect the actual level of corruption in itself to decline over the long term. In fact, Cordis and Warren (2014), examining the effect of changing from weak to strong state-level FOI laws, find that strengthening FOI laws in the United States increases detection of corruption in the short term, but helps to reduce corruption levels in the long run. If FOI laws infuse greater transparency into the system leading to an increase in corruption in the short run, then the long run effect of this transparency should witness lower levels of actual corruption and thus lower perceived corruption. Therefore, we expect **the perception of government corruption to decline as the duration of adopting FOI laws increases**.

3. Data and Methods

3.1. Model Specification

We use panel data covering 132 countries (see Online Appendix Section 1) over the 1990–2011 (22 years) period to examine the impact of FOI laws on perceived government corruption. Since FOI laws were introduced in many countries between 1990 and 2011, our study period begins from 1990 onwards. Estimating the impact of FOI laws on perceived government corruption is not straightforward because adopting such laws are not random events. Rather, countries decide whether or not to adopt such laws in the first place based on various socio-economic and political considerations thus leading to a self-selection problem.[4] Thus, applying the Ordinary Least Squares (OLS) estimator would ignore the selection bias. To circumvent this problem, we use a binary treatment regression estimator to control for selection effects. The treatment regression estimator takes account of the determinants of a country's decision to adopt an FOI law, the non-random treatment assignment, and models in non-linear specification. The non-linear prediction equation for FOI laws and the linear estimation of determinants of perceived government corruption are estimated simultaneously. The treatment regression estimator is the most appropriate in this case because modelling the decision process (of adopting an FOI law) solves the problem of selection bias. The two-step treatment regression specification estimates the probability of country i adopting an FOI law in year t in the first step which is a non-linear specification and the impact of the same on perceived government corruption in country i in year t in the second step which is a linear specification:

$$\begin{aligned} p\ (FoI = 1)_{it} &= \phi_i + \beta Z_{it} + \lambda_t + \omega_{it} \\ Gcorrp_{it} &= \varphi_i + \beta_1 FoI_{it} + \beta_2 Z_{it} + v_i + \lambda_t + \omega_{it} \end{aligned} \tag{1}$$

where, *FoI* is a discrete variable taking the value of 1 for all subsequent years since country i introduced an FOI law and 0 otherwise. As discussed, about 70 countries as of 2011 in our sample of 132 countries have passed such laws in different years since 1990 (see Online Appendix Section 2 for the list). *Gcorrp* is our dependent variable in the second step which is a measure of perceived government corruption in country i in year t. We use the ICRG corruption index which collects the data informing international business on political risk, corruption is an important consideration in this index. The corruption data are based on newspaper reports, in-house observations and the use of country experts on the basis of insidious acts of corruption at higher echelons within the political system such as excessive patronage, nepotism, job reservations, quid-pro-quo favours, secret party funding, and suspiciously close ties between politics and business. Usually this sort of corruption can breed public discontent provoking a popular backlash against the government. But this form of corruption can only be unearthed when the public at large has access to free information on various governmental activities. The ICRG codes the index on the scale of 0–6 wherein the higher the value the higher is the (perceived) corruption in that country. However, the ICRG method of computing corruption in a country is not without problems. As noted earlier the index is computed based on the

expertise of country experts using the information available in newspaper reports and media. Therefore, the ICRG index captures perceived levels of government corruption rather than actual corruption. Nevertheless, perception on corruption tends to go up when actual corruption levels in the country are high (Cordis & Warren, 2014).

The vector $\boldsymbol{Z_{it}}$ includes potential determinants of adopting FOI laws in the first step and perceived government corruption in the second step of the treatment regression estimator. The list of control variables to be captured is long and we are aware of the trap of 'garbage-can models' (Achen, 2005) or 'kitchen-sink models' (Schrodt, 2010) in which various variables are dumped onto the right hand side of the equation. Thus, as before, we adopt a conservative strategy of accounting only for known factors that affect FOI laws rather than using the 'kitchen sink' approach. First, we include per capita GDP (logged) in US$ 2005 constant prices obtained from the World Development Indicators (WDI, 2014), World Bank, as a measure of the income level of a country. We expect richer countries to be more willing to initiate such transparency measures. Per capita GDP can also act as a proxy for economic freedom, as the response of a nation to economic freedom depends on the stage of development as suggested by Billger and Goel (2009) and Pieroni and d'Agostino (2013). Hollyer, Rosendorff, and Vreeland (2011) argue that democracies are more transparent vis-à-vis autocracies especially in introducing measures of transparency. We include a measure of democracy based on the Marshall and Jaggers (2002) polity IV index[5] which is recoded on a 1–21 scale with higher values representing full democracy. Previous studies find strong resistance for resource rich countries to join such initiatives (Pitlik, Frank, & Firchow, 2010). Thus, we include a measure of natural resource rents as a share of GDP from the WDI (2014). Accordingly, the World Bank defines resource rents as unit price minus the cost of production times the quantity produced. Following others (Berliner, 2014), we also control for the level of a country's integration with the global economy using total trade as a share of GDP sourced from UNCTAD statistics. Finally, it is expected that countries which follow the rule of law are more willing to adopt transparency promoting measures. We use the Law and Order index of the Societal Infrastructures and Development (SID) project[6] developed by Nardulli, Peyton, and Bajjalieh (2013) which measures 'legal orders' and 'legal infrastructure' of countries. The legal order captures the law-based order in a constitution using 10 different variables which are integrated into a composite variable measured on a scale of 1–5 in which higher values denote law based order. The legal infrastructure gauges the status of the country's legal infrastructure using eight legal periodical variables and two legal education variables leading to a composite index on a 1–7 scale, wherein highest values denote best legal infrastructure. We combine both of these measures and take the average of an index which ranges from 1–6 in which 6 denotes the highest level of law and order. Finally, we also include a measure of '*FOI regional context*' which is the share of neighbouring countries in the geographic region that have adopted an FOI law. This is our instrumental exclusion variable which explains the adoption of FOI laws in the first step of the treatment regression estimator but is excluded from the second step of the analysis. Details about this variable are discussed in Section 3.4 below. It is noteworthy that in the first step of our analysis we include time fixed effects. However, we do not control for country-specific fixed effects in this non-linear estimation due to the incidental parameter problem (Lancaster, 2000; Wooldridge, 2002).

With respect to the control variables in the second step of the analysis, we follow previous cross-country studies on determinants of corruption viz. Aidt (2003), Dreher, Kotsogiannis, and McCorriston (2009) and other comprehensive evaluations of early studies on corruption (Mauro, 1995). Accordingly, the models control for economic development by including per capita GDP (log) as described above. A large public sector might not only increase corruption but also change the composition of public expenditure away from vital sectors such as health and education (Mauro, 1998). Consequently, we include government consumption as a share of GDP obtained from WDI 2014. We also control for population to capture the size of the economy. Evidence shows that higher levels of democracy reduce corruption (Costa, 2013). We include the democracy measure as described earlier. Montinola and Jackman (2002) find that membership in the Organisation of the Petroleum Exporting Countries (OPEC) has a significant impact on corruption, leading to increased rent-seeking. We thus include the aforementioned natural resource rents variable to capture natural

resource wealth of a country. Lastly, we also include a measure of trade openness as discussed earlier. Note that in the second step we control for both time and country fixed effects. Along with treatment regressions, we also estimate regressions using the Feasible Generalised Least Squares (FGLS) method. Using FGLS over a simple OLS allows estimations in the presence of AR (1) autocorrelation within panels and cross-sectional heteroscedasticity across the panels. The descriptive statistics are provided in Online Appendix Section 3 and details on definitions and data sources are in Online Appendix Section 4.

3.2. Heterogeneity in the Association between FOI Laws and Government Corruption

We also explore heterogeneity by introducing a set of interaction effect models in which FOI laws are interacted with certain key variables which explains the transmission mechanism:

$$Gcorrp_{it} = \varphi_i + \beta_1 FoI_{it} + \beta_2 (FoI \times CV)_{it} + \beta_3 CV_{it} + \beta_4 Z_{it} + v_i + \lambda_t + \omega_{it} \quad (2)$$

Where, $FoI \times CV$ is the interaction term between FOI laws and various measures of conditioning variables (CV) which explain the transmission mechanism, namely, media freedom, presence of NGO groups and political competition. We use the media freedom index computed by Freedom House which assesses the degree of print, broadcast, and internet freedom in about 197 countries from 1980 to 2013. Based on country narratives that examine the media's legal environment, various forms of political pressures influencing media reporting, and other economic factors that affect access to free media information, the Freedom House arrives at numerical rankings that rate media freedom in country i as 'Free', 'Partly Free', or 'Not Free'. We use this information to assign a value of 1 if the score for country i in year t is 'Not Free'; 2 if it is 'Partly Free'; and 3 if it is 'Free'. Second, we use the presence of NGO groups as a proxy for civil society activism. We collect the data from the Union of International Associations' (UIA) yearbooks. The UIA as its core activity compiles and disseminates information and data on international organisations which are active in approximately 190 countries from 1960 onward. We use the count of local and international NGO groups per 1000 capita (log) in country i in year t in our analysis. Finally, we use the political competition index which is a subcomponent of the Polity IV index. Accordingly, the political competition index is made up of two components. The first is competitiveness of political participation, which is coded on a scale of 0–5, where higher values denote that various political groups are free to regularly compete for political influence at national level politics. The other component is regulation of participation, which is also coded on a 1–5 scale, where higher values suggest that political groups compete for political influence in national politics without use of coercion or force. Taken together, the political competition index is coded on a scale of 0–10 in which a higher value denotes that the system allows for free and fair participation of various political groups and parties without violence or force. We believe that this measure acts as a good proxy to capture the genuine strength of political opposition groupings in country i during year t. Note that we estimate all our interaction effects using the FGLS two-way fixed effects estimator controlling for both country and time fixed effects.[7]

3.3. Long Run Effects

Next, in order to further tease out the effect of FOI laws, we disentangle the long run vis-à-vis short run effects of FOI laws by adopting an approach akin to Cordis and Warren (2014):

$$Gcorrp\_90{-}11_i = \beta_1 FoI\_yr_i + \beta_2 Z_i + \omega_i \quad (3)$$

Where, $Gcorrp\_90{-}11_i$ is the average score of the ICRG perceived government corruption index in country i during the period 1990–2011. FoI_yr_i is the count of years since a country legislated an FOI law during the 1990–2011 period. Vector $\boldsymbol{Z_i}$ includes controls as discussed earlier, namely, per capita

income (log); government consumption/GDP; democracy index; natural resource rents/GDP; and trade/GDP. Furthermore, we estimate:

$$Gcorrp\_90-11_i = \beta_1 FoI\_time_i + \beta_2 Z_i + \omega_i \quad (4)$$

where, FoI_time_i includes three different sets of dummy variables that delineate time effects into three period windows, namely, short, medium and long run enactment periods of FOI laws. In other words, it distinguishes the short vis-à-vis long run effects of FOI laws. We include a dummy variable for the short run which takes the value of 1 if a country is under a FOI law for more than a year but less than 10 years and 0 otherwise. The medium run dummy variable takes a value of 1 if a country is under a FOI law for more than 20 years and 0 otherwise. Finally, a long run dummy variable takes the value of 1 if a country is under an FOI law for more than 30 years and 0 otherwise. Note that implementation of FOI laws is a gradual process because the government must set-up institutional procedures (such as information commissioners) and ensure that other mechanisms are in place, while the judiciary must work on new rules that will be applied. Since this transition period may vary from country to country depending upon their institutional capacities, we think under 10 years since FOI inaction should be a reasonable time frame to capture transitional effects and over 10 years can be classified as a medium to long run period. If hypothesis three is true, then we expect the longer countries stay under an FOI law, the lower would be the perceived levels of government corruption in the long run.

3.4. Endogeneity Concerns

It is quite possible that our key explanatory variable – FOI laws – is endogenous to higher levels of perceived government corruption. It could be that higher levels of perceived corruption might influence governments to adopt an FOI law in the first place. Not taking this endogeneity into account would induce a bias in our estimates. This issue is not trivial because those who argue that transparency is key to curtail corruption also make causal claims about higher levels of corruption causing governments to initiate a series of transparency promoting measures. To address this concern, we use a two-stage least squares instrumental variable (2SLS-IV) estimator. We identify two instruments, namely, (i) the percentage share of neighbouring countries in the geographic region that have adopted an FOI law in year *t* (*FOI regional context*) and (ii) the percentage share of countries with a common language with country *i* that have adopted an FOI law in year *t* (*FOI language context*). These instruments, we believe, are likely to be correlated to country *i* adopting an FOI law, but may not be correlated with the corruption index in country *i*. With specific reference to transparency laws, Berliner (2013) examines FOI laws in 4096 country pairs and finds that countries belonging to the same geographic region tend to have similar FOI laws compared to other country pairs. The main argument presented here is that adopting FOI laws, which is a relatively new concept in most countries, provides policy makers with the challenge of uncertainty over which policy design to adopt and the potential economic and political consequences of adopting a particular type of FOI law. Hence, Berliner (2013) argues that it is likely that policy makers emulate the design of FOI laws elsewhere which serves as an example. Furthermore, it is plausible that countries emulate the policy on FOI laws of a former colonial power, or countries sharing a colony, or perhaps the easiest of all is to look at neighbouring countries because most often than not they are similar in terms of culture and institutional structures. Berliner (2013) provides numerous illustrative cases from Latin America to sub-Saharan Africa to support these arguments. Thus, we believe that regional emulation plays an important role in shaping a country's transparency policy. Moreover, the idea of peer effects influencing the likelihood of a country's participation in such a transparency initiative is not new in the literature. Several studies have used such diffusion variables in the past. For instance, Simmons and Elkins (2004) assess diffusion in financial policy among countries. Gassebener, Noel, and Michael (2011) find that a country's economic policy reforms are affected by reforms adopted by its neighbouring countries. Eichengreen and Leblang (2008), examining the impact of democracy on economic openness, instrument capital account openness with the capital account openness of a country's peers.[8]

The validity of our instruments depends on two conditions. The first is instrument relevance, that is, they must be correlated with the explanatory variable in question. The joint F-statistic in the first stage

of the IV regressions as suggested by Bound, Jaeger, and Baker (1995) must be examined to test the relevance of the instruments. Thus, the instruments would be relevant when the first stage regression model F-statistics meet the thumb rule of being above a threshold of 10 (Staiger & Stock, 1997). However, the F-test has been criticised in the literature as being insufficient to measure the degree of instrument relevance (Stock, Wright, & Yogo, 2002). The more powerful tests, namely, Cragg-Donald Wald F statistic and Kleibergen-Paap Wald F statistic, offer reliable statistical inferences in a weak instrument setting (for example, Cragg & Donald, 1993; Kleibergen & Paap, 2006). In all three cases, an F-statistic above the critical value (10% maximal test size) indicates the rejection of weak instruments. Second, the instrumental variables should not vary systematically with the disturbance term in the second stage equation, that is $[\omega_{it} \mid IV_{it}] = 0$. Meaning, the instruments cannot have an independent effect directly on the dependent variable. As for the exclusion restriction, we are not aware of a theoretical or an empirical argument linking the aforementioned exogenous instrumental variables directly explaining the corruption index of country *i*. Nevertheless, the Hansen J-test (Hansen, 1982) is employed to check whether the selected instruments satisfy the exclusion restriction (reported in column 5 in Tables 1 and 2).

4. Empirical Results

Tables 1–4 present our main results. Table 1 covers a global sample, while Table 2 reports results with a restricted sample of countries, that is without The Organisation for Economic Co-operation and Development (OECD) countries. In Table 3, the results of interaction effects between FOI laws and media freedom, NGO presence and political competition variables are presented. Finally, Table 4 captures the short-run versus long-run effects of FOI laws. To begin with, we compute the average score of perceived government corruption for countries with an FOI law during the pre and post enactment periods. The average score of perceived corruption before the enactment of an FOI law is around 2.28 (on a scale of 0–6 in which the highest score denotes high levels of government corruption). Contrary to conventional expectations we find that countries with FOI laws witness an increase in the score of government corruption index. Figure 1 provides additional stylised facts on six randomly selected countries which have introduced an FOI law. As seen in all six instances post FOI law enactment saw an increase in the scores of perceived corruption. For instance, post FOI law enactment, Bulgaria's perceived corruption score jumps from 2.75 to 4 and so on. One might conclude from these stylised facts that introducing transparency initiatives such as FOI laws is associated with an increase in perceived government corruption. Interestingly, in the case of Ireland, Israel, Jamaica and Thailand roughly seven to eight years after adopting FOI laws the perceived corruption scores start to decline. This could mean that the long run effects of FOI laws could be positive. While these differences could also be spurious, we turn to the regression analysis below.

4.1. Baseline Results

Table 1 reports the impact of FOI laws on perceived government corruption. In column 1 we present the raw estimates of FOI laws on perceived government corruption without controlling for other variables, while in column 2 we add additional controls estimated using a treatment regression estimator. We replicate the same in columns 3 and 4 by estimating GLS two-way fixed effects estimations followed by the 2SLS-IV estimation in column 5. As seen from column 1, FOI laws are associated with an increase in perceived government corruption. The point estimate suggests that adopting FOI laws is associated with a 0.26 point increase in the perceived corruption index which is 21 per cent of the standard deviation of the corruption index and is significantly different from zero at the 1 per cent level. This result may overstate the true association because FOI laws are likely to be correlated with numerous variables, such as per capita income, government consumption, and regime type, among others. These variables are also likely to be correlated with the outcome variable. Therefore, in column 2, we control for the aforementioned control variables. After controlling for

Table 1. Impact of FOI laws on government corruption (baseline models)

	(1)	(2)	(3)	(4)	(5)
	Corruption	Corruption	Corruption	Corruption	Corruption
Freedom of Information Law	0.259***	0.362***	0.258***	0.230***	0.525**
	(0.0984)	(0.104)	(0.0428)	(0.0441)	(0.257)
Per capita GDP (log)		0.264***		0.233***	0.123
		(0.0902)		(0.0855)	(0.165)
Government Consumption		−0.0125***		−0.0132***	−0.0202***
		(0.00405)		(0.00383)	(0.00506)
Democracy		−0.00713		−0.00633	−0.0160**
		(0.00539)		(0.00503)	(0.00818)
Trade/GDP		0.00350***		0.00384***	0.00299***
		(0.000670)		(0.000655)	(0.000766)
Resource Rents/GDP		0.0583***		0.0540***	0.0552***
		(0.0112)		(0.0110)	(0.0105)
Constant	3.077***	1.195*	3.082***	1.413**	2.168*
	(0.135)	(0.687)	(0.134)	(0.651)	(1.175)
	(1)	(2)			
	FOI Law	FOI Law			
Per capita GDP (log) t-1	0.285***	0.285***			
	(0.0314)	(0.0314)			
Democracy index t-1	0.107***	0.107***			
	(0.00824)	(0.00824)			
Government Consumption t-1	0.0198***	0.0198***			
	(0.00680)	(0.00680)			
Rule of Law t-1	0.00608	0.00605			
	(0.0541)	(0.0541)			
Trade/GDP t-1	−0.000389	−0.000390			
	(0.000331)	(0.000331)			
Resource Rents/GDP t-1	−0.0892***	−0.0892***			
	(0.0288)	(0.0288)			
FOI in Regional context t-1	0.0126***	0.0126***			
	(0.00215)	(0.00215)			
Constant	−4.953***	−4.952***			
	(0.325)	(0.325)			

(*continued*)

Table 1. (*Continued*)

	(1)	(2)	(3)	(4)	(5)
	Corruption	Corruption	Corruption	Corruption	Corruption
Estimation Technique	Treat Reg	Treat Reg	OLS-FE	OLS-FE	2SLS-IV
Year Fixed Effects	YES	YES	YES	YES	YES
Country Fixed Effects	YES	YES	YES	YES	YES
Joint F-statistic					28.42***
Cragg-Donald Wald-F statistic					35.91***
Kleibergen-Paap rk Wald-F statistic					59.17***
Hansen J-statistic (p-value)					0.1699
Number of Countries	124	124	132	125	125
Number of Observations	2,485	2,483	2,808	2,619	2,187

Notes: Country fixed effects (in the treatment regressions only for the linear estimations) and year dummies are included and robust standard errors in parenthesis. ***p < 0.01, **p < 0.05, *p < 0.1.

Table 2. Impact of FOI laws on government corruption (non-OECD sample)

	(1)	(2)	(3)	(4)	(5)
	Corruption	Corruption	Corruption	Corruption	Corruption
Freedom of Information Law	0.248**	0.368***	0.233***	0.209***	0.743***
	(0.105)	(0.110)	(0.0486)	(0.0502)	(0.249)
Per capita GDP (log)		0.249***		0.226**	0.00826
		(0.0939)		(0.0900)	(0.166)
Government Consumption		−0.0144***		−0.0155***	−0.0214***
		(0.00415)		(0.00399)	(0.00522)
Democracy index		−0.00707		−0.00507	−0.0183**
		(0.00553)		(0.00521)	(0.00839)
Trade/GDP		0.00333***		0.00369***	0.00256***
		(0.000691)		(0.000680)	(0.000800)
Resource Rents/GDP		0.0566***		0.0518***	0.0554***
		(0.0114)		(0.0113)	(0.0104)
Constant	3.136***	1.394*	3.132***	1.544**	3.039**
	(0.140)	(0.714)	(0.140)	(0.684)	(1.198)
	(1)	(2)			
	FOI Law	FOI Law			
Per capita GDP (log) t-1	0.154***	0.154***			
	(0.0368)	(0.0368)			
Democracy index t-1	0.0957***	0.0957***			
	(0.00864)	(0.00865)			
Government Consumption t-1	−0.000265	−0.000274			
	(0.00775)	(0.00775)			
Rule of Law t-1	−0.167**	−0.167**			
	(0.0650)	(0.0650)			
Trade/GDP t-1	−0.000563	−0.000563			
	(0.000346)	(0.000346)			
Resource Rents/GDP t-1	−0.100***	−0.100***			
	(0.0296)	(0.0296)			
FOI in Regional context t-1	0.0191***	0.0191***			
	(0.00241)	(0.00241)			
Constant	−3.620***	−3.618***			
	(0.453)	(0.453)			
Estimation Technique	Treat Reg	Treat Reg	OLS-FE	OLS-FE	2SLS-IV
Year Fixed Effects	YES	YES	YES	YES	YES
Country Fixed Effects	YES	YES	YES	YES	NO
Joint F-statistic					33.25***
Cragg-Donald Wald F-statistic					43.99***
Kleibergen-Paap rk Wald F-statistic					66.86***
Hansen J-statistic (p-value)					0.0094
Number of Countries	104	104	111	104	104
Number of Observations	2,065	2,063	2,346	2,157	1,809

Notes: Country fixed effects (in the treatment regressions only for the linear estimations) and year dummies are included and robust standard errors in parenthesis. ***p < 0.01, **p < 0.05, *p < 0.1.

these variables, the point estimate increases wherein FOI laws are associated with a 0.36 point increase in perceived government corruption which is significantly different from zero at the 1 per cent level. Note that these results are estimated using treatment regression estimations which control for the factors influencing the legislation of FOI laws in the first place. These results highlight two important points. First, contrary to conventional wisdom, implementing FOI laws actually results in an increase

Table 3. Impact of FOI laws on government corruption – Interactions (GLS estimators)

	(1)	(2)	(3)	(4)	(5)	(6)
Freedom of Information Law	−0.120	−0.212*	−0.268**	−0.337**	0.0791	0.139
	(0.119)	(0.127)	(0.119)	(0.132)	(0.164)	(0.175)
Media Freedom	−0.0691*	−0.0737*				
	(0.0382)	(0.0394)				
Freedom of Information Law × Media Freedom	0.153***	0.200***				
	(0.0482)	(0.0558)				
NGOs per head (log)			0.564***	0.617***		
			(0.0906)	(0.0985)		
Freedom of Information Law × NGOs per head (log)			0.102***	0.114***		
			(0.0261)	(0.0298)		
Political Competition					0.0272*	0.0275
					(0.0161)	(0.0168)
Freedom of Information Law × Political Competition					0.0175	0.00842
					(0.0183)	(0.0204)
Per capita GDP (log)	0.262***	0.249***	0.00971	−0.0421	0.232***	0.220**
	(0.0858)	(0.0901)	(0.0931)	(0.100)	(0.0889)	(0.0937)
Government Consumption	−0.0150***	−0.0173***	−0.0153***	−0.0165***	−0.0121***	−0.0144***
	(0.00386)	(0.00401)	(0.00379)	(0.00393)	(0.00395)	(0.00411)
Democracy	−0.00207	−0.000919	−0.00404	−0.00474	−0.0201**	−0.0186**
	(0.00545)	(0.00566)	(0.00497)	(0.00513)	(0.00861)	(0.00887)
Trade/GDP	0.00373***	0.00353***	0.00325***	0.00308***	0.00369***	0.00356***
	(0.000656)	(0.000681)	(0.000651)	(0.000674)	(0.000658)	(0.000683)
Resource Rents/GDP	0.0553***	0.0532***	0.0609***	0.0575***	0.0512***	0.0490***
	(0.0110)	(0.0113)	(0.0109)	(0.0112)	(0.0111)	(0.0113)
Constant	1.363**	1.535**	0.429	0.606	1.286*	1.449**
	(0.650)	(0.682)	(0.656)	(0.683)	(0.684)	(0.720)
Estimation Technique	OLS-FE	OLS-FE	OLS-FE	OLS-FE	OLS-FE	OLS-FE
Year Fixed Effects	YES	YES	YES	YES	YES	YES
Country Fixed Effects	YES	YES	YES	YES	YES	YES
Sample	Full	Non-OECD	Full	Non-OECD	Full	Non-OECD
Number of Countries	125	104	125	104	125	104
Number of Observations	2,619	2,157	2,619	2,157	2,575	2,113

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

Table 4. Long-run effects of FOI laws on government corruption

	(1)	(2)	(3)	(4)	(5)
	Corruption	Corruption	Corruption	Corruption	Corruption
Years under Freedom of Information Law	−0.0571***	−0.0138*			
	(0.00764)	(0.00731)			
Short-run effects of FOI Law			0.109		
			(0.160)		
Medium-run effects of FOI Law				0.613***	
				(0.191)	
Long-run effects of FOI Law					−0.697***
					(0.263)
Per capita GDP (log)		−0.350***	−0.389***	−0.428***	−0.350***
		(0.0603)	(0.0501)	(0.0499)	(0.0536)
Government Consumption		−0.0367***	−0.0382***	−0.0409***	−0.0344**
		(0.0137)	(0.0140)	(0.0132)	(0.0136)
Democracy		−0.0245**	−0.0352***	−0.0448***	−0.0263**
		(0.0120)	(0.0106)	(0.0109)	(0.0105)
Trade/GDP		−0.000766**	−0.000615*	−0.000651*	−0.000729**
		(0.000363)	(0.000361)	(0.000358)	(0.000362)
Resource Rents/GDP		−0.00333	0.000578	0.00190	−0.000935
		(0.0104)	(0.0118)	(0.0123)	(0.0106)
Constant	3.774***	7.077***	7.329***	7.657***	7.020***
	(0.0809)	(0.460)	(0.395)	(0.402)	(0.431)
Estimation Technique	OLS	OLS	OLS	OLS	OLS
R-squared	0.315	0.570	0.562	0.597	0.595
Number of Countries	132	125	125	125	125
Number of Observations	132	125	125	125	125

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

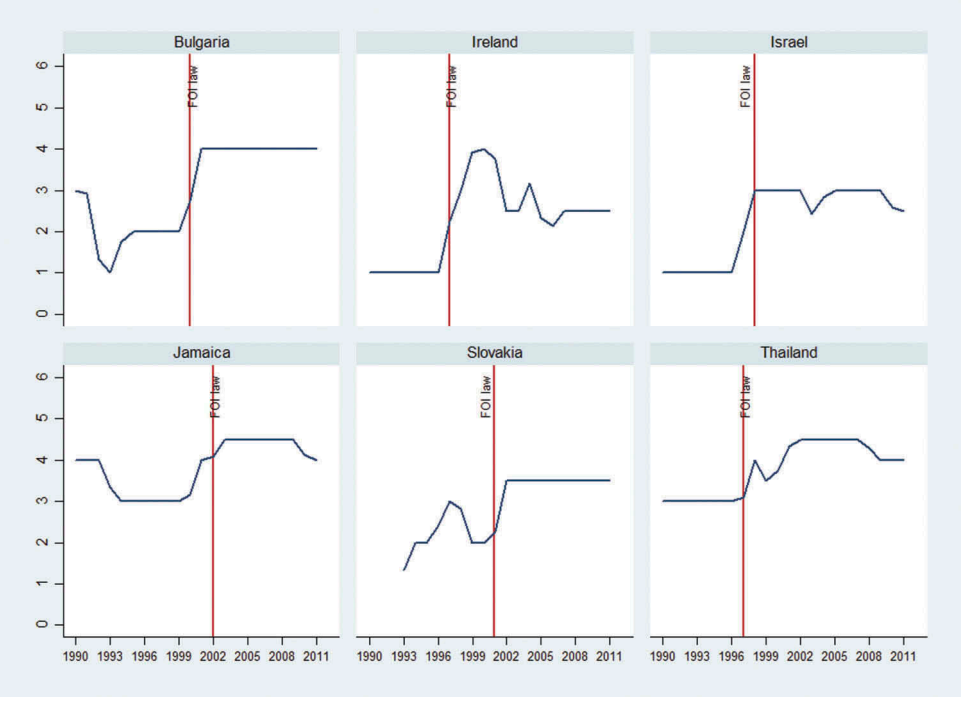

Figure 1. Government corruption index during pre and post FOI law.

rather than decrease in perceived government corruption after controlling for self-section bias. Although our results are contrary to conventional belief, in fact, our findings are in line with that of Costa (2013). Second, an increase in perceived government corruption post FOI law enactment may not be that bad after all. This is in fact good news as it could suggest that enacting and implementing FOI laws result in more observed corruption being unearthed which could be driven by greater reporting. We will return to this point a little later in the analysis.

The lower part of the treatment regression table (in columns 1–2) captures results for the non-linear treatment regression on the probability to adopt FOI laws. As seen, richer countries tend to adopt FOI laws and so do democratic countries, which is statistically significant at the 1 per cent level. Interestingly, countries with higher levels of government consumption are more likely to adopt FOI laws. Also, countries dependent on natural resource rents are less likely to pass FOI laws. This finding is in line with the arguments of Ross (2001) that countries with access to natural resource rents are less likely to tax their population which reduce their accountability, thus increasing scope for corruption at the top. Lastly, we find a strong positive impact of *FOI regional context* on FOI laws. Countries are more likely to adopt FOI laws when their peers in the geographic region have done so, which is significantly different from zero at the 5 per cent level in both columns.

In columns 3 and 4, we replace the treatment regression estimator with the GLS two-way fixed effects estimator. As seen, the positive and significant effect of FOI laws in explaining perceived government corruption is retained, albeit the substantive effects have come down marginally. For instance, adopting FOI laws is associated with a 0.23 point increase in perceived government corruption which is significantly different from zero at the 1 per cent level (see column 4). Finally, we estimate the 2SLS-IV estimator to address potential endogeneity concerns in column 5. As seen there, we find the positive effect of FOI laws on perceived corruption remains intact and significantly different from zero at the 5 per cent level. The substantive effects suggest that moving from no FOI law to adopting one, is associated with a 0.52 point increase in the government corruption index, which is about 41 per cent of the standard deviation of the government corruption index. Interestingly, after controlling for potential feedback from perceived corruption, the coefficient value of FOI law increases from 0.23 to 0.52. Note that column 5 also captures the results on the endogeneity tests – the joint F-statistic, Kleibergen-Paap rk Wald F statistic, and Cragg-Donald F-statistic. The joint F-statistics from the first stage reject the null that the instruments selected are not relevant. We obtain higher joint F-statistics for all three statistics which are above 10 and significantly different from zero at the 1 per cent level. Finally, the Hansen J-statistic (with p-value of 0.17) shows that the null-hypothesis of exogeneity cannot be rejected at the conventional level of significance. These tests confirm that we have avoided the weak instrument problem and that the results are robust.

In Table 2 we replicate the estimations with a restricted sample in which 21 OECD countries are excluded.[9] It is quite plausible that our results reported in Table 1 could be driven by the inclusion of OECD countries in the sample, which perform better on controlling corruption compared to non-OECD countries (OECD, 2006). Moreover, all the OECD members are signatories to the convention on Combating Bribery of Foreign Public Officials in International Business Transactions which came into force in 1999. Unlike in most developing countries, the enforcement capacity is relatively strong among OECD countries (OECD, 2011). As seen from Table 2, in line with our earlier results, FOI laws among non-OECD countries are associated with an increase in perceived government corruption. On average, adopting FOI laws in a non-OECD country increases the perceived corruption index by roughly 0.37 points, which is significantly different from zero at the 1 per cent level (see column 2). When estimating these models with the GLS two-way fixed effects and 2SLS-IV estimators, we find the results to be in line with our theoretical predictions. Our results for this restrictive sample group are comparable to those for the full sample, indicating that our results are not driven by inclusion of OECD countries in the sample. However, it is noteworthy that although our instruments for the non-OECD countries sample pass the instrument relevance tests (see joint F-statistics results), they fail to pass the exclusion restriction criteria as shown by the statistical significance (p-value) of the Hansen J-statistic. The lower part of Table 2 also shows results for the non-linear treatment regression that estimates the probability of adopting FOI laws. The results do not differ from those reported in Table 1 with the exception of the rule of law, which now becomes statistically significant.

With respect to control variables on perceived government corruption, we find contrary to the conventional belief that an increase in per capita income is associated with an increase in perceived corruption which negates the findings of Mauro (1995). It could be that economic growth in developing countries provides numerous business opportunities to entrepreneurs to bribe government officials to avoid unnecessary bureaucratic hurdles (Shleifer & Vishny, 1993). We also estimated a model in which we include a squared term for per capita GDP to investigate if there was a curvi-linear effect of income on corruption. We find that as countries increase their existing levels of income, that corruption tends to decline which is largely in line with the findings of Mendez and Sepulveda (2006). Contrary to the conventional argument, an increase in government consumption is associated with a decline in perceived government corruption which is significantly different from zero at the 1 per cent level. Democratic countries, as opposed to autocracies, witness roughly a 0.02 point decline in perceived corruption which is significantly different from zero at the 10 per cent level in both samples of countries (see column 5). Interestingly, we find that countries which are more open to trade witness an increase in corruption. Bjørnskov (2012) finds that in countries which are more open to trade, corruption is used to buy protection from foreign competition resulting in an increase in non-tariff barriers. Finally, natural resource dependence is found to be a strong determinant of corruption which is in line with the literature on the resource curse. Notice that these results on controls are similar in non-OECD sample in Table 2.

4.2. Conditional Effects

Next, we explore the transmission channels through which FOI laws result in an increase in perceived government corruption. We introduce the interactions between FOI law, media freedom, NGO presence and political competition variables covering both the global sample and a sample of non-OECD countries in Table 3. In columns 1 and 2, we introduce the interactions between FOI laws and the media freedom index. We find that the interaction term is positive and statistically significant, which means that the ability of FOI laws to increase perceived government corruption is conditional upon free media in both samples of countries respectively. Note that the interpretation of the interaction term even in linear models is not straightforward. Consequently, a simple t-test on the coefficient of the interaction term might not be sufficient to see whether the interaction is statistically significant. Thus, we rely on the marginal plot as shown in Figure 2, which depicts the magnitude of

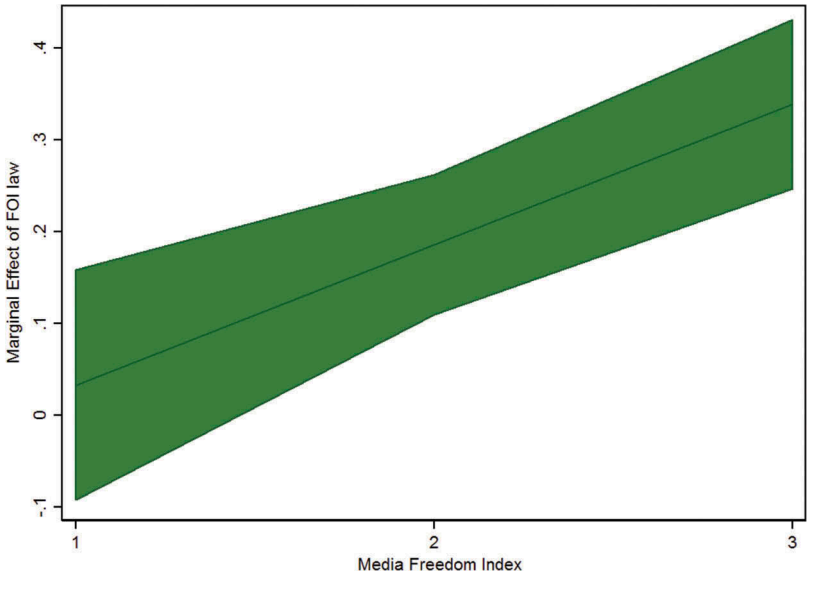

Figure 2. FOI law, media freedom and marginal effect on government corruption (global sample).

the interaction effect. In Figure 2 we take into account both the conditioning variable (media freedom index) and the interaction term, and show the total marginal effect conditional on media freedom graphically. The y-axis of Figure 2 displays the marginal effect of adopting an FOI law and on the x-axis the level of media freedom at which the marginal effect is evaluated. In addition, we include the 90 per cent confidence interval. As seen, adopting an FOI law increases perceived government corruption (at the 90% confidence level at least) if the media freedom index is around 2 (which is coded on a scale of 1–3). Figure 2 also shows that adopting FOI laws has no effect on perceived government corruption when the media freedom index is below a score of 2, that is, no media freedom. In other words, the coefficients are not significant when the lower bound of the confidence interval is below zero. Note that the interactive effects are exactly similar (around score of 2) when estimating the conditional plot graphically for the sample of non-OECD countries alone.[10]

In columns 3 and 4 we replicate the interaction effects, but replace the media freedom index with local and international NGO groups (per 1000 capita log). The FOI law variable is significantly different from zero at the 1 per cent level in both columns representing the global sample and a sample of developing countries respectively, when conditional upon a higher degree of NGO presence. To interpret the substantive effects, we resort to the marginal plot and provide a graphical interpretation of the magnitude of the interaction effect. On the y-axis of Figure 3, we show the marginal effect of adopting an FOI law, whereas on the x-axis the level of NGO per 1000 capita (log) at which the marginal effect is evaluated. As before, we include the 90 per cent confidence interval in Figure 3, which reveals that adopting FOI laws increase perceived government corruption (at the 90% confidence level at least) if NGOs per 1000 capita (log) is greater than 3.7, which is about nine NGOs per 1000 capita. However, the coefficients are also significant when the lower bound of the confidence interval is below zero suggesting a negative effect when NGO presence is lower (and the upper bound is above it). It is noteworthy that these results are similar in the case of the non-OECD country sample, that is, the effect of FOI laws on corruption start to increase if NGOs per capita (log) is greater than 3.69, which is also about nine NGOs per 1000 capita.

We also show the interaction effects between FOI laws and political competition reported in columns 5 and 6. As seen there, the interactions become statistically insignificant. However, the margins plot in Figure 4 shows that at higher levels of political competition adopting an FOI law does increase perceived government corruption. If political competition (coded on 0–10 scale) is above a certain threshold (in the case of global sample approximately five and above and in the case of non-OECD sample about four and above), adopting an FOI law increases perceived

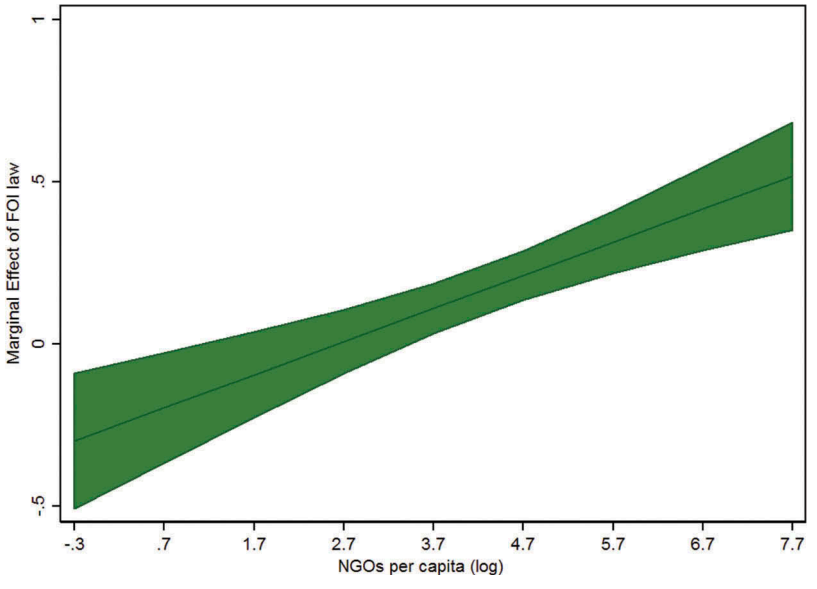

Figure 3. FOI law, NGOs and marginal effect on government corruption (global sample).

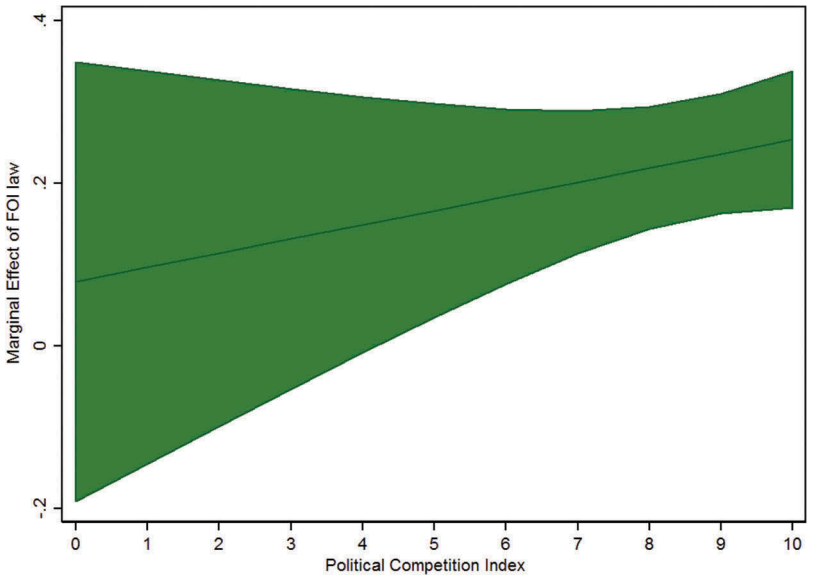

Figure 4. FOI law, political competition and marginal effect on government corruption (global sample).

government corruption at the 90 per cent confidence level. However, the effect remains statistically insignificant when the lower bound of the confidence interval is below zero. Overall, these results lend support to our second hypothesis that FOI laws will be more effective at exposing corruption when combined with a higher degree of media freedom, presence of NGO activism and competitiveness of political participation.

4.3. Long-Run Effects

Table 4 presents the results of the regression analysis of four variants of the specification in Equations (3) and (4). The first two columns include the count of years since a country has adopted an FOI law. An additional year spent under an FOI law is associated with a decline in perceived government corruption. For instance, a standard deviation increase in additional years spent under an FOI law is associated with a 0.61 point decline in the corruption perception index, which is significantly different from zero at the 1 per cent level. However, moving from no FOI law to the maximum number of years spent under an FOI law (which is about 63 years in our sample for Sweden) is associated with a roughly 3.6 point decline in the corruption index, which is 283 per cent of the standard deviation of the corruption index. Clearly, these effects are substantially large. Controlling for other factors tends to bring down the statistical significance of years spent under an FOI law. Nevertheless, these results suggest that as countries spend more years under FOI laws, it improves transparency and as a result actual corruption tends to decline in the long run resulting in an improvement in public perception about government corruption. In columns 3–5, we delineate the time window into short; medium and long run. As seen, countries with an FOI law of less than 20 years actually witnesses a positive effect on perceived government corruption (see column 4) while countries which spent more than 20 years under an FOI law see a decline in public perception on government corruption (see column 5). This is reflected in the scatter plot in Figure 5, which demonstrates that the longer a country is associated with an FOI law, the lower the score on perceived government corruption index is. These results from the regressions using a three-period window are suggestive of a spike in perceived corruption around the 20-year period of FOI law enforcement followed by a decline in public perception on government corruption over subsequent years.

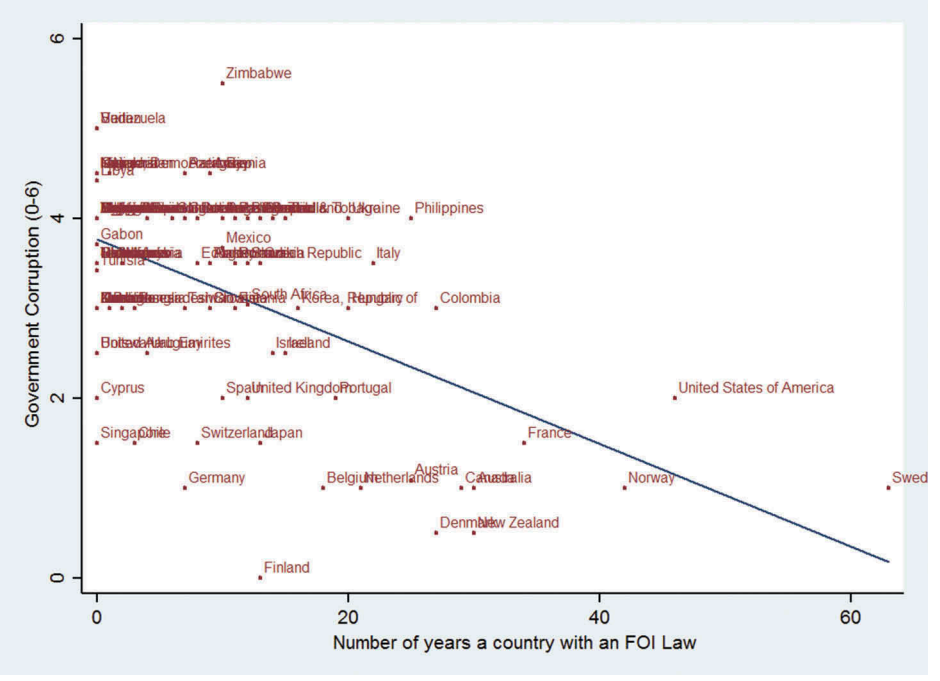

Figure 5. Years under FOI law and government corruption.

4.4. Robustness Checks

As a part of robustness check we drop countries which have enacted FOI laws before 1990 (the first year of our study period), namely Australia, Austria, Canada, Colombia, Denmark, France, Italy, New Zealand, Norway, Philippines, Sweden, and the United States. We estimate our baseline models without these 12 countries. We find no change in our results when we drop these countries from our sample although the magnitude of the coefficient on FOI laws varies marginally. These findings suggest that our results are robust not only to the size of the sample and alternative data, but also to alternative estimation techniques.

5. Conclusion

In this paper we examine the impact of adopting FOI laws on perceived government corruption. As of 2015, 90 countries adopted FOI laws with the intention of facilitating citizens' right to access information on government activities which is required to be provided expeditiously by government agencies. Anecdotal evidence suggests that such laws increase transparency and fix accountability of the government. Others, however, argue that initiating transparency laws increases corruption. Empirical evidence on this topic remains scant. Using panel data on 132 countries over the 1990–2011 period, we find that legislating FOI laws is associated with an increase in perceived government corruption. Although in the first instance it might appear to be contrary to conventional wisdom, we consider this to be good news as we attribute this to an increase in more observed corruption driven by greater reporting. We then examine the long term implications of adopting FOI laws. We find that the perception of government corruption does come down when countries spend more time under FOI laws suggesting a decline in the probability of actual corruption in the long run due to an increase in transparency. Furthermore, we explore various transmission channels through which FOI laws increase perceived government corruption. Our results suggest that FOI laws appear to increase the perception of government corruption if

accompanied by a greater degree of media freedom, existence of NGOs and greater competitiveness in political participation. FOI laws, therefore, might not have the desired effects unless accompanied by a free press, greater political competition and an increased role for NGOs which are important precursors to the access of information as they enhance transparency and make governments more accountable to their citizens. Our results survive a wide-variety of robustness checks including controlling for endogeneity, using alternative samples of countries and estimation methods.

The policy implications of our results is that countries which have not implemented FOI laws should strive to do so, and those which have adopted these laws, should endeavour to ensure that other complementary mechanisms such as such as well-trained public officers, and proper institutional structures are in place to promote greater efficiency in the implementation of these laws. Greater transparency can lead to lower levels of corruption and an environment that is conducive for long run growth and development. Future research might focus on understanding the variation in the quality of FOI laws adopted and their impact on actual and perceived corruption.

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Disclosure statement

No potential conflict of interest was reported by the authors.

Notes

1. The focus of this study is on perceived government corruption and not petty corruption which people face in their day to day life in the form of harassment bribes. Lack of a comprehensive measure to gauge the actual level of petty corruption across countries over a long period of time makes it difficult to test the impact of FOI laws.
2. Note that transparency laws are correlated with economic freedom. The literature shows that the impact of economic freedom on corruption depends on the level of economic development. Examining over 100 countries Billger and Goel (2009) find that greater economic freedom does not necessarily reduce corruption in the most corrupt nations. They argue that it depends on the stage of development of a country. The findings are also corroborated by Pieroni and d'Agostino (2013).
3. Less corrupt countries are also found to have a higher intelligence quotient (see Potrafke, 2012a).
4. In the context of governments adopting new technologies to improve governance, Bussell (2011) finds that local political considerations and established rent seeking arrangements play a key role in explaining variation among governments adopting innovative programmes to deliver good governance.
5. Although the Polity IV index has faced some criticism (see Potrafke, 2012b), it captures three important elements of democracy, namely, presence of institutions, existence of effective constraints on executive and participation in political process.
6. For more details see: http://www.clinecenter.illinois.edu/research/sid/legal/
7. We also estimated the interaction effects using treatment regression estimator. The results interaction effects using treatment regression estimator is robust and identical to the results reported using FGLS estimations. These results are not shown here due to brevity but are available upon request.
8. Cooray, Tamazian, and Vadlamannati (2014) have also done this in the context of FDI policy liberalisation.
9. Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, and the United States.
10. Conditional plot figures for developing countries sample are not shown here to maintain brevity but are available upon request.

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