Online Appendix to

# Reversing the Resource Curse: Foreign Corruption Regulation and the Local Economic Benefits of Resource Extraction

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**Section IA1: Model for Buying the Community versus the Local Official**

In this section, we develop a simple model of foreign corruption regulation, bribery, and communities' benefits from local firms as a framework to interpret our main results.

We consider one representative firm and one official and assume that the community has no direct decision rights (i.e., it takes what it gets). The firm can make two types of payments to the official to obtain or maintain the right to operate: 1) bribes, *b*, that the official privately consumes (e.g., direct cash or shell company payments) or 2) payments to the local community, *c*. Payments to the local community can take the form of, for example, infrastructure improvements, fulfilment of local content agreements (i.e., training and using legitimate local suppliers), taxes and permits, or compliance costs to satisfy environmental regulations.

The official's utility equals:

$$U(b,c) = u(b) + ac\,,$$

where *u(b)* is the utility that the official derives from the bribe, *b*. *u(b)* is a concave function because we assume the official has decreasing marginal utility of private consumption. *a* is a parameter between 0 and 1 that captures how much the official "cares about her community," with higher values capturing a higher weight on community welfare. Bribes have a higher benefit for the official than community payments since $a < 1$. The official cares about her community either because of altruistic reasons or because her job security and career advancement depend on the public's opinion.

The firm's profit net of transfers to external stakeholders equals:

$$p(\Pi, b, c, \alpha) = \Pi - b - c - \alpha b\,,$$

where $\Pi$ is the profit before transfers and $\alpha$ is the expected per dollar punishment for paying bribes. If $\alpha > 0$, the firm is willing to make higher transfers if they are community payments instead of bribes.

Assuming that the local official has the decision rights over the firm's operating permissions, the firm makes zero profits and *b* and *c* maximize the utility of the official subject to the firm's participation constraint. Thus, the official's maximization problem is:

$$\underset{b,c}{\text{Max}}\; U(b,c) = u(b) + ac$$

$$\text{subject to } \Pi - b - c - \alpha b = 0 \text{ and } b, c \geq 0$$

To solve this optimization problem, we substitute the firms' participation contraint into the official's utility function and take the first derivative with respect to b, which yields:

$$U'(b) = u'(b) - a(1+\alpha)\,.$$

If the marginal utility at the maximum possible bribe $u'(b_{\max}) = u'\left(\Pi/(1+\alpha)\right)$ is negative and $u'(0) > a(1+\alpha)$, i.e., the marginal utility at the first unit of the bribe is sufficiently high and the cost of bribing is sufficiently low, we obtain an interior solution with $b^* > 0$ and $c^* > 0$. At this interior solution, the marginal utility of bribing equals zero, i.e., $U'(b) = u'(b) - a(1+\alpha) = 0$ or $u'(b) = a(1+\alpha)$. We assume a functional form of the official's utility of $U(b,c) = \sqrt{b} + ac$, implying that the marginal utility of the bribe *b* decreases faster than the community payment *c*, which seems realistic because *b* is part of the bureaucrat's private wealth whereas c is not. Given this utility function, the optimal bribe $b^*$ and community payment $c^*$ equal:

$$b^* = \left(\frac{1}{2a(1+\alpha)}\right)^2 \qquad \text{and} \qquad c^* = \Pi - \left(\frac{1}{4a^2(1+\alpha)}\right).$$

In the context of this model, we can interpret the FCPA enforcement increase as an increase in the expected cost of bribery $\alpha$. We compute the comparative statics of $b^*$ and $c^*$ with respect to $\alpha$ to derive the following propositions:

***Proposition 1****: Since* $\frac{\partial b^*}{\partial \alpha} < 0$*, the amount of bribes paid decreases after an increase in FCPA enforcement.*

***Proposition 2***: *Since* $\frac{\partial c^*}{\partial \alpha} > 0$*, the amount of community payments c increases after an increase in FCPA enforcement.*

A direct implication of Proposition 1 is that the level of corruption should decline after the FCPA enforcment shock. Moreover, if buying the community is more conducive to development than bribes, Proposition 2 implies that the local economic benefits of natural resource extraction should increase after the regulation. Payments made to the community could be more conducive to local economic activity because corruption has negative economic externalities (e.g., inefficient resource allocation) and/or because the payments to the community could have a direct economic benefit (e.g., training and using local suppliers to fulfil local content obligations, providing electricity and other infrastructure, or complying with environmental and other regulation).

Our model can also shed light on the mediating role of political institutions in determining the local economic effects of FCPA enforcement. Recall that *a* is the weight the official puts on community payments, which is plausibly determined in part by the prevailing level of democracy. In a democracy, the extent to which the official cares about her community is typically higher than in an autocracy or a dictatorship because of electoral competition and the fact that public opinion directly impacts the official's re-election probability (or indirectly through job security). Assuming that FCPA enforcement makes it prohibitively costly to pay bribes (i.e., $\alpha$ goes to infinity), the firm pays the price for permits only through community payments. In this case, $c^*_{post-FCR} = \Pi$, leading to the following proposition:

***Proposition 3**: Since* $\Delta c^* = c^*_{post-FCR} - c^* = \frac{1}{4a^2(1+\alpha)}$ *, the increase in community payments after an FCPA enforcement increase is larger for areas with weak political institutions (i.e., areas with a lower value for a).*

Thus, Proposition 3 implies that the increase in local economic activity after FCPA enforcement will be larger in countries with weak political institutions.

Finally, we use the model to derive a prediction for the potential change in the extent to which communities share the rents from resource extraction with the official around the increase in FCPA enforcement:

***Proposition 4**: Since* $\frac{\partial c^*}{\partial \alpha} > 0$ *and* $\frac{\partial c^*}{\partial \Pi} > 0$ *while* $\frac{\partial b^*}{\partial \Pi} = 0$ *, the association between resource rents* $\Pi$ *and community payments c increases after the rise in FCPA enforcement.*

Our proxy for resource rents is $\Pi$, the amount of firm profits before transfers to outside stakeholders. Proposition 4 indicates that local communities share more of the rents from resource extraction after the regulation.

## Section IA2: Evidence on How Firms Buy Local Communities

### *IA2.1 Corporate Social Responsibility Reports*

In this section, we provide anecdotal evidence on how the treated firms in our sample report that they contribute to local communities where they operate, which is an important aspect of our conceptual framework (see Internet Appendix Section IA1). This evidence allows us to establish the types of services extraction firms typically provide to local communities and to assess whether those services could lead to greater local economic activity.

The data is based on publicly available corporate social responsibility (CSR) reports (also known as sustainability or community reports). 18 of the 30 firms in our treated sample have published a CSR report. When a CSR report is available, we use the first CSR report after 2004. We do not go through all reports published since 2005 to avoid concerns about cherry picking examples that fit a particular explanation. Very few firms disclose CSR reports prior to 2005, which precludes a time-series analysis around the increase in FCPA enforcement. Importantly, all information is voluntarily self-reported.

We find that almost all firms that publish a CSR report disclose doing something for the local community and that these activities depend on what the community needs or asks for. The most common services include 1) healthcare services, 2) water and sewage, 3) roads or road maintenance, and 4) electricity. We then read each report and identify the firms that report providing one of these common services. Table IA2.1 presents representative quotes for each parent company that publishes a CSR report.

The most common community services are related to healthcare (100%); followed by water and sewage (78%), road maintenance (44%), and electricity (33%). Each of these services could lead to an increase in economic activity but through somewhat different channels. Healthcare can increase economic activity if it prevents or cures diseases decrease worker productivity. Improved water and sewage systems can increase economic activity if the systems reduce waterborne diseases, reduce the time needed to obtain water, or increase agricultural yields. Well-maintained roads could increase economic activity if they reduce traffic congestion or allow people to travel further and faster. Increased access to electricity can have a substantial impact on economic growth (e.g., Dinkelmann 2011; Lipscomb et al. 2013; Bos et al. 2018).

## Table IA2.1: Anecdotal Evidence on Local Community Services Provided by Extraction Companies

| Parent Company Name | Number of Properties (main sample) | Community Investments | | | | | Quotes | |
|---|---|---|---|---|---|---|---|---|
| | | Electri-city | Roads | Water and Sewage | Health-care | CSR Report (Year) | Infrastructure | Healthcare |
| Alcan Inc. | 2 | No | Yes | Yes | Yes | 2005 | "In the Bauxite and Alumina group at Compagnie des Bauxites de Guinée (CBG), a wastewater treatment project is currently under way for the city of Kamsar. [...] Alcan's investment in the project through CBG is an estimated US$6.3 million."<br>"At the Alcan Composites site in Shanghai, China a reflecting mirror at the road corner behind the facility has improved visibility on the only access road to the immediate neighbouring community." | "Alcan's Ghana Bauxite Company Limited (GBC) operates a Maternal Child Health Clinic in the community and also participates in a national immunization program where vaccines, needles, syringes and monitoring are all part of the service."<br>"With the aid of 'rapid HIV testing kits' purchased by the Polokwane plant clinic in early 2004, 52 employees were tested. Three were unfortunately diagnosed as being HIV positive." |
| Anglo American Plc | 27 | Yes | No | No | Yes | 2005 | "In South Africa, a significant number of peak load-reducing projects have been completed, with more in progress. These aim to reduce the cost of electricity to individual divisions by moving away from peak tariffs. This will enable the South African electricity supply system to operate more efficiently and provide further opportunity for economic growth." | "Our community programmes are designed to build capacity for comprehensive HIV/AIDS services in communities associated with our operations."<br>"Certification to 3rd party health and safety systems will be at least 75% complete by the end of 2005."<br>"Through the Anglo American Chairman's Fund, the company made an initial grant of R30 million ($4,7 million) over three years to loveLife, a national South African youth HIV-prevention and skills development programme." |
| ArcelorMittal | 1 | No | No | No | Yes | 2005 | "We made a substantial contribution towards addressing air pollution in communities by providing subsidised steel for gas cylinders in an attempt to decrease smoke and emissions from coal fires in townships. This project will continue during the current financial year." | "Our response strategy has focused on HIV/AIDS awareness education aimed at reducing the prevalence rate of 9,3% by encouraging behaviour change."<br>"During the reporting period we contributed a sum of approximately [...] R650,000 to HIV/AIDS initiatives." |
| BHP Billiton | 14 | Yes | Yes | Yes | Yes | 2005 | "Through the Mozal project, the region has been provided with significant public infrastructure, including roads and bridges, potable water supplies, electricity supplies, telephone services, sewage treatment works, housing units and general amenities buildings." | "We have also progressed a project during the year supporting the development of a new treatment for HIV/AIDS that may be applicable to the African subcontinent. The Company has provided significant funding to develop a clinical trial on this treatment, which is given as an injectable therapeutic vaccine."<br>"In an effort to limit development of the disease, we have embarked on a screening program to detect latent TB infection in our workforce and the local community." |
| Barrick Gold Corporation | 5 | No | No | Yes | Yes | 2008 | "At the Buzwagi development project in Tanzania, a comprehensive resettlement program [...] was completed in 2008. [...] Over fifty community water wells have been deepened or improved." | "A sample of Barrick's numerous wide-ranging health programs include funding community-based HIV/AIDS awareness programs and clinics in Tanzania, Papua New Guinea, North America and Australia; teaming up with World Vision to fight child malnutrition and poverty in Peru" |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Eni | 4 | Yes | No | No | Yes | 2006 | "In Kazakhstan various public infrastructures were restructured and the creation of Village Councils was promoted to facilitate the participation of communities in the development of local projects."<br>In Ecuador: "Moreover, a program of community development will provide support to indigenous communities through the construction of basic infrastructures (houses, basic sanitation infrastructures, hydroelectric generation systems, radio-communication structures), the access to air transport services and the promotion of initiatives for the local social and economic development."<br>"In 2006 the expenditure for communities amounted to €74.70 million, 54% of which refer to the development of infrastructures and social actions." | "With expenditure of €48 million in 2006, the health management system has 307 health facilities of which 90 are in Italy and 217 abroad and on ships."<br>"In some situations abroad Eni's health centers also offer services to families of local workers and expatriates in full cooperation with the local public health institutions, such services take on strategic value in relations with the communities." |
| First Quantum Minerals Limited | 6 | Yes | Yes | Yes | Yes | 2016 | "In recent years First Quantum has invested up to $10 million annually in a wide range of programs – from health care and education to housing, infrastructure and livelihood development – all aimed at strengthening the social and economic well-being of Akjoujt and the surrounding region."<br>"And then there are welcome amenities such as a reliable supply of potable water, and solar panels generating electricity for much of the day."<br>"Creating a direct link to the recently completed smelter at the Kansanshi mine in Zambia was vital to avoid congestion on existing roads and ensure the new facility ran smoothly. But just as importantly, people living and farming along the new road had to feel they were better off after it was built." | "First Quantum takes a hybrid approach to managing its heath commitments. Prevention and wellness promotion programs are developed and delivered by a corporate team; clinics, while benefitting from company subsidies, are operated autonomously by medical professionals and administrative staff."<br>"The company funds mobile testing and antiretroviral treatment units which regularly visit local communities around Solwezi, Kalumbila and Ndola. First Quantum also provides free condoms in work-site washrooms, as well as medication for employees who are HIV-positive." |
| Freeport Minerals Corporation | 3 | Unclear | Unclear | Unclear | Yes | 2008 | "We invested approximately $113 million in programs and activities to stimulate infrastructure and economic development in 2008."<br>"In 2008, we made direct contributions of approximately $190 million to support local communities and organizations in the geographic areas where we operate." | "The company regularly conducts targeted insecticide spraying – including indoor residual spraying (IRS) in people's homes – to eliminate likely sources of malaria."<br>"In the 2014–2015 fiscal year, First Quantum's total annual expenditure on health-related programs in Zambia was $12.5 million. Of this, approximately 80% was allocated to the delivery of clinical and community-based health services, with the balance going to prevention and education programs." |
| Glencore Plc | 11 | No | Yes | Yes | Yes | 2010 | The company takes a case study appraoch to illustrate how it helps communities. In the 2010 report, they describe what they have done for infrastruction in various communities:<br>"Katanga has provided boreholes for drinking water for several villages in and around olwezi, most notably in Musonoi and Mutoshi, plus five new boreholes, along with associated equipment and pumps, for Kolwezi. It has paved 19 km of roads in Kolwezi and maintains a further 30 km between nearby villages, along with investing USD 8 million for refurbishing roadsin Lubumbashi and USD 1.2 million to replace the heavy vehicle barge on the Lualaba river." | "...Mopani has been partnering with other stakeholders, including the Zambian government, to increase the coverage of key malaria and HIV/AIDS interventions."<br>"Mutanda constructed two additional clinics and formed an alliance with the DRC government to open a vaccination clinic for underfives" |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Golden Star Resources Limited | 2 | Yes | Yes | Yes | Yes | 2011 | "We constructed and upgraded community road infrastructure, purchased equipment, made donations towards community infrastructure improvements, supported farming and fish pond projects, and undertook two GSSTEP programs (see GSSTEP case study)."<br>"Commencement of the Bondaye Nsuta Mbease electricity provision project - electricity poles and wiring for the main town supply line, which will service over 3,000 people."<br>"Provision of a 4 water supply boreholes, a pipe-borne water supply system, and pumps for two existing water systems, as well as system repairs and maintenance." | "Furnishing of the Bondaye clinic, constructed as a GSDF project in 2010." "As part of our corporate social responsibility programs, we built a health centre at Nsadweso, an Outpatients Department at the Prestea Government Hospital, nurses quarters at Bogoso, and a community health post at Bondaye."<br>"GSR supports and participates in national immunisation programs, including the 2011 Ghana national yellow fever immunisation program, as well as, providing health and family planning education and participating in World AIDS day programs." |
| IAMGOLD Corporation | 3 | No | Yes | Yes | No | 2007 | "In Guyana, we assisted with road repairs after heavy rain damage, gave books and cricket equipment to a school in exchange for expertise needed for a roof repair, and employed a summer school student for a recycling exercise."<br>"At Buckreef in Tanzania, we provided $60,000 towards school construction, at the request of the community. We also donated US$120,000 for four water wells to be drilled and pumps to be installed in four communities. Further, we established community water committees to manage the wells and helped train technicians to ensure that the wells remain functional." | "Occupational diseases are monitored at all our operations. As of 2007 no cases had been reported at any of our operations." |
| Kinross Gold Corporation | 4 | No | Yes | Yes | Yes | 2009 | "While road maintenance is carried out by the Chilean Ministry of Public Works, Kinross contributes financially to support ongoing road work."<br>"Committed $250,000 in 2009 to improve water flow in Espalha Creek" | "Providing support for the House for Native Health, where traditional healing methods are practised and taught"<br>"Established a partnership with Atenas Medical College and the City of Paracatu to build a new emergency care unit in the municipal hospital, contributing $400,000 to buy materials for the construction of the new emergency care unit and hospital expansion" |
| Mineral Deposits Limited | 1 | No | No | Yes | Yes | 2017 | "GCO's social responsibility activities focus on enhancing local economic development opportunities, strengthening local community infrastructure, supporting community capacity building and entrepreneurship programs in agriculture and small business development (particularly for women and young people) and building company-community relationships."<br>"Having completed the project associated with extending Diogo's water supply network to 13 villages in the GCO active area, a new water distribution network project involving three villages was initiated in 2017." | "GCO also participates in government health initiatives through its partnership with organisations such as AFRIVAC which aims to increase child immunisation rates across Africa." |
| Nevsun Resources Limited | 1 | No | No | Yes | Yes | 2012 | "The CAP will provide materials and technical expertise for a number of infrastructure projects, including: > Enhanced local transportation routes; > Improved sanitation facilities; > Increased supply of safe drinking water; and > Improved wells, piping, and diversion channels. In 2012, there was no specific CAP activities undertaken but the Company is actively looking for opportunities in 2013." | "To promote public health and safety we have developed the following four public programs: > Providing medical services at the mine site clinic; > Implementing healthy lifestyles campaigns for workers; and > Providing health checkups and other relevant medical testing" |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Newmont Mining Corporation | 2 | No | No | Yes | Yes | 2014 | "Newmont invested $28 million globally in 2014 to support a wide range of community initiatives."<br>"This joint initiative by Yanacocha and the municipal water authority included the expansion of water pipelines; upgrades of local water treatment plants; and construction of a new reservoir and network system."<br>2014 monetary community investments (in thousands)<br>Civil projects $1,047.6<br>Community capacity building $6,204.1<br>Education $2,643.5<br>Farming $1,042.7<br>Health $4,580.6<br>Public infrastructure $2,915.2<br>Other activities $8,557.7 | "To aid in the health and humanitarian fight against the world's deadliest outbreak of the Ebola virus in 2014, Newmont joined other mining companies that operate in West Africa to call on the international community to step up the fight against Ebola. We also became active participants in a coalition of private companies, government agencies and NGOs working to halt the spread of the disease in West Africa. [...] And we partnered with Project C.U.R.E. – an international humanitarian relief organization – to deliver donated medical supplies and protective gear worth more than $700,000 to Guinea and Liberia." |
| Rio Tinto | 2 | No | No | No | Yes | 2010 | "In addition to direct economic contributions through salaries, wages, taxes, royalties and local service and supply, our businesses supported 2,900 socio-economic programmes covering a wide range of activities such as health, education, business development, housing, environmental protection and agricultural development during 2010." | "Rio Tinto operates in countries where the prevalence of human immunodeficiency virus (HIV), tuberculosis and malaria are high. We work closely with the international health community on these problems not only in Africa, but globally. Where our operations are located in regions with a generalised HIV epidemic (as defined by UNAIDS) we actively encourage all employees to know their HIV status through voluntary testing. We also ensure that all employees in these regions and their nominated partner have affordable access to treatment, care and support, including antiretroviral drugs." |
| Vale S.A. | 1 | No | Yes | Yes | Yes | 2006 | "The investments – in projects in education, culture, health, infrastructure, farming, and social assistance – were guided by the concept of hearing the demands of the communities of Moatize and Tete."<br>"In Mário de Campos, improvements were made to a highway interchange and the main routes that carry intensive traffic of trucks with iron ore in the region. A contribution of R$1 million was made to Margarida Municipal Hospital of the municipality of João Monlevade"<br>"In Governador Valadares CVRD invested R$5.465 million in 2006 for construction of the Altinópolis viaduct, which, this year, will now serve approximately 15,000 people who cross the rail tracks daily."<br>"During this period, the community, CVRD and the public authority chose the investments that were a priority for each town such as water, drainage works, and a sewage network in Barão de Cocais – R$1.4 million has already been allocated for their construction." | With indigenous communities, and Quilombolas: "The company invested in works, such as construction of a health center"<br>"Other investments included R$1.6 million to Nossa Senhora das Dores Hospital, for the purchase of new equipment for hemodialysis, works on the remodeling the pediatricians' and obstetricians' section, and equipment for the sterilized material center." |
| Xstrata Limited | 11 | Yes | No | Yes | Yes | 2005 | "Extension of electricity supply for communities, e.g. at Project Lion in South Africa and Minera Alumbrera, Argentina" "Water management and conservation initiatives (all operations)"<br>"Irrigation systems are being constructed and healthy cattle will be introduced to improve the local genetic pool and a health prevention system will be established to protect the new cattle from disease."<br>"Expansion and refurbishment of schools, provision of education materials to more than 200 primary and secondary schools in Argentina" | "HIV/AIDS education, prevention and training initiatives; voluntary counselling, testing and treatment programmes"<br>"Primary healthcare community clinics, support for regional healthcare services and facilities, particularly for remote communities" |
| No. of "Yes" | | 6 | 8 | 13 | 17 | | | |

*IA2.2 UN African Investor Survey*

The evidence from CSR reports in Section IA2.1 focuses on how firm self-report that they invest in communities through infrastructure and healthcare. Firms can also "buy the local community" by treating local suppliers and employees better. To examine this channel, in this section, we look at how foreign extraction firms interact with local African communities in the post-2004 period.

We obtain data on local supplier and labor policies of foreign firms from the *African Investor Survey* of the *United Nations Industrial Development Organization* (UNIDO). In 2010, UNIDO conducted a large-scale survey among foreign firms with operations in Africa to elicit their investment motives and policies (Amendolagine et al. 2013). Our sample covers the survey responses of 155 foreign extractive firms with investments in 19 African countries. The advantage of the UN survey data is that it allows us to provide direct ground-level evidence on how foreign firms integrate local communities into their operations. The drawback is that the UN conducted this particular survey only once, in 2010, which limits our inferences to cross-sectional comparisons between foreign extraction firms. Moreover, because the survey was fully anonymized, we cannot observe the names of individual companies and assess whether they are under US jurisdiction. As an alternative, we assign treatment based on whether the firm is headquartered in an OECD country and thus is subject to the OECD Anti-Bribery Convention.

We compare local supplier and labor policies between OECD and non-OECD firms in 2010, accounting for host country and subsector fixed effects (i.e., oil/gas extraction, mining, and natural resource refining). In Table IA2.2, we find that OECD firms operating in Africa are more likely than non-OECD firms to purchase from local suppliers, train local employees, and pay their employees more in 2010 (after the increase in foreign corruption regulation). These results are consistent with the idea that foreign corruption regulation incentivizes firms to pursue business practices that are more beneficial to the local communities where they operate as a substitute for paying bribes. However, because our analysis relies on only one year of cross-sectional data in the post-FCR period (i.e., 2010), we cannot rule out that OECD firms already interacted more with local African communities than non-OECD firms before the increase in FCPA enforcement. Readers should interpret the results in Table IA2.2 with this caveat in mind.

## Table IA2.2: Local Suppliers and Labor Policies of OECD Firms in Africa

### Panel A: Descriptive Statistics

| | N | Mean | SD | P1 | P25 | P50 | P75 | P99 |
|---|---|---|---|---|---|---|---|---|
| *OECD* | 150 | 0.200 | 0.401 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 |
| *New Local Suppliers Added* | 129 | 5.519 | 14.027 | 0.000 | 0.000 | 0.000 | 4.000 | 60.000 |
| *Employee Training* | 150 | 0.467 | 0.501 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 |
| *Wage Production Workers* | 133 | 305.988 | 340.422 | 0.000 | 124.064 | 198.102 | 353.406 | 2,012.516 |
| *Wage Technical Workers* | 137 | 976.088 | 1,167.823 | 0.000 | 297.152 | 598.167 | 1,250.962 | 6,061.056 |
| *Wage Clerical Workers* | 139 | 554.985 | 782.390 | 0.000 | 158.018 | 292.036 | 535.860 | 3,804.607 |

*Notes:* This table presents descriptive statistics for the regression analyses in Table IA2.2 Panel B. *OECD* is a binary indicator equal to one if the firm is headquartered in a country that ratified the OECD Anti-Bribery Convention before 2004. *New Local Suppliers Added* is the number of new local suppliers that have been added to the firm's supplier list during the last three years. *Employee Training* is a binary indicator equal to one if the firm provides formal internal or external training to its employees. *Wage Production Workers* is the average monthly wage or salary paid to production workers during the last fiscal year. *Wage Technical Workers* is the average monthly wage or salary paid to technical, supervisory, or managerial staff during the last fiscal year. *Wage Clerical Workers* is the average monthly wage or salary paid to clerical or administrative staff during the last fiscal year.

### Panel B: Regressions

| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| Dependent Variable: | Ln(1+New Local Suppliers Added) | Employee Training | Ln(1+Wage Production Workers) | Ln(1+Wage Technical Workers) | Ln(1+Wage Clerical Workers) |
| *OECD* | 0.901 | 0.373 | 0.734 | 0.954 | 0.747 |
| | (0.415) | (0.111) | (0.251) | (0.320) | (0.397) |
| Fixed Effects: | | | | | |
| Host Country | Yes | Yes | Yes | Yes | Yes |
| Subsector | Yes | Yes | Yes | Yes | Yes |
| Adjusted R-Squared | 0.07 | 0.12 | 0.14 | 0.14 | 0.26 |
| Firm Observations | 129 | 150 | 133 | 137 | 139 |

*Notes:* This table reports coefficient estimates of OLS regressions examining the local supplier and labor policies of OECD and non-OECD firms in Africa. Standard errors clustered at the firm level are reported in parentheses. *OECD* is a binary indicator equal to one if the firm is headquartered in a country that ratified the OECD Anti-Bribery Convention before 2004. *New Local Suppliers Added* is the number of new local suppliers that have been added to the firm's supplier list during the last three years. *Employee Training* is a binary indicator equal to one if the firm provides formal internal or external training to its employees. *Wage Production Workers* is the average monthly wage or salary paid to production workers during the last fiscal year. *Wage Technical Workers* is the average monthly wage or salary paid to technical, supervisory, or managerial staff during the last fiscal year. *Wage Clerical Workers* is the average monthly wage or salary paid to clerical or administrative staff during the last fiscal year.

## Section IA3: Reasons for and Timing of the FCPA Enforcement Increase

### *IA3.1 Reasons for the FCPA Enforcement Increase after 2004*[1]

Figure 1 in the Manuscript plots the number of FCPA enforcement actions related to operations in Africa per year from 1977 to 2017. We collect all enforcement actions against corporations from the *Stanford Law School FCPA Database*. FCPA cases increase sharply after 2005. The first spike in enforcement actions occurs in 2007, which, given that a typical FCPA investigation, from initiation until the filing of an enforcement action, takes multiple years, is consistent with an onset of the ramp up in enforcement around 2005. Importantly, SEC-registered firms are generally required to publicly disclose FCPA investigations when they become aware of them. Evidence in Cassin (2018) suggests that public disclosure typically occurs a few years before cases are resolved. From 1977 until 2004 there were 53 FCPA enforcement actions (fewer than 2 per year); since then, there have been 284 cases (more than 20 per year).

A confluence of factors, all occurring in 2004, help to explain the timing of the FCPA enforcement increase. Below, we discuss these factors in detail.

United States v. Kay

A 2004 ruling by the US Court of Appeals in *United States v. Kay* expanded the legal definition of a bribe paid to "obtain or retain" business, and thereby broadened the scope of the FCPA beyond government procurement contracts to include a variety of potential interactions with public officials when conducting business abroad (e.g., payments for customs duties, licenses, permits, taxes, etc.). Consistent with the importance of the *Kay* decision, Martin et al. (2012) find that, compared to the period from 1977 to 2004, the percentage of FCPA enforcement actions targeting activities besides government procurement contracts nearly doubled after 2005.

Deferred Prosecution and Non-Prosecution Agreements

In late 2004, the DOJ used a non-prosecution agreement for the first time in a case against InVision Technologies and General Electric. Previously, the DOJ relied on filing formal charges as its only FCPA-enforcement option. In January of 2005, the DOJ, again for the first time, employed a deferred-prosecution agreement in a case against Monsanto. These alternative resolution vehicles forgo formal charges in favor of allowing the accused to acknowledge wrongdoing, pay a monetary penalty, and prospectively demonstrate good conduct. The possibility of using these agreements greatly reduced the likelihood that the DOJ would have to fulfill the burden of proof in court, and thus increased the agency's willingness to pursue cases.

Although the possibility of using deferred and non-prosecution agreements existed before 2005, their usage in FCPA cases beginning in 2004 appears to reflect a change in tactics by the DOJ. Mark Mendelsohn, the former deputy chief of the DOJ's FCPA enforcement unit, whose tenure at the DOJ began in 2005, stated publicly that if the agency did not have the option of resolving FCPA enforcement cases with non-prosecution or deferred-prosecution agreements, it would "certainly bring fewer cases" (Corporate Crime Reporter 2010). Consistent with this argument, Martin et al. (2012) show that since 2004 the DOJ has resolved 75% of all corporate FCPA

[1] The discussion in this section is based on Christensen et al. (2021): "Policeman for the World: The Impact of Extraterritorial FCPA Enforcement on Foreign Investment and Internal Controls."

enforcement actions with non- or deferred-prosecution agreements.

The Sarbanes-Oxley Act (SOX)

Regulatory changes arising from SOX increased the consequences to firms and their senior corporate officers for failing to maintain adequate internal control systems, such as those required under the FCPA's accounting provisions (98% of all successful FCPA cases after 2005 involve violations of the FCPA's accounting provisions. see Christensen et al. 2021 for further details). SOX Section 404, which became effective in November 2004 (for most firms), requires SEC registrants and their external auditors to assess the effectiveness of firms' internal control systems, including the firm's FCPA compliance programs, and to publicly disclose the results in the auditor's report. Increased scrutiny under SOX made it more likely that internal control failures and questionable transactions would be detected. An increased awareness of potential improprieties, coupled with the requirement under SOX Section 302 that senior corporate officers certify the accuracy of the firm's financial statements, increased the incentives for managers to self-report potential FCPA violations. Because the SEC and DOJ consider the extent of a company's cooperation, self-reporting misconduct upon discovery can also lead to less severe sanctions (SEC and DOJ 2012).

The DOJ has referenced SOX Sections 404 and 302 as important drivers of the increase in FCPA enforcement. During a 2010 Senate FCPA hearing a DOJ representative stated: "We are getting a significant number of disclosures from corporations about their own criminal conduct. I think that, in part, relates to the passage of Sarbanes-Oxley legislation, which encourages corporations to review their own books and records." In 2011 the same official stated "…one likely cause for this increase in cases is disclosures by companies consistent with their obligations under the Sarbanes-Oxley Act, which requires senior corporate officers to certify the accuracy of their financial statements. This has led to more companies discovering FCPA violations and making the decision to disclose them to the SEC and DOJ" (Koehler 2019).

### *IA3.2 Revealed Corporate Awareness of the FCPA Enforcement Increase*

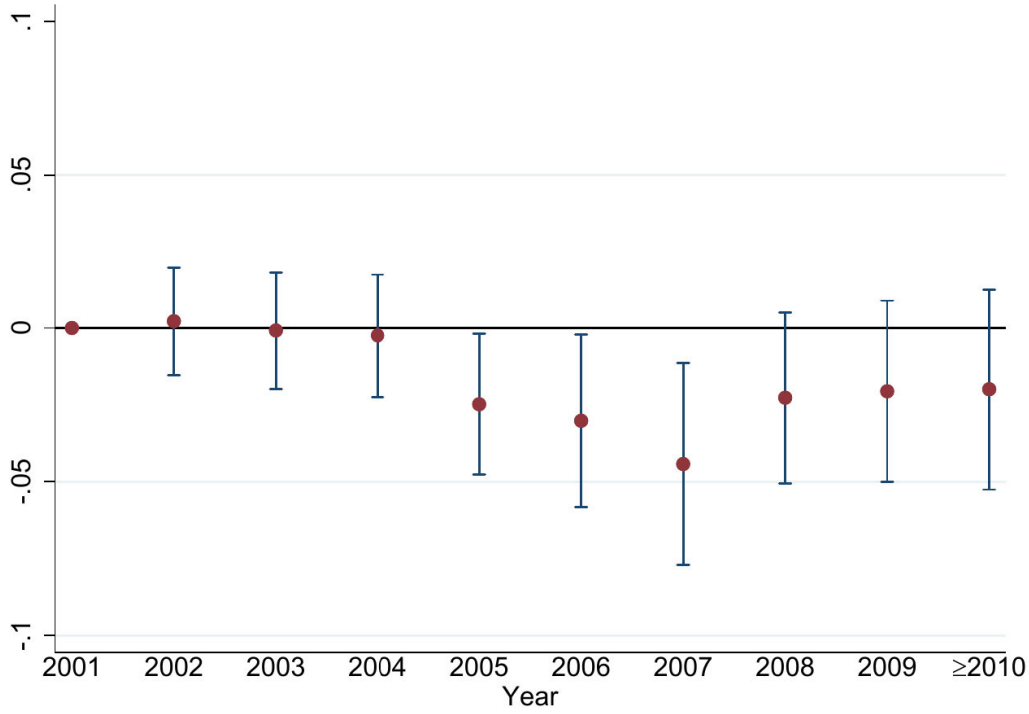
The three regulatory events discussed in Section IA3.1 can explain why FCPA enforcement actions increased after 2004. A related question is when multinational firms became aware of the FCPA enforcement increase and, hence, when the deterrent effect started to materialize. One empirical approach to assess when firms became aware of the enforcement threat is to examine the timing of changes in corporate policies that (i) respond to increased enforcement of foreign corruption regulation and (ii) are relatively easy to adjust and hence are expected to occur soon after firms become aware of an increase in enforcement.

The level of *new* investments in high-corruption-risk countries is a relatively fast-moving outcome that we expect to change when firms become aware of the increase in FCPA enforcement. Since forgoing marginal investment opportunities likely does not entail significant adjustment costs, multinational firms can quickly change their investments in a given host country. Zeume (2017) and Sanseverino (2021) find that multinational firms slow their expansion to high-corruption-risk countries almost immediately after an increase in anti-corruption enforcement due to the passage of the UK Bribery Act. Based on these papers, we gauge when multinational firms likely became aware of the increase in FCPA enforcement by looking at when their new investments in high-corruption-risk countries change relative to their investments in low-corruption-risk countries.

To do so, we compare changes in bilateral foreign direct investment (FDI) flows for firms headquartered in OECD countries (that are subject to the FCPA because their home country signed the OECD Anti-Bribery Convention) versus non-OECD firms in high- versus low-corruption-risk countries. We use the same data sources and essentially the same empirical model (excluding control variables) as in Christensen et al. (2021). In Figure IA3.2, we plot the yearly coefficient estimates of the treatment effect relative to 2001, which serves as the benchmark year. Before 2005, OECD firms have almost identical patterns in FDI flows as non-OECD firms. However, starting in 2005, OECD firms sharply curtail their new investments in high-corruption-risk countries. This decrease in FDI flows persists through the end of our sample period.

Taken together, the timing of the investment reduction suggests that multinational firms subject to the FCPA became aware of the enforcement increase beginning in 2005. Thus, we choose 2005 as the onset of the treatment period (i.e., when the deterrent effect of the FCPA most likely starts to materialize for our sample firms).

**Figure IA3.2: Revealed Knowledge of FCPA Enforcement – Foreign Direct Investment Flows in High-Corruption-Risk Areas**




*Notes:* This figure shows coefficient estimates and 95% confidence intervals for OLS regressions estimating the effect of increased FCPA enforcement on foreign direct investments in high-corruption-risk countries.

## Section IA4: Sample Selection and Composition

### *IA4.1 Sample Selection Criteria*

In Table IA4.1, we describe how we construct the sample for our luminosity analyses and provide a breakdown of the number of observations affected by each step of the sample selection for the mining facilities (Panel A) and the oil and gas facilities (Panel B).

For the mining sample (Table IA4.1 Panel A), there are 3,842 extraction facilities in the *SNL* Database in December 2018. However, most of the extraction sites (3,355) report zero production for our sample period (2000 to 2013). After excluding these facilities, we have 487 unique facilities and 186 of these facilities extract two minerals. We perform the main analysis at the facility×mineral level and when we account for multiple minerals at the same facility, we have 673 facility-mineral observations (we provide results only including the main mineral in Section IA5.4). For each facility, we have 14 years of data and we exclude facilities that produce minerals without price data and singletons. After applying all selection criteria, the baseline mine-mineral-year sample consist of 8,736 observations.

For the oil and gas sample (Table IA4.1 Panel B), there are 3,026 wells in the *Enverus International* database in June 2019. However, after excluding duplicates, wells without location data, and wells that opened after 2004 (i.e., the year before treatment), there are 2,404 wells. Oil and gas wells are often located close together in blocks, which makes it difficult to isolate each well's contribution to growth. To address this issue, we exclude blocks with multiple owners (2,132 wells). We further exclude offshore wells because our measures of growth (nighttime luminosity and cash-wage employment) make little sense for non-land environments. Finally, we exclude abandoned, shut in, depleted and newly discovered wells and one well for which we have no luminosity data, which results in 113 wells left in our final sample. Again, for each well we have 14 years of data. After applying all selection criteria, the baseline oil well sample consists of 1,582 observations.

Our combined sample of mining and oil and gas facilities consists of 10,318 (8,736+1,582) observations.

## Table IA4.1: Sample Selection Criteria

**Panel A: Mining Sample**

| Sample Selection Step | Mine Observations | Luminosity Observations | Δ |
|---|---|---|---|
| Raw mine level data (downloaded from the SNL Database in Dec. 2018) | | | |
| (1) Raw mine observations | 3,842 | | |
| (2) Excluding mines with zero reported production from 2000 to 2013 | 487 | | -3,355 |
| (3) Adding observations for mines that produce multiple minerals | 673 | | +186 |
| Luminosity data | | | |
| (4) Luminosity observations at the mine-mineral-year level | | 9,422 | × 14 |
| (5) Excluding minerals with no price data | | 8,778 | -644 |
| (6) Excluding singletons | | 8,736 | -42 |
| Final baseline sample of mine-mineral-year observations | | 8,736 | |

**Panel B: Oil and Gas Sample**

| Sample Selection Step | Oil Well Observations | Luminosity Observations | Δ |
|---|---|---|---|
| Raw oil well data (downloaded from Enverus International in June 2019) | | | |
| (1) Raw oil well observations | 3,026 | | |
| (2) Excluding duplicate observations | 3,021 | | -5 |
| (3) Excluding observations with no location data | 3,012 | | -9 |
| (4) Excluding wells discovered after 2004 | 2,404 | | -608 |
| (5) Excluding wells located in blocks where multiple firms operate | 272 | | -2,132 |
| (6) Excluding offshore wells | 193 | | -79 |
| (8) Excluding abandoned, shut in, depleted, or discovery wells | 114 | | -79 |
| (9) Excluding wells with no luminosity data | 113 | | -1 |
| Luminosity data | | | |
| (10) Luminosity observations at the well-year level | | 1,582 | × 14 |
| Final baseline sample of well-year observations | | 1,582 | |

*Notes:* This table describes the sample selection process for our luminosity analyses. The sample is from 2000 to 2013.

### *IA4.2 Mapping Extraction Sites to Owners and Treatment Classification*

Mining Sample

For each mine in our sample, the *SNL Metals and Mining* database provides the name, headquarter country, and ownership percentage of all corporate owners of the mine by year.[2] Based on this information, we check for each owner whether the firm is under US jurisdiction and thus subject to the FCPA. Based on FCPA guidelines, we classify a mine as being under US jurisdiction if at least one of the facility's corporate owners has a stake of 20% or more and is: 1) headquartered in the US, 2) has an SEC-registered cross-listing on a US stock exchange, or 3) discloses an operating segment in the US (SEC and DOJ 2012). We verify whether an owner is headquartered in the US based on the home country information provided in the *SNL Metals and Mining* data. To assess whether the corporate owner has an SEC cross listing in the US, we merge US cross-listings data from the websites of the major depository banks (Bank of New York and Citibank) and verify that a cross-listed firm is an SEC registrant through a search of 20-F and 40-F filings in the *SeekEdgar* database. Finally, we merge to each owner data on reporting segments from *Worldscope* to check whether the firm discloses an operating segment in the US. We consider only owners that are under US jurisdiction and are also headquartered in an OECD country as being subject to the FCPA (i.e., treated) because enforcement of the FCPA has in practice been limited to firms headquartered in OECD Anti-Bribery Convention signatory countries. We use the home country information in *SNL Metals and Mining* to verify whether the corporate owner has its headquarters in an OECD country. Overall, this multi-step procedure allows us to classify mines as treated or control facilities.

Oil and Gas Sample

For each oil well in our sample, we observe in the *Enverus International* database the owner's name in the year the well started operating. In contrast to mines, oil wells in our data are owned by one individual firm. We first conduct a manual web search on the headquarter country of the well owner to check whether the firm is headquartered in the US or in another OECD country. Then, we merge the owner list with the US cross-listings data, SEC-registration data, and geographic segment data as described above. Equivalent to our mining sample, we classify wells as treated if they are under US jurisdiction and headquartered in an OECD country.

[2] We access the *SNL Metals and Mining* database through the *S&P Global Market Intelligence* platform.

*IA4.3 Sample Composition by Commodity*

Table IA4.3 reports the distribution of extraction facilities across commodity types. Our sample includes facilities that extract 20 different commodities, with the largest concentration in gold (23%), followed by coal (14%), and oil (13%).

**Table IA4.3: Sample Composition by Commodity**

| | Unique Properties | Unique Foreign Properties | Unique USJ Properties | Unique FCR Properties | Property-Year Observations | FCR Property-Year Observations |
|---|---|---|---|---|---|---|
| Aluminum | 5 | 3 | 2 | 2 | 70 | 28 |
| Chromite | 18 | 10 | 10 | 8 | 252 | 112 |
| Coal | 102 | 35 | 46 | 31 | 1,428 | 434 |
| Cobalt | 22 | 15 | 9 | 5 | 308 | 70 |
| Copper | 73 | 37 | 28 | 13 | 1,022 | 182 |
| Diamond | 85 | 43 | 11 | 2 | 1,190 | 28 |
| Gas | 14 | 1 | 1 | 1 | 196 | 14 |
| Gold | 170 | 78 | 86 | 27 | 2,380 | 378 |
| Iron | 19 | 2 | 6 | 2 | 266 | 28 |
| Lead | 7 | 5 | 5 | 3 | 98 | 42 |
| Manganese | 11 | 5 | 3 | 2 | 154 | 28 |
| Nickel | 36 | 11 | 13 | 2 | 504 | 28 |
| Oil | 99 | 19 | 7 | 4 | 1,386 | 56 |
| Phosphate | 4 | 0 | 0 | 0 | 56 | 0 |
| Platinum | 39 | 12 | 15 | 1 | 546 | 14 |
| Silver | 12 | 7 | 3 | 1 | 168 | 14 |
| Tantalum | 3 | 0 | 0 | 0 | 42 | 0 |
| Vanadium | 3 | 2 | 2 | 2 | 42 | 28 |
| Zinc | 11 | 8 | 9 | 6 | 154 | 84 |
| Zircon | 4 | 3 | 2 | 2 | 56 | 28 |
| Total | 737 | 296 | 258 | 114 | 10,318 | 1,596 |

*Notes:* This table presents descriptive statistics by commodity for our luminosity sample. We describe the sample selection in Internet Appendix Section IA4. The sample is from 2000 to 2013. FCR properties have at least one significant owner (with an ownership stake of 20% or more) in 2004 who is headquartered, cross-listed, or operates a segment in the US and is from a signatory country of the OECD Anti-Bribery Convention.

*IA4.4 Sample Composition by Facility Country and Region*

Table IA4.4 provides descriptive statistics on the sample composition by facility country (Panel A) and facility region (Panel B). Of note is the fact that, within many countries, there are relatively few treated and/or control properties. Indeed, in 14 countries there are no treated properties and in 8 countries there is only one treated property. However, within region there is much more variation in treated and control properties. Northern Africa has the lowest fraction of treated properties (5.26%) and Southern Africa has the highest fraction of treated properties (54.38%). The lack of treated or control properties in many African countries is why we do not, in our main analysis, include *Country*×*Year* fixed effects and instead report results with *Region*×*Year* fixed effects (see sensitivity tests in Section IA5.9).

**Table IA4.4: Sample Composition by Country and Region**

**Panel A: By Country**

| | Unique Properties | Treated Properties | % Treated Properties within Country |
|---|---|---|---|
| Algeria | 31 | 2 | 6.45 |
| Angola | 10 | 1 | 10.00 |
| Botswana | 21 | 1 | 4.76 |
| Burkina Faso | 11 | 1 | 9.09 |
| Cote d'Ivoire | 6 | 0 | 0.00 |
| Dem. Rep. Congo | 36 | 7 | 19.44 |
| Egypt | 11 | 0 | 0.00 |
| Eritrea | 4 | 0 | 0.00 |
| Ethiopia | 2 | 0 | 0.00 |
| Gabon | 7 | 1 | 14.29 |
| Ghana | 17 | 5 | 29.41 |
| Guinea | 9 | 1 | 11.11 |
| Lesotho | 3 | 0 | 0.00 |
| Liberia | 1 | 0 | 0.00 |
| Libya | 57 | 2 | 3.51 |
| Madagascar | 3 | 2 | 66.67 |
| Mali | 9 | 3 | 33.33 |
| Mauritania | 6 | 3 | 50.00 |
| Morocco | 13 | 0 | 0.00 |
| Mozambique | 5 | 1 | 20.00 |
| Namibia | 20 | 1 | 5.00 |
| Niger | 2 | 0 | 0.00 |
| Nigeria | 7 | 0 | 0.00 |
| Senegal | 1 | 1 | 100.00 |
| Sierra Leone | 8 | 0 | 0.00 |
| South Africa | 351 | 60 | 17.09 |
| Sudan | 2 | 0 | 0.00 |
| Swaziland | 1 | 0 | 0.00 |
| Tanzania | 12 | 6 | 50.00 |
| Tunisia | 10 | 2 | 20.00 |
| Uganda | 1 | 0 | 0.00 |
| Western Sahara | 1 | 0 | 0.00 |
| Zambia | 23 | 7 | 30.43 |
| Zimbabwe | 36 | 7 | 19.44 |
| Total | 737 | 114 | |

**Panel B: By Region**

| | Unique Properties | Treated Properties | % Treated Properties within Region |
|---|---|---|---|
| East Africa | 86 | 23 | 26.74 |
| Middle Africa | 53 | 9 | 16.98 |
| North Africa | 125 | 6 | 4.80 |
| Southern Africa | 396 | 62 | 15.66 |
| West Africa | 77 | 14 | 18.18 |
| Total | 737 | 114 | |

*Notes:* This table presents descriptive statistics by country and region for our luminosity sample. We describe the sample selection in Internet Appendix Section IA4. The sample is from 2000 to 2013. Treated properties have at least one significant owner (with an ownership stake of 20% or more) in 2004 who is headquartered, cross-listed, or operates a segment in the US and is from a signatory country of the OECD Anti-Bribery Convention.

*IA4.5 Sample Composition by Owner Country*

Table IA4.5 reports the number of facility owners by headquarter country and treatment or control group. We focus on parent companies with an ownership stake in the given extraction facility of at least 20% in 2004. Note that the number of treated properties in Table IA4.5 equals 121 (instead of 114 treated properties in the Manuscript) because seven properties have two separate FCR owners. Most of our treated properties are owned by firms located in Canada (29%), the United Kingdom (26%), Switzerland (18%), Australia (13%), and the United States (7%). Properties owned by domestic firms that are neither subject to US jurisdiction nor located in the OECD are primarily from South Africa (42%), Libya (12%), Algeria (6%), the Democratic Republic of the Congo (5%), and Zimbabwe (4%).

**Table IA4.5: Sample Composition by Owner Country**

| | FCR Properties | USJ Non-OECD Properties | Non-USJ OECD Properties | Non-USJ Non-OECD Foreign Properties | Non-USJ Non-OECD Domestic Properties |
|---|---|---|---|---|---|
| Algeria | 0 | 0 | 0 | 0 | 27 |
| Angola | 0 | 0 | 0 | 0 | 7 |
| Australia | 16 | 0 | 17 | 0 | 0 |
| Austria | 0 | 0 | 1 | 0 | 0 |
| Barbados | 0 | 0 | 0 | 2 | 0 |
| Bermuda | 0 | 24 | 0 | 4 | 0 |
| Botswana | 0 | 0 | 0 | 0 | 17 |
| Brazil | 1 | 0 | 1 | 0 | 0 |
| British Virgin Islands | 0 | 0 | 0 | 4 | 0 |
| Burkina Faso | 0 | 0 | 0 | 0 | 1 |
| Canada | 35 | 0 | 32 | 0 | 0 |
| Cayman Islands | 0 | 0 | 0 | 1 | 0 |
| China | 0 | 3 | 0 | 2 | 0 |
| Cote d'Ivoire | 0 | 0 | 0 | 0 | 1 |
| Cyprus | 0 | 0 | 0 | 1 | 0 |
| Dem. Rep. Congo | 0 | 0 | 0 | 0 | 23 |
| Egypt | 0 | 0 | 0 | 0 | 9 |
| Eritrea | 0 | 0 | 0 | 0 | 4 |
| Ethiopia | 0 | 0 | 0 | 0 | 2 |
| France | 3 | 0 | 3 | 0 | 0 |
| Gabon | 0 | 0 | 0 | 0 | 2 |
| Germany | 0 | 0 | 1 | 0 | 0 |
| Ghana | 0 | 0 | 0 | 0 | 4 |
| Guinea | 0 | 0 | 0 | 0 | 5 |
| Indonesia | 0 | 0 | 0 | 2 | 0 |
| Ireland | 0 | 0 | 1 | 0 | 0 |
| Italy | 4 | 0 | 0 | 0 | 0 |
| Lesotho | 0 | 0 | 0 | 0 | 2 |
| Liberia | 0 | 0 | 0 | 0 | 1 |
| Libya | 0 | 0 | 0 | 0 | 53 |
| Luxembourg | 1 | 0 | 21 | 0 | 0 |
| Madagascar | 0 | 0 | 0 | 0 | 1 |
| Mali | 0 | 0 | 0 | 0 | 8 |
| Malta | 0 | 0 | 0 | 3 | 0 |
| Mauritania | 0 | 0 | 0 | 0 | 3 |
| Morocco | 0 | 0 | 0 | 0 | 13 |
| Mozambique | 0 | 0 | 0 | 0 | 3 |
| Namibia | 0 | 0 | 0 | 0 | 12 |
| Netherlands | 0 | 0 | 4 | 0 | 0 |
| Niger | 0 | 0 | 0 | 0 | 1 |
| Nigeria | 0 | 0 | 0 | 1 | 6 |
| Portugal | 0 | 0 | 1 | 0 | 0 |
| Russia | 0 | 0 | 0 | 3 | 0 |
| Sierra Leone | 0 | 0 | 0 | 0 | 7 |
| South Africa | 0 | 132 | 0 | 6 | 181 |
| Sudan | 0 | 0 | 0 | 0 | 2 |
| Swaziland | 0 | 0 | 0 | 0 | 1 |
| Switzerland | 22 | 0 | 2 | 0 | 0 |
| Tanzania | 0 | 0 | 0 | 0 | 4 |
| Tunisia | 0 | 0 | 0 | 0 | 5 |
| USA | 8 | 0 | 0 | 0 | 0 |
| Uganda | 0 | 0 | 0 | 0 | 1 |
| United Arab Emirates | 0 | 0 | 0 | 2 | 0 |
| United Kingdom | 31 | 0 | 31 | 0 | 0 |
| Western Sahara | 0 | 0 | 0 | 0 | 1 |
| Zambia | 0 | 0 | 0 | 1 | 5 |
| Zimbabwe | 0 | 0 | 0 | 0 | 18 |

*Notes:* This table presents descriptive statistics by owner country for our luminosity sample. We consider the headquarter country of all owners with an ownership stake of 20% or more in 2004. If ownership information of a property is missing, we consider the property to be domestically owned.

*IA4.6 Characteristics of Treated Firms*

In Table IA4.6, we provide descriptive information for the treated oil/gas and mining firms in our analysis sample. Our 121 treated facilities are owned by only 30 different companies because the extractive sector is highly concentrated and dominated by relatively few multinational firms. Note that the number of treated properties in Table IA4.6 equals 121 (instead of 114 treated properties in the Manuscript) because seven properties have two separate FCR owners. In fact, the 30 treated companies in our sample represent 31% ($556 bn.) of the total market capitalization ($1,771 bn.) of all listed extractive firms covered in *S&P Global* in 2004.

Our treatment sample is skewed towards mining and contains all major mining firms in the world (e.g., Glencore, BHP Billiton, Rio Tinto, Anglo American, Vale). In contrast, our sample only contains two major treated oil and gas firms, Eni and Total. Our sample does not include other major oil corporations (like ExxonMobil, Chevron, or Shell) because, in Africa, these firms only operate in large multi-firm oil blocks and/or offshore blocks. We exclude offshore oil wells because they do not fit our research question/design (i.e., there are no villages on open water) and drop blocks with multiple owners since wells in multi-firm blocks are often located close together, which makes it difficult to isolate each well's impact on local communities.

Finally, three of our treated firms (10%) became targets of FCPA enforcement actions (17% of treated properties). Our documented treatment effects need not necessarily operate through direct enforcement actions and the threat of enforcement likely plays a significant role. For instance, Zeume (2017) finds deterrence effects with very few anti-corruption cases in a UK setting.

**Table IA4.6: Characteristics of Treated Firms**

| Parent Company Name | Headquarter Country | Number of Properties (our sample) | FCPA Case | Market Capitalization 2004 (M USD) |
|---|---|---|---|---|
| Alcan Inc. | Canada | 2 | -- | 18,075 |
| Anglo American Plc | United Kingdom | 27 | -- | 35,263 |
| ArcelorMittal | Luxembourg | 1 | -- | 71,039 |
| BHP Billiton | Australia | 14 | Yes | 74,154 |
| Barrick Gold Corporation | Canada | 5 | -- | 12,869 |
| Breakwater Resources Ltd. | Canada | 2 | -- | 172 |
| Caledonia Mining Corporation Plc | United Kingdom | 1 | -- | 328 |
| Crew Gold Corporation | United Kingdom | 1 | -- | 172 |
| Dynatec Corporation | Canada | 2 | -- | -- |
| Eastwest Gold Corporation | Canada | 3 | -- | 1,222 |
| Eni | Italy | 4 | Yes | 94,628 |
| First Quantum Minerals Limited | Canada | 6 | -- | 949 |
| Freeport Minerals Corporation | USA | 3 | -- | 9,486 |
| Glencore Plc | Switzerland | 11 | -- | -- |
| Gold One International Ltd South Africa | Australia | 1 | -- | 344 |
| Golden Star Resources Limited | Canada | 2 | -- | 570 |
| High River Gold Mines Ltd. | Canada | 1 | -- | 215 |
| IAMGOLD Corporation | Canada | 3 | -- | 971 |
| Kinross Gold Corporation | Canada | 4 | -- | 2,422 |
| Mineral Deposits Limited | Australia | 1 | -- | 37 |
| Nevsun Resources Limited | Canada | 1 | -- | 140 |
| Newmont Mining Corporation | USA | 2 | -- | 19,798 |
| Placer Dome Inc. | Canada | 2 | -- | 8,187 |
| Rio Narcea Gold Mines, Ltd. | Canada | 1 | -- | 359 |
| Rio Tinto | United Kingdom | 2 | -- | 40,528 |
| Stamper Oil & Gas Corporation | Canada | 1 | -- | 9 |
| Total S.A. | France | 3 | Yes | 129,653 |
| Vale S.A. | Brazil | 1 | -- | 32,565 |
| Vectra Co. | USA | 3 | -- | 923 |
| Xstrata Limited | Switzerland | 11 | -- | 11,145 |
| Total | | 121 | | 566,224 |

## Section IA5: Supplementary Tests for Luminosity Analyses

### *IA5.1 Jackknife Procedure Excluding Individual Commodities*

In Table IA5.1, we present results dropping each commodity from the sample in turn. Excluding the two commodities with the largest number of observations, coal and gold (see Table IA4.3), significantly impacts the estimated treatment effects. Excluding coal increases the estimated treatment effect and excluding gold decreases it.

**Table IA5.1: Jackknife Procedure Excluding Individual Commodities**

| Dependent Variable: Ln(Luminosity (10) + 1) | (1) Excluding Aluminum | (2) Excluding Chromite | (3) Excluding Coal | (4) Excluding Cobalt | (5) Excluding Copper | (6) Excluding Diamond | (7) Excluding Gas | (8) Excluding Gold | (9) Excluding Iron | (10) Excluding Lead |
|---|---|---|---|---|---|---|---|---|---|---|
| *FCR × Post 2004* | 0.137 | 0.131 | 0.191 | 0.142 | 0.122 | 0.141 | 0.126 | 0.074 | 0.138 | 0.143 |
| | (0.047) | (0.048) | (0.059) | (0.047) | (0.041) | (0.048) | (0.046) | (0.046) | (0.047) | (0.046) |
| Fixed Effects: | | | | | | | | | | |
| Property × Commodity | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Region × Year | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Commodity × Year | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Property-Commodity-Year Observations | 10,248 | 10,066 | 8,890 | 10,010 | 9,296 | 9,128 | 10,122 | 7,938 | 10,052 | 10,220 |

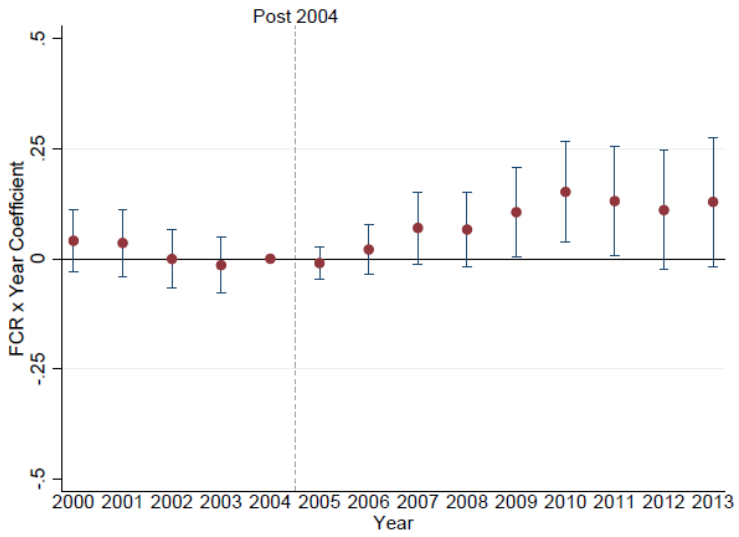
| Dependent Variable: Ln(Luminosity (10) + 1) | (1) Excluding Manganese | (2) Excluding Nickel | (3) Excluding Oil | (4) Excluding Phosphate | (5) Excluding Platinum | (6) Excluding Silver | (7) Excluding Tantalum | (8) Excluding Vanadium | (9) Excluding Zinc | (10) Excluding Zircon |
|---|---|---|---|---|---|---|---|---|---|---|
| *FCR × Post 2004* | 0.136 | 0.134 | 0.132 | 0.137 | 0.138 | 0.143 | 0.136 | 0.135 | 0.143 | 0.139 |
| | (0.047) | (0.046) | (0.048) | (0.046) | (0.047) | (0.046) | (0.046) | (0.047) | (0.047) | (0.047) |
| Fixed Effects: | | | | | | | | | | |
| Property × Commodity | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Region × Year | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Commodity × Year | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Property-Commodity-Year Observations | 10,164 | 9,814 | 8,932 | 10,262 | 9,772 | 10,150 | 10,276 | 10,276 | 10,164 | 10,262 |

*Notes:* This table reports coefficient estimates of OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity. We estimate the model from Column (1) of Table 4 in the Manuscript, but separately exclude individual commodities. We describe the sample selection in Internet Appendix Section IA4. The sample is from 2000 to 2013. Conley (1999) standard errors allowing for spatial correlation within a 100km radius and for infinite serial correlation are reported in parentheses. *Luminosity (10)* is the stable light mean unsaturated nighttime luminosity within a 10 km radius of the respective property. *FCR* is a binary indicator equal to one if an extraction facility has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is headquartered, cross-listed, or operates a segment in the US and is from a signatory country of the OECD Anti-Bribery Convention. *Post 2004* is a binary indicator equal to one for years after 2004.

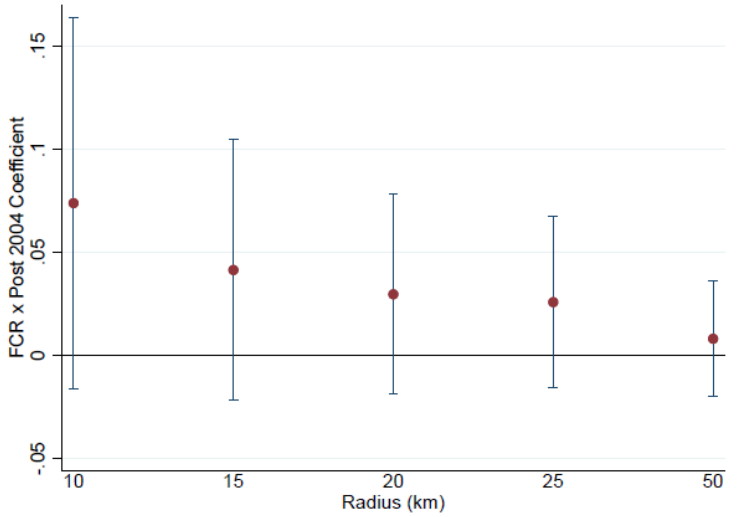
In Figure IA5.1, we plot the treatment effect of the FCPA on luminosity in event time excluding gold. In the pre-treatment period, there are no statistically significant differences between the treatment and control groups. In the post-treatment period, the path looks similar to the baseline specification including gold (reported in the Manuscript in Figure 4) but the magnitude of the estimated treatment effects is generally lower.

## Figure IA5.1: Luminosity Effects Excluding Gold

Panel A: Event-time Chart




Panel B: Spatial Diffusion of Luminosity Effect




*Notes:* Panel A shows coefficient estimates and 95% confidence intervals for OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity. We estimate the model from Column (1) of Table 4 in the Manuscript but exclude extraction areas around gold mines and replace the *FCR* × *Post 2004* indicator with separate interactions for each of the years in our sample (except for 2004, which serves as the benchmark). Panel B shows coefficient estimates of *FCR* × *Post 2004* and 95% confidence intervals for cell areas with radii of 10km, 15km, 20km, 25km, and 50km, respectively. We estimate the model from Column (1) of Table 4 in the Manuscript but exclude extraction areas around gold mines and use different cell areas.

## *IA5.2 Jackknife Procedure Excluding Individual Countries*

In Table IA5.2 below, we present results dropping each country from the sample in turn. Our results are not driven by any single country. South Africa is unique in that it is one of the most economically and politically developed countries in Africa and has the largest number of mining facilities in our sample. Nevertheless, it does not single-handedly drive our results.

**Table IA5.2: Jackknife Procedure Excluding Individual Countries**

| | (1) Excluding | (2) Excluding | (3) Excluding | (4) Excluding | (5) Excluding | (6) Excluding | (7) Excluding | (8) Excluding |
|---|---|---|---|---|---|---|---|---|
| Dependent Variable: Ln(Luminosity (10) + 1) | Algeria | Angola | Botswana | Burkina Faso | Cote d'Ivoire | Dem. Rep. Congo | Egypt | Eritrea |
| *FCR × Post 2004* | 0.127 | 0.139 | 0.135 | 0.136 | 0.138 | 0.145 | 0.137 | 0.139 |
| | (0.046) | (0.047) | (0.046) | (0.047) | (0.046) | (0.048) | (0.046) | (0.046) |
| Fixed Effects: | | | | | | | | |
| Property × Commodity | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Region × Year | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Commodity × Year | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Property-Commodity-Year Observations | 9,884 | 10,178 | 10,024 | 10,164 | 10,234 | 9,814 | 10,164 | 10,262 |

| | (9) Excluding | (10) Excluding | (11) Excluding | (12) Excluding | (13) Excluding | (14) Excluding | (15) Excluding | (16) Excluding | (17) Excluding |
|---|---|---|---|---|---|---|---|---|---|
| Dependent Variable: Ln(Luminosity (10) + 1) | Ethiopia | Gabon | Ghana | Guinea | Lesotho | Liberia | Libya | Madagascar | Mali |
| *FCR × Post 2004* | 0.136 | 0.128 | 0.129 | 0.137 | 0.136 | 0.136 | 0.140 | 0.131 | 0.133 |
| | (0.046) | (0.047) | (0.047) | (0.047) | (0.046) | (0.046) | (0.047) | (0.047) | (0.047) |
| Fixed Effects: | | | | | | | | | |
| Property × Commodity | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Region × Year | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Commodity × Year | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Property-Commodity-Year Observations | 10,290 | 10,220 | 10,080 | 10,192 | 10,276 | 10,304 | 9,520 | 10,276 | 10,192 |

| | (18) Excluding | (19) Excluding | (20) Excluding | (21) Excluding | (22) Excluding | (23) Excluding | (24) Excluding | (25) Excluding | (26) Excluding |
|---|---|---|---|---|---|---|---|---|---|
| Dependent Variable: Ln(Luminosity (10) + 1) | Mauritania | Morocco | Mozambique | Namibia | Niger | Nigeria | Senegal | Sierra Leone | South Africa |
| *FCR × Post 2004* | 0.125 | 0.134 | 0.142 | 0.136 | 0.136 | 0.130 | 0.131 | 0.137 | 0.282 |
| | (0.047) | (0.046) | (0.047) | (0.046) | (0.046) | (0.046) | (0.046) | (0.047) | (0.075) |
| Fixed Effects: | | | | | | | | | |
| Property × Commodity | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Region × Year | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Commodity × Year | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Property-Commodity-Year Observations | 10,234 | 10,136 | 10,248 | 10,038 | 10,290 | 10,220 | 10,304 | 10,206 | 5,404 |

| | (27) Excluding | (28) Excluding | (29) Excluding | (30) Excluding | (31) Excluding | (32) Excluding | (33) Excluding | (34) Excluding |
|---|---|---|---|---|---|---|---|---|
| Dependent Variable: Ln(Luminosity (10) + 1) | Sudan | Swaziland | Tanzania | Tunisia | Uganda | Western Sahara | Zambia | Zimbabwe |
| *FCR × Post 2004* | 0.134 | 0.136 | 0.121 | 0.144 | 0.135 | 0.136 | 0.108 | 0.128 |
| | (0.046) | (0.046) | (0.048) | (0.047) | (0.046) | (0.046) | (0.041) | (0.047) |
| Fixed Effects: | | | | | | | | |
| Property × Commodity | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Region × Year | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Commodity × Year | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Property-Commodity-Year Observations | 10,290 | 10,304 | 10,150 | 10,178 | 10,304 | 10,304 | 9,996 | 9,814 |

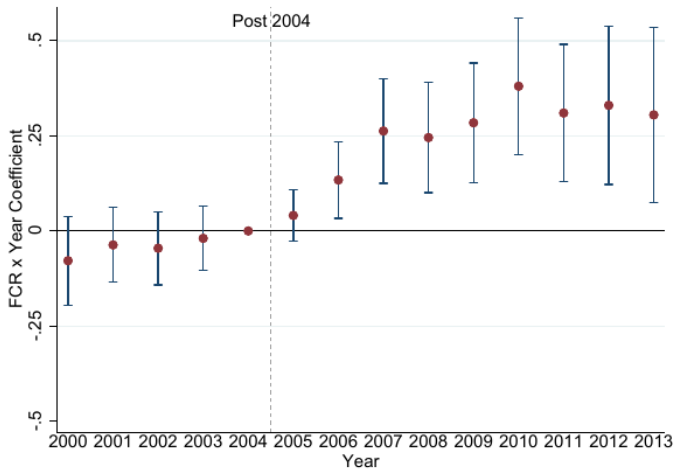
*Notes:* This table reports coefficient estimates of OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity. We estimate the model from Column (1) of Table 4 in the Manuscript, but separately exclude individual countries. We describe the sample selection in Internet Appendix Section IA4. The sample is from 2000 to 2013. Conley (1999) standard errors allowing for spatial correlation within a 100km radius and for infinite serial correlation are reported in parentheses. *Luminosity (10)* is the stable light mean unsaturated nighttime luminosity within a 10 km radius of the respective property. *FCR* is a binary indicator equal to one if an extraction facility has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is headquartered, cross-listed, or operates a segment in the US and is from a signatory country of the OECD Anti-Bribery Convention. *Post 2004* is a binary indicator equal to one for years after 2004.

### *IA5.3 Excluding Overlapping Extraction Areas*

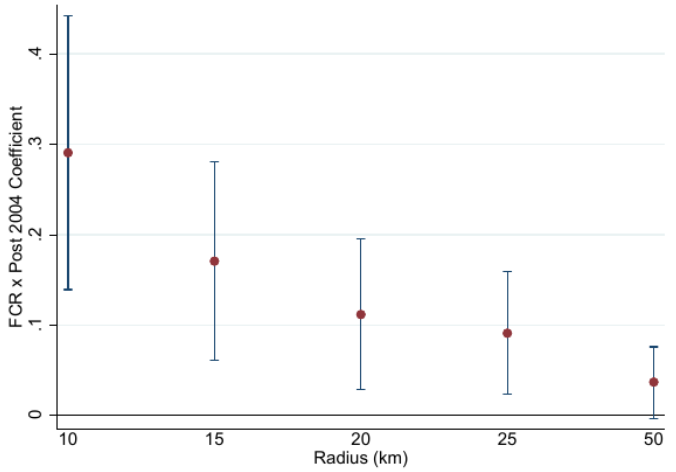
In the Manuscript, our main unit of observation is the 10-kilometer circular geographic area around an active extraction facility. For facilities located near each other, these areas might overlap. When the observed increase in luminosity in treated areas spills over to overlapping control areas, measurement error is introduced and our estimated treatment effects understate the effects of foreign corruption regulation. In Figure IA5.3 and Table IA5.3, we assess the effect of treatment spillovers by excluding extraction areas that overlap within a 10-kilometer radius. Consistent with these spillovers biasing our estimates towards zero, the economic magnitude of our main results becomes larger. For example, the coefficient on *FCR×Post 2004* increases from 0.136 in Table 4 of the Manuscript to 0.291 in Table IA5.3.

**Figure IA5.3: Luminosity Effects Excluding Overlapping Extraction Areas**

Panel A: Event-time Chart




Panel B: Spatial Diffusion of Luminosity Effect




*Notes:* Panel A shows coefficient estimates and 95% confidence intervals for OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity. We estimate the model from Column (1) of Table 4 in the Manuscript but exclude extraction areas that overlap within a 10-kilometer radius, and replace the *FCR* × *Post 2004* indicator with separate interactions for each of the years in our sample (except for 2004, which serves as the benchmark). Panel B shows coefficient estimates of *FCR* × *Post 2004* and 95% confidence intervals for cell areas with radii of 10km, 15km, 20km, 25km, and 50km, respectively. We estimate the model from Column (1) of Table 4 in the Manuscript but exclude extraction areas that overlap within a 10-kilometer radius and use different cell areas.

## Table IA5.3: Luminosity Effects Excluding Overlapping Extraction Areas

| | Baseline | Sensitivity Analyses | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Dependent Variable: | 0-10 km | Asinh | 1-10 km | USJ Non-OECD |
| Ln(Luminosity (10) + 1) | Radius | (Luminosity) | Radius | and Non-USJ OECD |
| *FCR* × *Post 2004* | 0.291 | 0.383 | 0.281 | 0.291 |
| | (0.077) | (0.098) | (0.076) | (0.083) |
| *USJ Non-OECD* × *Post 2004* | | | | -0.100 |
| | | | | (0.101) |
| *Non-USJ OECD* × *Post 2004* | | | | 0.075 |
| | | | | (0.054) |
| Difference in Coefficients (p-value): | | | | |
| [FCR–USJ Non-OECD]×Post 2004 | | | | 0.00 |
| [FCR–Non-USJ OECD]×Post 2004 | | | | 0.01 |
| Fixed Effects: | | | | |
| Property × Commodity | Yes | Yes | Yes | Yes |
| Region × Year | Yes | Yes | Yes | Yes |
| Commodity × Year | Yes | Yes | Yes | Yes |
| Property-Commodity-Year Observations | 5,194 | 5,194 | 5,194 | 5,194 |

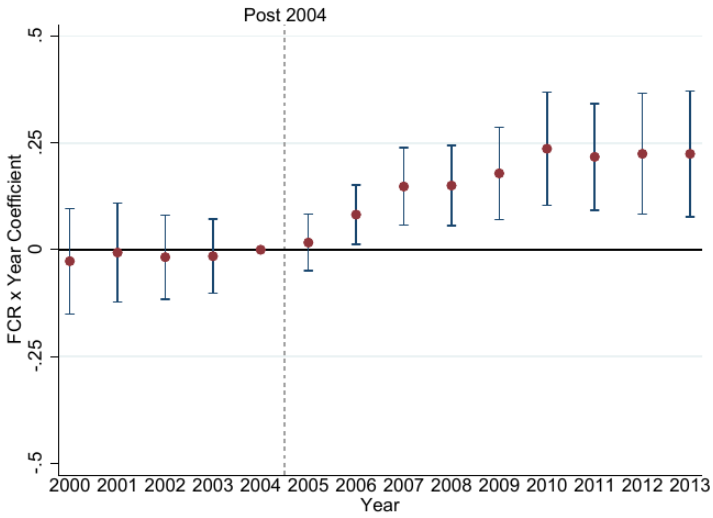
*Notes:* This table reports coefficient estimates of OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity. We exclude extraction areas that overlap within a 10-kilometer radius. We describe the sample selection in Internet Appendix Section IA4. The sample is from 2000 to 2013. Conley (1999) standard errors allowing for spatial correlation within a 100km radius and for infinite serial correlation are reported in parentheses. *Luminosity (10)* is the stable light mean unsaturated nighttime luminosity within a 10 km radius of the respective property. *Luminosity (1-10)* is the stable light mean unsaturated nighttime luminosity within a 1-10 km radius of the respective property. *FCR* is a binary indicator equal to one if an extraction facility has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is headquartered, cross-listed, or operates a segment in the US and is from a signatory country of the OECD Anti-Bribery Convention. *USJ Non-OECD* is a binary indicator equal to one if a property in the control group has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is cross-listed or operates a segment in the US but is not from a signatory country of the OECD Anti-Bribery Convention. *Non-USJ OECD* is a binary indicator equal to one if a property in the control group has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is from a signatory country of the OECD Anti-Bribery Convention but is not cross-listed and does not operate a segment in the US. *Post 2004* is a binary indicator equal to one for years after 2004.

### *IA5.4 Keeping only the Main Commodity*

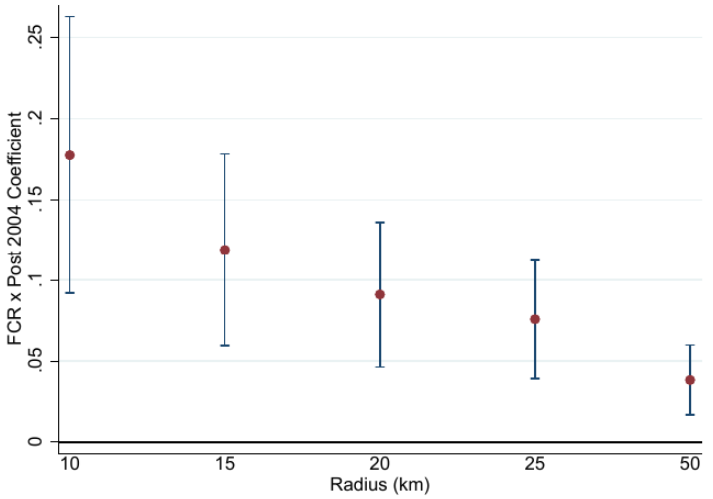
In our baseline sample, 16% of the mines (77 out of 478 mines) produce more than one commodity. If more than one commodity is extracted on the same site, that cell appears in our dataset as a separate observation for each commodity. Our approach implicitly assumes that commodities from the same facility are independent from each other, which they likely are not, given that these commodities are, in most cases, jointly extracted at the same site. The potential interdependence of observations could bias our inferences. As a robustness test, we include each extraction facility only once, based on the commodity with the highest production value. In Figure IA5.4 and Table IA5.4, we find that the estimated treatment effects are generally larger if we keep only the commodity with the highest production value.

**Figure IA5.4: Luminosity Effects Keeping Only the Main Commodity**

Panel A: Event-time Chart




Panel B: Spatial Diffusion of Luminosity Effect




*Notes:* Panel A shows coefficient estimates and 95% confidence intervals for OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity. We estimate the model from Column (1) of Table 4 in the Manuscript but only keep the main commodity of each mine, and replace the *FCR* × *Post 2004* indicator with separate interactions for each of the years in our sample (except for 2004, which serves as the benchmark). Panel B shows coefficient estimates of *FCR* × *Post 2004* and 95% confidence intervals for cell areas with radii of 10km, 15km, 20km, 25km, and 50km, respectively. We estimate the model from Column (1) of Table 4 in the Manuscript but only keep the main commodity of each mine and use different cell areas.

# Table IA5.4: Luminosity Effects Keeping Only the Main Commodity

| | Baseline | Sensitivity Analyses | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Dependent Variable: | 0-10 km | Asinh | 1-10 km | USJ Non-OECD |
| Ln(Luminosity (10) + 1) | Radius | (Luminosity) | Radius | and Non-USJ OECD |
| *FCR* × *Post 2004* | 0.178 | 0.233 | 0.173 | 0.174 |
| | (0.044) | (0.056) | (0.043) | (0.046) |
| *USJ Non-OECD* × *Post 2004* | | | | -0.051 |
| | | | | (0.039) |
| *Non-USJ OECD* × *Post 2004* | | | | 0.067 |
| | | | | (0.042) |
| Difference in Coefficients (p-value): | | | | |
| [FCR–USJ Non-OECD]×Post 2004 | | | | 0.00 |
| [FCR–Non-USJ OECD]×Post 2004 | | | | 0.06 |
| Fixed Effects: | | | | |
| Property × Commodity | Yes | Yes | Yes | Yes |
| Region × Year | Yes | Yes | Yes | Yes |
| Commodity × Year | Yes | Yes | Yes | Yes |
| Property-Commodity-Year Observations | 8,246 | 8,246 | 8,246 | 8,246 |

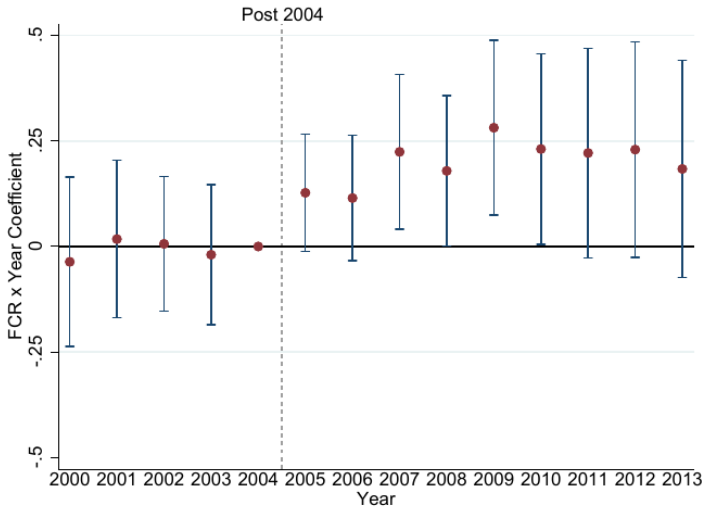
*Notes:* This table reports coefficient estimates of OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity. We only keep the main commodity of each mine, determined by maximum production value over the sample period. We describe the sample selection in Internet Appendix Section IA4. The sample is from 2000 to 2013. Conley (1999) standard errors allowing for spatial correlation within a 100km radius and for infinite serial correlation are reported in parentheses. *Luminosity (10)* is the stable light mean unsaturated nighttime luminosity within a 10 km radius of the respective property. *Luminosity (1-10)* is the stable light mean unsaturated nighttime luminosity within a 1-10 km radius of the respective property. *FCR* is a binary indicator equal to one if an extraction facility has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is headquartered, cross-listed, or operates a segment in the US and is from a signatory country of the OECD Anti-Bribery Convention. *USJ Non-OECD* is a binary indicator equal to one if a property in the control group has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is cross-listed or operates a segment in the US but is not from a signatory country of the OECD Anti-Bribery Convention. *Non-USJ OECD* is a binary indicator equal to one if a property in the control group has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is from a signatory country of the OECD Anti-Bribery Convention but is not cross-listed and does not operate a segment in the US. *Post 2004* is a binary indicator equal to one for years after 2004.

### *IA5.5 Ln(Luminosity) as an Alternative Outcome Variable*

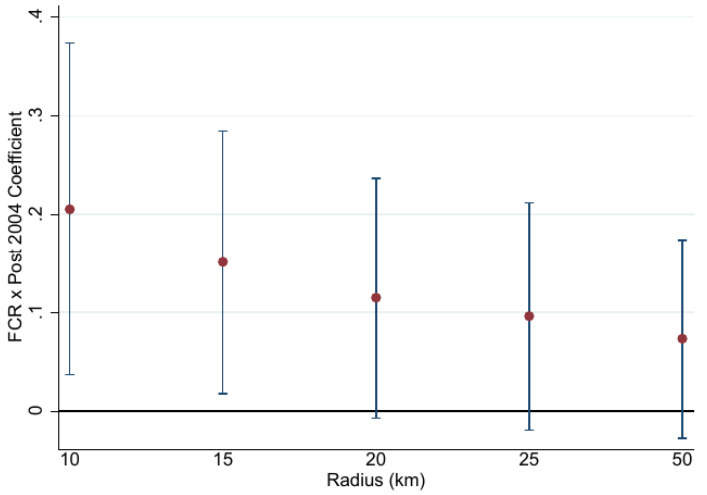
In the Manuscript, our main dependent variable is the natural logarithm of *Luminosity* plus 1 (we also report results using the inverse hyperbolic sine in sensitivity analyses reported in Tables 4 and 7 of the Manuscript). We include observations with a value of zero because a luminosity value of zero does not necessarily imply an absence of economic activity (Hodler and Raschky 2014). In Figure IA5.5 and Table IA5.5, we drop zero-value observations and use Ln(*Luminosity*) as the dependent variable. In these alternative specifications, we find that the estimated treatment effects mostly increase in magnitude relative to those reported in the Manuscript.

**Figure IA5.5: Luminosity Effects using Ln(Luminosity) as Outcome Variable**

Panel A: Event-time Chart




Panel B: Spatial Diffusion of Luminosity Effect




*Notes:* Panel A shows coefficient estimates and 95% confidence intervals for OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity. We estimate the model from Column (1) of Table 4 in the Manuscript but do not add 1 when log transforming *Luminosity*, and replace the *FCR* × *Post 2004* indicator with separate interactions for each of the years in our sample (except for 2004, which serves as the benchmark). Panel B shows coefficient estimates of *FCR* × *Post 2004* and 95% confidence intervals for cell areas with radii of 10km, 15km, 20km, 25km, and 50km, respectively. We estimate the model from Column (1) of Table 4 in the Manuscript but do not add 1 when log transforming *Luminosity* and use different cell areas.

## Table IA5.5: Luminosity Effects using Ln(Luminosity) as Outcome Variable

| | Baseline | Sensitivity Analyses | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Dependent Variable: | 0-10 km | Asinh | 1-10 km | USJ Non-OECD |
| Ln(Luminosity (10)) | Radius | (Luminosity) | Radius | and Non-USJ OECD |
| *FCR × Post 2004* | 0.205 | 0.183 | 0.201 | 0.215 |
| | (0.086) | (0.059) | (0.084) | (0.092) |
| *USJ Non-OECD × Post 2004* | | | | -0.041 |
| | | | | (0.083) |
| *Non-USJ OECD × Post 2004* | | | | 0.150 |
| | | | | (0.118) |
| Difference in Coefficients (p-value): | | | | |
| [FCR–USJ Non-OECD]×Post 2004 | | | | 0.01 |
| [FCR–Non-USJ OECD]×Post 2004 | | | | 0.63 |
| Fixed Effects: | | | | |
| Property × Commodity | Yes | Yes | Yes | Yes |
| Region × Year | Yes | Yes | Yes | Yes |
| Commodity × Year | Yes | Yes | Yes | Yes |
| Property-Commodity-Year Observations | 8,770 | 10,318 | 8,769 | 8,770 |

*Notes:* This table reports coefficient estimates of OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity. We do not add 1 when log transforming *Luminosity*. We describe the sample selection in Internet Appendix Section IA4. The sample is from 2000 to 2013. Conley (1999) standard errors allowing for spatial correlation within a 100km radius and for infinite serial correlation are reported in parentheses. *Luminosity (10)* is the stable light mean unsaturated nighttime luminosity within a 10 km radius of the respective property. *Luminosity (1-10)* is the stable light mean unsaturated nighttime luminosity within a 1-10 km radius of the respective property. *FCR* is a binary indicator equal to one if an extraction facility has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is headquartered, cross-listed, or operates a segment in the US and is from a signatory country of the OECD Anti-Bribery Convention. *USJ Non-OECD* is a binary indicator equal to one if a property in the control group has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is cross-listed or operates a segment in the US but is not from a signatory country of the OECD Anti-Bribery Convention. *Non-USJ OECD* is a binary indicator equal to one if a property in the control group has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is from a signatory country of the OECD Anti-Bribery Convention but is not cross-listed and does not operate a segment in the US. *Post 2004* is a binary indicator equal to one for years after 2004.

*IA5.6 Treatment Effects for Subsets of the Control Group*

In Table IA5.6, we present all of the results from Table 4 including the two additional *USJ Non-OECD×Post 2004* and *Non-USJ OECD×Post 2004* interaction terms. Across all specifications, we find no evidence of a statistically significant counterfactual treatment effect from being under US jurisdiction or being headquartered in an OECD country absent an increase in the threat of FCPA enforcement. However, the coefficient on *Non-USJ OECD×Post 2004* is positive in all specifications, which is consistent with all OECD firms experiencing some increase in FCPA enforcement after 2004.

**Table IA5.6: Placebo Treatment Effects**

| | Baseline | Sensitivity Analyses | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Dependent Variable: | 0-10 km | Asinh | 1-10 km | USJ Non-OECD |
| Ln(Luminosity (10) + 1) | Radius | (Luminosity) | Radius | and Non-USJ OECD |
| *FCR × Post 2004* | 0.137 | 0.185 | 0.131 | 0.137 |
| | (0.049) | (0.063) | (0.048) | (0.049) |
| *USJ Non-OECD × Post 2004* | -0.025 | -0.032 | -0.026 | -0.025 |
| | (0.051) | (0.064) | (0.050) | (0.051) |
| *Non-USJ OECD × Post 2004* | 0.045 | 0.066 | 0.042 | 0.045 |
| | (0.042) | (0.054) | (0.041) | (0.042) |
| Difference in Coefficients (p-value): | | | | |
| [FCR–USJ Non-OECD]×Post 2004 | 0.01 | 0.00 | 0.01 | 0.01 |
| [FCR–Non-USJ OECD]×Post 2004 | 0.11 | 0.11 | 0.11 | 0.11 |
| Fixed Effects: | | | | |
| Property × Commodity | Yes | Yes | Yes | Yes |
| Region × Year | Yes | Yes | Yes | Yes |
| Commodity × Year | Yes | Yes | Yes | Yes |
| Property-Commodity-Year Observations | 10,318 | 10,318 | 10,318 | 10,318 |

*Notes:* This table reports coefficient estimates of OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity controlling for *USJ Non-OECD* and *Non-USJ OECD* properties. We describe the sample selection in Internet Appendix Section IA4. The sample is from 2000 to 2013. Conley (1999) standard errors allowing for spatial correlation within a 100km radius and for infinite serial correlation are reported in parentheses. *Luminosity (10)* is the stable light mean unsaturated nighttime luminosity within a 10 km radius of the respective property. *Luminosity (1-10)* is the stable light mean unsaturated nighttime luminosity within a 1-10 km radius of the respective property. *FCR* is a binary indicator equal to one if an extraction facility has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is headquartered, cross-listed, or operates a segment in the US and is from a signatory country of the OECD Anti-Bribery Convention. *USJ Non-OECD* is a binary indicator equal to one if a property in the control group has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is cross-listed or operates a segment in the US but is not from a signatory country of the OECD Anti-Bribery Convention. *Non-USJ OECD* is a binary indicator equal to one if a property in the control group has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is from a signatory country of the OECD Anti-Bribery Convention but is not cross-listed and does not operate a segment in the US. *Post 2004* is a binary indicator equal to one for years after 2004.

*IA5.7 Controlling for Economic Conditions in Headquarter Countries*

Our classification of treated facilities is partly determined by whether the facility's parent company (i.e., the ultimate owner of the facility) is headquartered in a country that is a member of the Organization for Economic Co-operation and Development (OECD). OECD membership requires a commitment to democracy and a market economy, implying that OECD countries differ from non-OECD countries along many dimensions. Perhaps the most concerning difference for our research design is that OECD countries' macroeconomic fluctuations are highly correlated (and almost certainly more correlated than those of non-OECD countries). In our difference-in-differences design, the concern is that our estimated treatment effect of foreign corruption regulation could be biased if 1) an economic shock occurred around 2005 (i.e., concurrent to the FCPA enforcement increase), 2) this shock differentially affected OECD and non-OECD countries, and 3) macroeconomic fluctuations in headquarter countries impact how firms operate their extraction facilities in Africa.

One way to address this issue is to control for some observable macroeconomic conditions in the parent country and assess how those controls impact our estimated treatment effects. This approach directly addresses selection on the observables we control for and, to the extent observable and unobservable factors are correlated, provides a way to gauge the magnitude of any potential unobservable confound (Altonji et al., 2005). That is, we first reproduce the main results without any control variables for the sample where the control variables are available and then add the control variables and assess the change in the magnitude of the estimated treatment effect.

We select variables that are likely highly associated with macroeconomic shocks that could potentially provide alternative explanations for our results, particularly factors that may affect firms' ability to expand their operations abroad. We focus on GDP growth, exports, FDI outflows, and unemployment rates. GDP growth, exports, and FDI outflows are likely associated with financial shocks and unemployment levels are likely associated with labor market constraints (i.e., a higher labor supply increases a firm's ability to expand operations).

Table IA5.7 Panel A mirrors Table 4 of the Manuscript but conditions the sample on non-missing macroeconomic controls. The results are virtually identical to those reported in the Manuscript. In Table IA5.7 Panel B, we use the same regression sample but include GDP growth, exports, FDI outflows, and the unemployment rate of the owner's headquarter country as control variables (stand alone and interacted with *Post 2004*). The estimated treatment effect remains roughly the same and, if anything, slightly increases in magnitude and statistical significance (compared to the results without any macro controls; see Table IA5.7 Panel A).

Overall, these results suggest that observable, and correlated unobservable, macroeconomic factors in the headquarter country of a facility's owner are unlikely to explain our results.

## Table 5.7: Controlling for Macroeconomic Conditions in Headquarter Country

### Panel A: Without Macroeconomic Controls

| | Baseline | Sensitivity Analyses | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Dependent Variable: | 0-10 km | Asinh | 1-10 km | USJ Non-OECD |
| Ln(Luminosity (10) + 1) | Radius | (Luminosity) | Radius | and Non-USJ OECD |
| *FCR × Post 2004* | 0.132 | 0.176 | 0.127 | 0.133 |
| | (0.043) | (0.055) | (0.042) | (0.045) |
| *USJ Non-OECD × Post 2004* | | | | -0.033 |
| | | | | (0.046) |
| *Non-USJ OECD × Post 2004* | | | | 0.053 |
| | | | | (0.040) |
| Difference in Coefficients (p-value): | | | | |
| [FCR–USJ Non-OECD]×Post 2004 | | | | 0.00 |
| [FCR–Non-USJ OECD]×Post 2004 | | | | 0.15 |
| Fixed Effects: | | | | |
| Property × Commodity | Yes | Yes | Yes | Yes |
| Region × Year | Yes | Yes | Yes | Yes |
| Commodity × Year | Yes | Yes | Yes | Yes |
| R-Squared | 0.964 | 0.960 | 0.965 | 0.964 |
| Property-Commodity-Year Observations | 8,498 | 8,498 | 8,498 | 8,498 |

### Panel B: With Macroeconomic Controls

| | Baseline | Sensitivity Analyses | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Dependent Variable: | 0-10 km | Asinh | 1-10 km | USJ Non-OECD |
| Ln(Luminosity (10) + 1) | Radius | (Luminosity) | Radius | and Non-USJ OECD |
| *FCR × Post 2004* | 0.145 | 0.188 | 0.140 | 0.188 |
| | (0.048) | (0.062) | (0.047) | (0.056) |
| *USJ Non-OECD × Post 2004* | | | | -0.059 |
| | | | | (0.050) |
| *Non-USJ OECD × Post 2004* | | | | 0.113 |
| | | | | (0.056) |
| Owner Country Controls: | | | | |
| *GDP Growth* | 0.001 | 0.002 | 0.001 | 0.001 |
| | (0.004) | (0.005) | (0.004) | (0.004) |
| *GDP Growth × Post 2004* | -0.000 | -0.001 | -0.000 | -0.000 |
| | (0.004) | (0.005) | (0.004) | (0.004) |
| *Unemployment Rate* | 0.008 | 0.011 | 0.008 | 0.005 |
| | (0.004) | (0.005) | (0.004) | (0.004) |
| *Unemployment Rate × Post 2004* | 0.004 | 0.005 | 0.004 | 0.007 |
| | (0.002) | (0.002) | (0.002) | (0.002) |
| *Exports* | -0.001 | -0.002 | -0.001 | -0.000 |
| | (0.002) | (0.002) | (0.002) | (0.002) |
| *Exports × Post 2004* | 0.000 | 0.000 | 0.000 | 0.000 |
| | (0.001) | (0.001) | (0.001) | (0.001) |
| *Foreign Direct Investment Outflow* | -0.001 | -0.003 | -0.001 | 0.008 |
| | (0.019) | (0.024) | (0.019) | (0.019) |
| *Foreign Direct Investment Outflow × Post 2004* | 0.006 | 0.015 | 0.007 | -0.014 |
| | (0.047) | (0.060) | (0.046) | (0.049) |
| Difference in Coefficients (p-value): | | | | |
| [FCR–USJ Non-OECD]×Post 2004 | | | | 0.00 |
| [FCR–Non-USJ OECD]×Post 2004 | | | | 0.18 |
| Fixed Effects: | | | | |
| Property × Commodity | Yes | Yes | Yes | Yes |
| Region × Year | Yes | Yes | Yes | Yes |
| Commodity × Year | Yes | Yes | Yes | Yes |
| R-Squared | 0.965 | 0.960 | 0.965 | 0.965 |
| Property-Commodity-Year Observations | 8,498 | 8,498 | 8,498 | 8,498 |

*Notes:* This table reports coefficient estimates of OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity. We restrict the sample to extraction facilities whose main owner country in 2004 has non-missing GDP growth data, non-missing employment rate data, non-missing exports data, and non-missing foreign direct investment outflow data. We describe the sample selection in Internet Appendix Section IA4. The sample is from 2000 to 2013. Conley (1999) standard errors allowing for spatial correlation within a 100km radius and for infinite serial correlation are reported in parentheses. *Luminosity (10)* is the stable light mean unsaturated nighttime luminosity within a 10 km radius of the respective property. *Luminosity (1-10)* is the stable light mean unsaturated nighttime luminosity within a 1-10 km radius of the respective property. *FCR* is a binary indicator equal to one if an extraction facility has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is headquartered, cross-listed, or operates a segment in the US and is from a signatory country of the OECD Anti-Bribery Convention. *USJ Non-OECD* is a binary indicator equal to one if a property in the control group has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is cross-listed or operates a segment in the US but is not from a signatory country of the OECD Anti-Bribery Convention. *Non-USJ OECD* is a binary indicator equal to one if a property in the control group has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is from a signatory country of the OECD Anti-Bribery Convention but is not cross-listed and does not operate a segment in the US. *Post 2004* is a binary indicator equal to one for years after 2004. *GDP Growth* is the annual percentage growth rate of real GDP per capita of the property's main owner country in 2004. *Unemployment Rate* is the annual rate of unemployment (in percentage points) of the property's main owner country in 2004. *Exports* is the exports of goods and services measured as the percentage of GDP of the property's main owner country in 2004. *Foreign Direct Investment Outflow* is the aggregate, bilateral foreign direct investment flow divided by the GDP of the outflow country, which is the property's main owner country in 2004.

*IA5.8 Alternative Research Design*

By design, our empirical tests preclude any alternative explanations that equally affect all firms globally such as worldwide economic growth (i.e., we have a control group of extraction sites not under US jurisdiction and not headquartered in the OECD). Thus, any endogeneity concerns are limited to factors that differentially affect firms under US jurisdiction and headquartered in the OECD. To further address the possibility that a confounding association between FCPA enforcement and headquarter-country economic growth could explain our results, we provide two additional tests.

First, we perform our analysis *within* the subsample of firms headquartered in OECD countries, only using variation in whether or not the firm is under US jurisdiction. In Table IA5.8 Panel A below, we find that our luminosity results are robust to this alternative research design, suggesting that our inferences are not spuriously driven by differential macroeconomic factors in OECD and non-OECD headquarter countries. The *USJ×Post2004* coefficients are statistically significant at the 95% level and similar in magnitude compared to our main analysis.

Second, analogous to the OECD-headquarter-country only test, to address the possibility that economic shocks that differentially affect firms under US jurisdiction could explain our results, we restrict the sample to only firms under US jurisdiction and only exploit variation in whether the firm is headquartered in an OECD country. In Table IA5.8 Panel B below, we continue to find a positive and highly significant increase in luminosity after 2004, indicating that correlated shocks to US jurisdiction firms unrelated to FCR are unlikely to drive the observed increase in luminosity.

## Table 5.8: Alternative Research Design

### Panel A: Only OECD Facilities using Variation in US Jurisdiction

| | Baseline | Sensitivity Analyses | |
|---|---|---|---|
| | (1) | (2) | (3) |
| Dependent Variable: | 0-10 km | Asinh | 1-10 km |
| Ln(Luminosity (10) + 1) | Radius | (Luminosity) | Radius |
| *USJ* × *Post 2004* | 0.126 | 0.168 | 0.123 |
| | (0.062) | (0.081) | (0.061) |
| Fixed Effects: | | | |
| Property × Commodity | Yes | Yes | Yes |
| Region × Year | Yes | Yes | Yes |
| Commodity × Year | Yes | Yes | Yes |
| Property-Commodity-Year Observations | 3,122 | 3,122 | 3,122 |

*Notes:* This table reports coefficient estimates of OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity in extraction areas for properties in the control group with at least one significant owner (with an ownership stake of 20% or more) in 2004 who is from a signatory country of the OECD Anti-Bribery Convention. We describe the sample selection in Internet Appendix Section IA4. The sample is from 2000 to 2013. Conley (1999) standard errors allowing for spatial correlation within a 100km radius and for infinite serial correlation are reported in parentheses. *Luminosity (10)* is the stable light mean unsaturated nighttime luminosity within a 10 km radius of the respective property. *Luminosity (1-10)* is the stable light mean unsaturated nighttime luminosity within a 1-10 km radius of the respective property. *USJ* is a binary indicator equal to one if a property has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is cross-listed or operates a segment in the US. *Post 2004* is a binary indicator equal to one for years after 2004.

### Panel B: Only US Jurisdiction Facilities using Variation in OECD

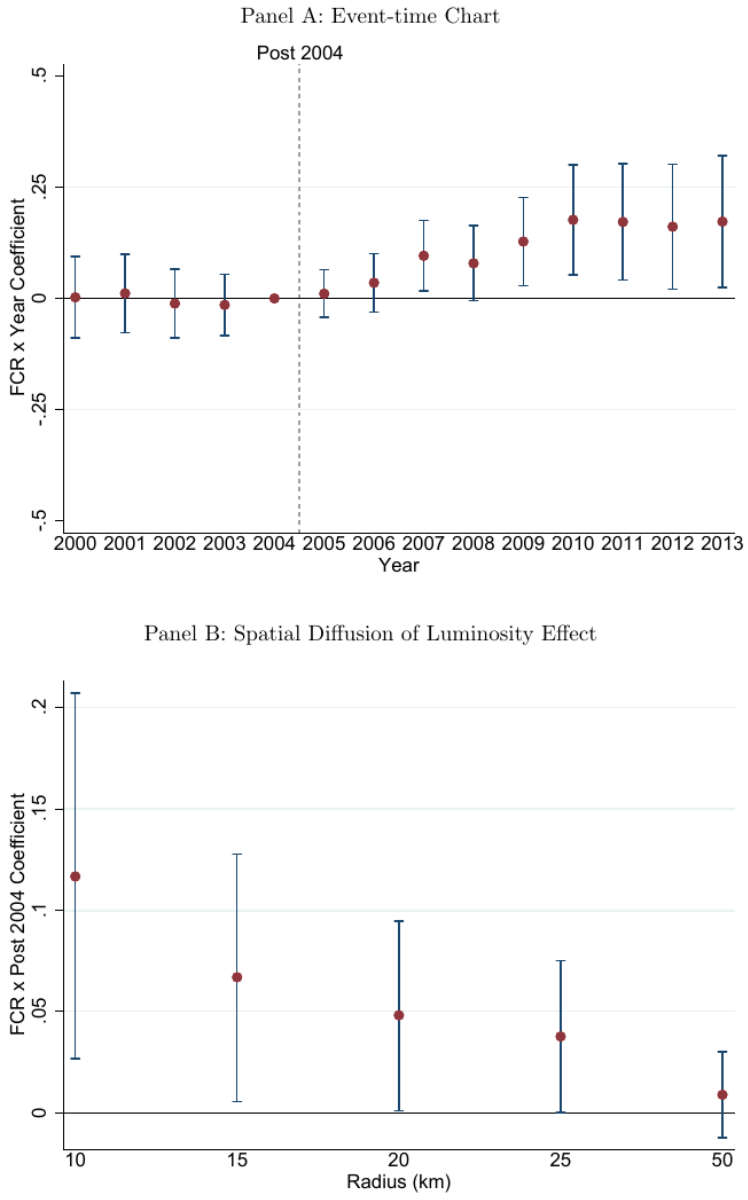
| | Baseline | Sensitivity Analyses | |
|---|---|---|---|
| | (1) | (2) | (3) |
| Dependent Variable: | 0-10 km | Asinh | 1-10 km |
| Ln(Luminosity (10) + 1) | Radius | (Luminosity) | Radius |
| *OECD* × *Post 2004* | 0.185 | 0.249 | 0.180 |
| | (0.061) | (0.078) | (0.060) |
| Fixed Effects: | | | |
| Property × Commodity | Yes | Yes | Yes |
| Region × Year | Yes | Yes | Yes |
| Commodity × Year | Yes | Yes | Yes |
| Property-Commodity-Year Observations | 3,598 | 3,598 | 3,598 |

*Notes:* This table reports coefficient estimates of OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity in extraction areas for properties in the control group with at least one significant owner (with an ownership stake of 20% or more) in 2004 who is cross-listed or operates a segment in the US. We describe the sample selection in Internet Appendix Section IA4. The sample is from 2000 to 2013. Conley (1999) standard errors allowing for spatial correlation within a 100km radius and for infinite serial correlation are reported in parentheses. *Luminosity (10)* is the stable light mean unsaturated nighttime luminosity within a 10 km radius of the respective property. *Luminosity (1-10)* is the stable light mean unsaturated nighttime luminosity within a 1-10 km radius of the respective property. *OECD* is a binary indicator equal to one if a property has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is from a signatory country of the OECD Anti-Bribery Convention. *Post 2004* is a binary indicator equal to one for years after 2004.

## *IA5.9 Country-Year Fixed Effects*

In Figure IA5.9 and Table IA5.9 we present results including *Country* × *Year* fixed effects instead of *Region* × *Year* fixed effects. Figure IA5.9 and Table IA5.9 reproduce Figure 4 and Table 4 from the manuscript with the alternative fixed effect structure, respectively. The results are similar to those reported in the Manuscript.

**Figure IA5.9: Reproducing Figure 4 from the Manuscript replacing *Region* × *Year* with *Country* × *Year* Fixed Effects**




*Notes:* Panel A shows coefficient estimates and 95% confidence intervals for OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity. We estimate the model from Column (1) of Table IA5.9 but replace the *FCR* × *Post 2004* indicator with separate interactions for each of the years in our sample (except for 2004, which serves as the benchmark). Panel B shows coefficient estimates of *FCR* × *Post 2004* and 95% confidence intervals for cell areas with radii of 10km, 15km, 20km, 25km, and 50km, respectively. We estimate the model from Column (1) of Table IA5.9 but use different cell areas.

## Table IA5.9: Reproducing Table 4 from the Manuscript replacing *Region* × *Year* with *Country* × *Year* Fixed Effects

| | Baseline | Sensitivity Analyses | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Dependent Variable: | 0-10 km | Asinh | 1-10 km | USJ Non-OECD |
| Ln(Luminosity (10) + 1) | Radius | (Luminosity) | Radius | and Non-USJ OECD |
| *FCR × Post 2004* | 0.117 | 0.158 | 0.112 | 0.121 |
| | (0.046) | (0.059) | (0.045) | (0.047) |
| *USJ Non-OECD × Post 2004* | | | | -0.007 |
| | | | | (0.049) |
| *Non-USJ OECD × Post 2004* | | | | 0.042 |
| | | | | (0.045) |
| Difference in Coefficients (p-value): | | | | |
| [FCR–USJ Non-OECD]×Post 2004 | | | | 0.03 |
| [FCR–Non-USJ OECD]×Post 2004 | | | | 0.22 |
| Fixed Effects: | | | | |
| Property × Commodity | Yes | Yes | Yes | Yes |
| Country × Year | Yes | Yes | Yes | Yes |
| Commodity × Year | Yes | Yes | Yes | Yes |
| Property-Commodity-Year Observations | 10,248 | 10,248 | 10,248 | 10,248 |

*Notes:* This table reports coefficient estimates of OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity in extraction areas. We describe the sample selection in Internet Appendix Section IA4. The sample is from 2000 to 2013. Conley (1999) standard errors allowing for spatial correlation within a 100km radius and for infinite serial correlation are reported in parentheses. *Luminosity (10)* is the stable light mean unsaturated nighttime luminosity within a 10 km radius of the respective property. *Luminosity (1-10)* is the stable light mean unsaturated nighttime luminosity within a 1-10 km radius of the respective property. *FCR* is a binary indicator equal to one if an extraction facility has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is headquartered, cross-listed, or operates a segment in the US and is from a signatory country of the OECD Anti-Bribery Convention. *USJ Non-OECD* is a binary indicator equal to one if a property in the control group has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is cross-listed or operates a segment in the US but is not from a signatory country of the OECD Anti-Bribery Convention. *Non-USJ OECD* is a binary indicator equal to one if a property in the control group has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is from a signatory country of the OECD Anti-Bribery Convention but is not cross-listed and does not operate a segment in the US. *Post 2004* is a binary indicator equal to one for years after 2004.

*IA5.10 Alternative Radii for Spatial Standard Error Clustering*

In Table 5.10 below, we show that our results from Table 4 of the Manuscript are robust to correcting standard errors for spatial correlation within a 50-, 250-, and 500-kilometer radius of the respective extraction property (Conley 1999).

**Table IA5.10: Luminosity Effects using Alternative Radii for Spatial Standard Error Clustering**

| | Baseline | Sensitivity Analyses | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Dependent Variable: | 100 km Radius | 50 km Radius | 250 km Radius | 500 km Radius |
| Ln(Luminosity (10) + 1) | Spatial Correlation | Spatial Correlation | Spatial Correlation | Spatial Correlation |
| *FCR* × *Post 2004* | 0.136 | 0.136 | 0.136 | 0.136 |
| | (0.046) | (0.045) | (0.047) | (0.047) |
| Fixed Effects: | | | | |
| Property × Commodity | Yes | Yes | Yes | Yes |
| Region × Year | Yes | Yes | Yes | Yes |
| Commodity × Year | Yes | Yes | Yes | Yes |
| Property-Commodity-Year Observations | 10,318 | 10,318 | 10,318 | 10,318 |

*Notes:* This table reports coefficient estimates of OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity. We describe the sample selection in Internet Appendix Section IA4. The sample is from 2000 to 2013. Conley (1999) standard errors allowing for spatial correlation within a 100km, 50km, 250km, and 500km radius and for infinite serial correlation are reported in parentheses in each column, respectively. *Luminosity (10)* is the stable light mean unsaturated nighttime luminosity within a 10 km radius of the respective property. *FCR* is a binary indicator equal to one if an extraction facility has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is headquartered, cross-listed, or operates a segment in the US and is from a signatory country of the OECD Anti-Bribery Convention. *Post 2004* is a binary indicator equal to one for years after 2004.

*IA5.11 Ownership Requirement 50% (Rather than 20%)*

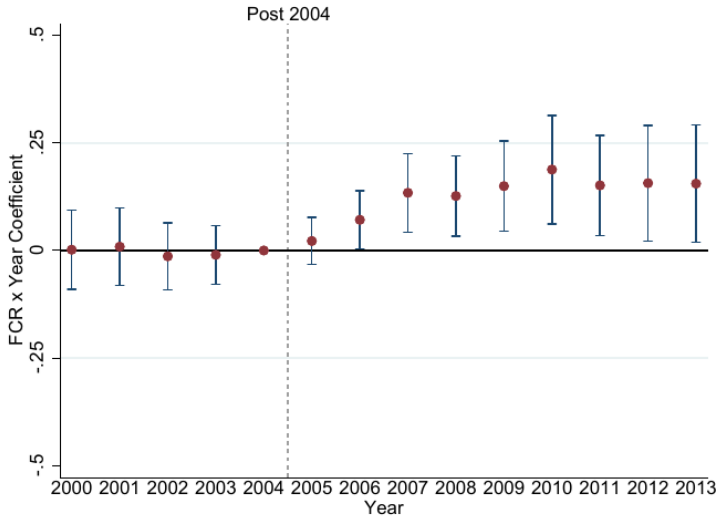
Our baseline specifications in the Manuscript, we use a threshold of at least 20% ownership to identify facility owners that are subject to the FCPA. Under the FCPA, a company is generally liable for violations of subsidiaries (i.e., entities the company controls via an ownership of more than 50%) and affiliates (i.e., entities where a company can exercise "significant influence" via an ownership of between 20% and 50%). Accounting standards apply the term "significant influence" to situations where a moderately high, but not controlling, level of ownership (i.e., between 20% and 50%) likely indicates that the investor company can have an impact on the investee's operating activities and decisions (*Accounting Standards Codification* 323-10-15-6). So, an ownership level of greater than 20% is a natural threshold at which to assign liability under the FCPA.

However, the FCPA does make some distinctions between subsidiaries and affiliates regarding an investor company's required level of oversight and potential liability. For instance, in the case of affiliates, a parent company only needs to "proceed in good faith to use its influence, to the extent reasonable under the issuer's circumstances, to cause such domestic or foreign firm to devise and maintain a system of internal accounting controls consistent with [Section 13(b)(2)]." Whereas for subsidiaries, the requirement to maintain control systems includes no such exceptions. So, although an ownership level above 20% will likely make a parent company liable for FCPA violations of an affiliated company, ownership of more than 50% likely increases the level of liability.

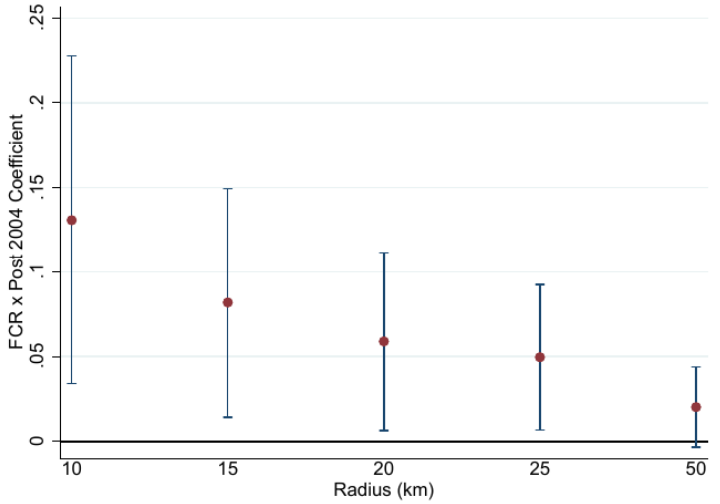
In Figure IA5.11 and Table IA5.11 we present results where US jurisdiction is determined based on 50% ownership (full control) rather than the 20% threshold we use in the Manuscript. For this analysis, we exclude facilities that are classified as treated in the main analysis because of ownership between 20% and 50%. Figure IA5.11 and Table IA5.11 reproduce Figure 4 and Table 4 from the manuscript with a 50% ownership threshold, respectively. The results are similar to those reported in the Manuscript.

**Figure IA5.11: Reproducing Figure 4 from the Manuscript using 50% Ownership Threshold rather than 20%**

Panel A: Event-time Chart




Panel B: Spatial Diffusion of Luminosity Effect




*Notes:* Panel A shows coefficient estimates and 95% confidence intervals for OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity. We estimate the model from Column (1) of Table 5.11 but replace the *FCR* × *Post 2004* indicator with separate interactions for each of the years in our sample (except for 2004, which serves as the benchmark). Panel B shows coefficient estimates of *FCR* × *Post 2004* and 95% confidence intervals for cell areas with radii of 10km, 15km, 20km, 25km, and 50km, respectively. We estimate the model from Column (1) of Table 5.11 but use different cell areas.

## Table 5.11: Reproducing Table 4 from the Manuscript using 50% Ownership Threshold rather than 20%

| | Baseline | Sensitivity Analyses | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Dependent Variable: | 0-10 km | Asinh | 1-10 km | USJ Non-OECD |
| Ln(Luminosity (10) + 1) | Radius | (Luminosity) | Radius | and Non-USJ OECD |
| *FCR × Post 2004* | 0.131 | 0.177 | 0.127 | 0.130 |
| | (0.049) | (0.063) | (0.048) | (0.052) |
| *USJ Non-OECD × Post 2004* | | | | -0.027 |
| | | | | (0.051) |
| *Non-USJ OECD × Post 2004* | | | | 0.045 |
| | | | | (0.042) |
| Difference in Coefficients (p-value): | | | | |
| [FCR–USJ Non-OECD]×Post 2004 | | | | 0.01 |
| [FCR–Non-USJ OECD]×Post 2004 | | | | 0.16 |
| Fixed Effects: | | | | |
| Property × Commodity | Yes | Yes | Yes | Yes |
| × Year | Yes | Yes | Yes | Yes |
| Commodity × Year | Yes | Yes | Yes | Yes |
| Property-Commodity-Year Observations | 10,164 | 10,164 | 10,164 | 10,164 |

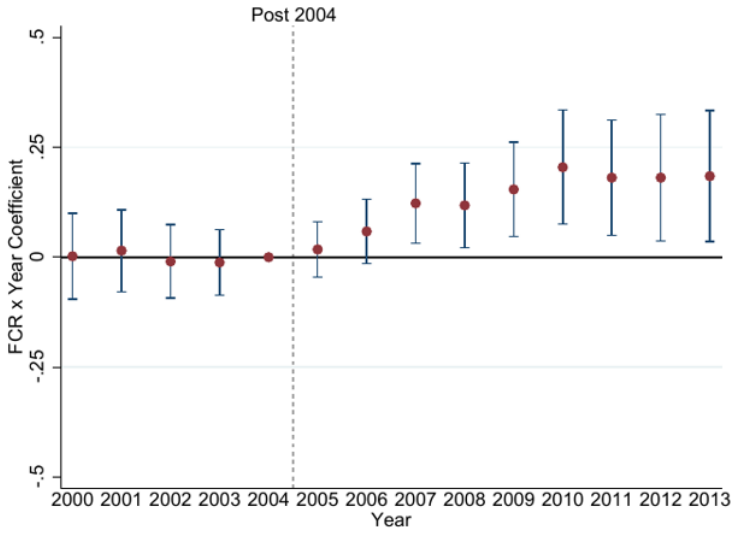
*Notes:* This table reports coefficient estimates of OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity in extraction areas. We describe the sample selection in Internet Appendix Section IA4. The sample is from 2000 to 2013. Conley (1999) standard errors allowing for spatial correlation within a 100km radius and for infinite serial correlation are reported in parentheses. *Luminosity (10)* is the stable light mean unsaturated nighttime luminosity within a 10 km radius of the respective property. *Luminosity (1-10)* is the stable light mean unsaturated nighttime luminosity within a 1-10 km radius of the respective property. *FCR* is a binary indicator equal to one if an extraction facility has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is headquartered, cross-listed, or operates a segment in the US and is from a signatory country of the OECD Anti-Bribery Convention. *USJ Non-OECD* is a binary indicator equal to one if a property in the control group has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is cross-listed or operates a segment in the US but is not from a signatory country of the OECD Anti-Bribery Convention. *Non-USJ OECD* is a binary indicator equal to one if a property in the control group has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is from a signatory country of the OECD Anti-Bribery Convention but is not cross-listed and does not operate a segment in the US. *Post 2004* is a binary indicator equal to one for years after 2004.

*IA5.12 Domestic African Firms as Control Group*

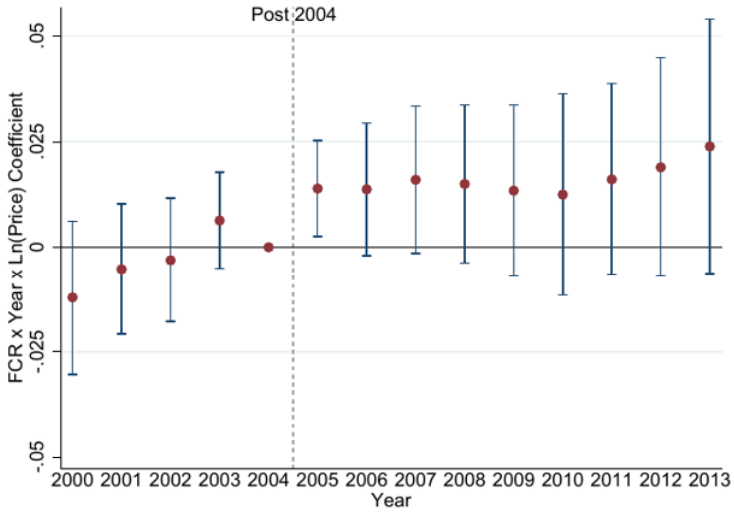
In Figure IA5.12 below, we map out the treatment effects of Table 4 Column (4) and Table 7 Column (4) over our sample period.

**Figure IA5.12: Event Time Charts for Column 4 in Table 4 and Table 7 of the Manuscript**

Panel A: Coefficient from Table 4 Column (4) in Event Time




Panel B: Coefficient from Table 7 Column (4) in Event Time




*Notes:* Panel A shows coefficient estimates and 95% confidence intervals for OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity. We estimate the model from Column (4) of Table 4 of the Manuscript but replace the *FCR* × *Post 2004* indicator with separate interactions for each of the years in our sample (except for 2004, which serves as the benchmark). Panel B shows coefficient estimates and 95% confidence intervals for OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on the association between world commodity prices and nighttime luminosity. We estimate the model from Column (4) of Table 7 of the Manuscript but replace the *FCR* × *Post 2004* × *Ln(Price)* indicator with separate interactions for each of the years in our sample (except for 2004, which serves as the benchmark).

*IA5.13 Countries with Strong/Weak Political Institutions*

In Section 3.2 of the Manuscript, we separately estimate our baseline specification for countries with "strong" versus "weak" political institutions based on the Center for Systemic Peace's *Polity IV Democracy Index* in 2004. In Table IA5.13 below, we tabulate the countries in each group.

**Table IA5.13: Country Classification by Strength of Political Institutions**

| Strong Political Institutions | Weak Political Institutions |
|---|---|
| Botswana | Algeria |
| Ghana | Angola |
| Lesotho | Burkina Faso |
| Madagascar | Egypt |
| Namibia | Eritrea |
| Niger | Ethiopia |
| Senegal | Gabon |
| South Africa | Guinea |
| | Libya |
| | Mali |
| | Mauritania |
| | Morocco |
| | Mozambique |
| | Nigeria |
| | Sierra Leone |
| | Sudan |
| | Swaziland |
| | Tanzania |
| | Tunisia |
| | Uganda |
| | Zambia |
| | Zimbabwe |

*Notes:* This table lists strong and weak political institution countries in 2004, respectively.

*IA5.14 Alternative Partition of Countries by Corruption Perceptions Index*

In Section 3.2 of the Manuscript, we use the Polity IV index, and its characterization of democratic and autocratic regimes, to examine heterogeneity in the luminosity effect by country based on the idea that the prevalence of the political resource curse (and the sharing of natural resource wealth) is dependent on the strength of political institutions and the concentration of political power (e.g., Robinson et al. 2006).

The level of institutional corruption is also likely to affect the pervasiveness of the political resource curse. As an alternative test, we repeat the analyses of Table 4 Columns (5)-(6) and Figure 5 using the Corruption Perceptions Index (CPI) by Transparency International as cross-sectional partitioning variable (i.e., instead of the Polity IV index). The CPI is a composite score of how corrupt a country's public sector is perceived to be, ranging from 0 (most corrupt) to 100 (least corrupt). We classify countries as *High Corruption Countries* (*Lower Corruption Countries*) if their CPI in 2004 (i.e., the year before the FCPA enforcement increase) was higher than the in-sample median. In Table IA5.14 and Figure IA5.14 below, we find very similar results to those based on the Polity IV measure, which is not surprising given that the two partitioning indicators are highly correlated (correlation of 0.95) and likely capture a similar underlying construct. The similarity of the results across measures also highlights the descriptive (as opposed to causal) nature of these cross-sectional tests.

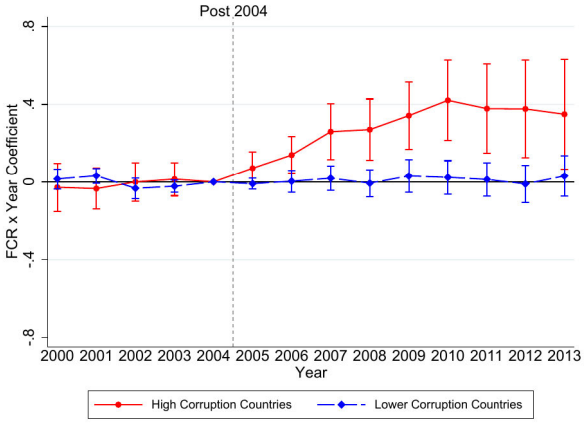
**Table IA5.14: Alternative Partition of Countries by Corruption Perceptions Index**

| | Baseline | Sensitivity Analyses | | | Role of Institutions | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Dependent Variable: Ln(Luminosity (10) + 1) | 0-10 km Radius | Asinh (Luminosity) | 1-10 km Radius | USJ Non-OECD and Non-USJ OECD | High Corruption Countries | Low Corruption Countries |
| *FCR × Post 2004* | 0.136 | 0.183 | 0.131 | 0.137 | 0.300 | 0.012 |
| | (0.046) | (0.059) | (0.045) | (0.049) | (0.092) | (0.041) |
| *USJ Non-OECD × Post 2004* | | | | -0.025 | | |
| | | | | (0.051) | | |
| *Non-USJ OECD × Post 2004* | | | | 0.045 | | |
| | | | | (0.042) | | |
| Difference in Coefficients (p-value): | | | | | | |
| [FCR–USJ Non-OECD]×Post 2004 | | | | 0.01 | | |
| [FCR–Non-USJ OECD]×Post 2004 | | | | 0.11 | | |
| Weak–Strong Political Institutions | | | | | 0.01 | |
| Fixed Effects: | | | | | | |
| Property × Commodity | Yes | Yes | Yes | Yes | Yes | Yes |
| Region × Year | Yes | Yes | Yes | Yes | Yes | Yes |
| Commodity × Year | Yes | Yes | Yes | Yes | Yes | Yes |
| Property-Commodity-Year Observations | 10,318 | 10,318 | 10,318 | 10,318 | 3,990 | 5,838 |

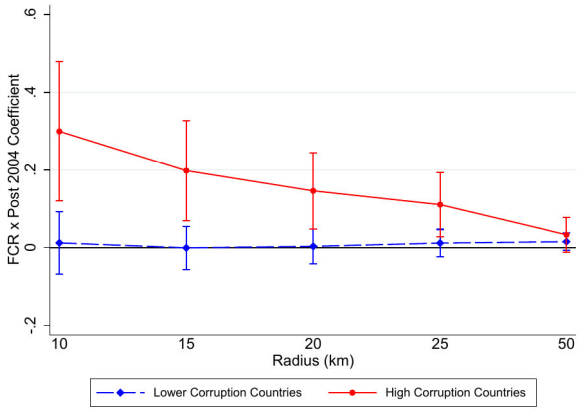
*Notes:* This table reports coefficient estimates of OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity in extraction areas. We describe the sample selection in Internet Appendix Section IA4. The sample is from 2000 to 2013. Conley (1999) standard errors allowing for spatial correlation within a 100km radius and for infinite serial correlation are reported in parentheses. *Luminosity (10)* is the stable light mean unsaturated nighttime luminosity within a 10 km radius of the respective property.

## Figure IA5.14: Alternative Partition of Countries by Corruption Perceptions Index

Panel A: Luminosity Effect only in High Corruption Countries




Panel B: Spatial Diffusion only in High Corruption Countries




*Notes:* Panel A shows coefficient estimates and 95% confidence intervals for OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on nighttime luminosity for high and lower corruption countries, respectively. We estimate the model from Columns (5) and (6) of Table 4 of the Manuscript but replace the *FCR* × *Post 2004* indicator with separate interactions for each of the years in our sample (except for 2004, which serves as the benchmark). Panel B shows coefficient estimates of *FCR* × *Post 2004* and 95% confidence intervals for cell areas with radii of 10km, 15km, 20km, 25km, and 50km for high and lower corruption countries, respectively.

## Section IA6: Supplementary Statistics and Tests for Survey Analyses

### *IA6.1 Composition of Afrobarometer Survey Sample*

In Table IA6.1, we provide a breakdown of the number of villages in the *Afrobarometer* data by country and survey round. Overall, our sample covers the responses of 53,015 African citizens in 6,165 villages across 31 African countries and 6 survey rounds between 1999 and 2015. Individual survey locations are widely dispersed across Africa. The countries that contribute the most observations are South Africa (25.3%), Zimbabwe (9.2%), Ghana (8.9%), Botswana (6.7%), and Uganda (5.0%). Data coverage has improved over time—rounds 1 to 4 of the Afrobarometer include fewer countries and respondents (18 countries; 49.1% of observations) than rounds 5 and 6 (31 countries; 50.9%). Nevertheless, the first two survey rounds conducted before the FCPA enforcement increase (i.e., before 2005) cover 15 countries and 1,319 village observations (21.4%), providing us with pre-period data for our difference-in-differences regressions in Table 5 and Table 6 of the Manuscript.

**Table IA6.1: Survey Villages in Extraction Areas by Country and Round**

| | All Villages | Round 1 1999/2000/2001 | Round 2 2002/2003/2004 | Round 3 2005/2006 | Round 4 2008/2009 | Round 5 2011/2012/2013 | Round 6 2014/2015 |
|---|---|---|---|---|---|---|---|
| Algeria | 29 | . | . | . | . | 14 | 15 |
| Botswana | 407 | 45 | 67 | 76 | 78 | 76 | 65 |
| Burkina Faso | 240 | . | . | . | 75 | 85 | 80 |
| Burundi | 67 | . | . | . | . | 32 | 35 |
| Egypt | 39 | . | . | . | . | 39 | . |
| Gabon | 16 | . | . | . | . | . | 16 |
| Ghana | 548 | . | 81 | 83 | 85 | 152 | 147 |
| Guinea | 181 | . | . | . | . | 87 | 94 |
| Ivory Coast | 83 | . | . | . | . | 43 | 40 |
| Kenya | 52 | . | 14 | 7 | 8 | 8 | 15 |
| Lesotho | 307 | 46 | 42 | 40 | 49 | 63 | 67 |
| Liberia | 90 | . | . | . | 31 | 32 | 27 |
| Madagascar | 54 | . | . | 18 | 16 | . | 20 |
| Malawi | 10 | 4 | 1 | 1 | 1 | 2 | 1 |
| Mali | 149 | 15 | 28 | 26 | 22 | 30 | 28 |
| Morocco | 48 | . | . | . | . | 22 | 26 |
| Mozambique | 89 | . | 8 | 18 | 19 | 16 | 28 |
| Namibia | 93 | 7 | 11 | 14 | 28 | 17 | 16 |
| Niger | 35 | . | . | . | . | 21 | 14 |
| Nigeria | 170 | . | 31 | 47 | 37 | 28 | 27 |
| Senegal | 14 | . | 2 | 2 | 5 | 2 | 3 |
| Sierra Leone | 234 | . | . | . | . | 118 | 116 |
| South Africa | 1,557 | 159 | 233 | 244 | 295 | 318 | 308 |
| Sudan | 2 | . | . | . | . | 1 | 1 |
| Swaziland | 152 | . | . | . | . | 81 | 71 |
| Tanzania | 277 | 70 | 35 | 37 | 36 | 51 | 48 |
| Togo | 17 | . | . | . | . | 8 | 9 |
| Tunisia | 106 | . | . | . | . | 50 | 56 |
| Uganda | 310 | 61 | 87 | 38 | 31 | 51 | 42 |
| Zambia | 220 | 21 | 42 | 35 | 38 | 41 | 43 |
| Zimbabwe | 569 | 116 | 93 | 68 | 97 | 36 | 159 |
| Total | 6,165 | 544 | 775 | 754 | 951 | 1,524 | 1,617 |

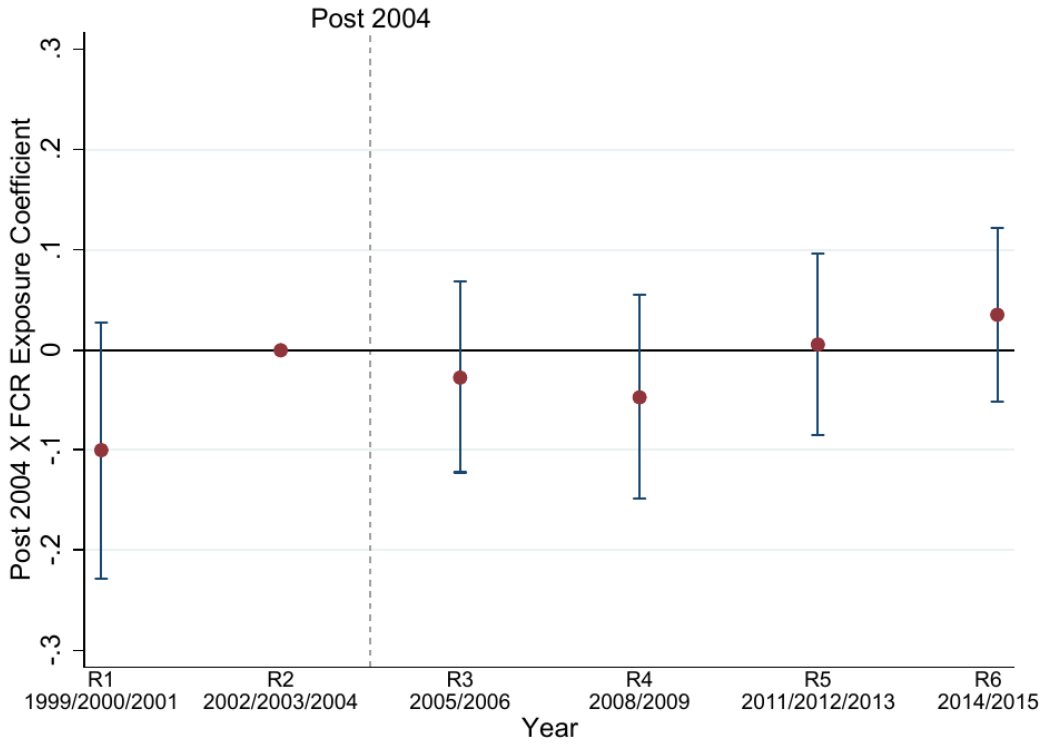
*Notes:* This table presents the number of Afrobarometer survey villages by country and survey round.

*IA6.2 Placebo Corruption Question from the Afrobarometer*

In this section, we report results for a placebo analysis that examines the effect of foreign corruption regulation on the perceived corruption of members of a country's national parliament. We expect there to be less of a (or no) change in corruption for these officials (given their distant proximity to the extraction facility) following the increase in FCPA enforcement. Specifically, we use the following question from the Afrobarometer survey for our placebo test: "How many of the following people do you think are involved in corruption: Members of Parliament?" We define an indicator, *Corrupt Members of Parliament*, equal to one if the response to the question is "most of them" or "all of them."

In Table IA6.2 and Figure IA6.2 below, we find that the *FCR Exposure*×*Post 2004* coefficients are virtually zero and statistically insignificant, consistent with the idea that foreign corruption regulation does not affect individuals' corruption perceptions of national politicians who are less likely to be affected by local extraction-related corruption.

**Figure IA6.2: Foreign Corruption Regulation and Perceived Corruption of Members of Parliament**




*Notes:* This figure shows coefficient estimates and 95% confidence intervals for OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on the perceived corruption of members of parliament. We estimate the model from Table IA6.2, but replace the *FCR Exposure* × *Post 2004* indicator with separate interactions for each survey round in our sample (except for round 2, which serves as the benchmark).

## Table IA6.2: Effect of Foreign Corruption Regulation on Perceived Corruption of Members of Parliament

| | Corrupt Members of Parliament |
|---|---|
| *FCR Exposure* × *Post 2004* | 0.039 |
| | (0.037) |
| *FCR Exposure* | -0.047 |
| | (0.034) |
| Controls: | |
| *Female* | -0.051 |
| | (0.029) |
| *Urban* | 0.023 |
| | (0.009) |
| *Ln(Age)* | 0.031 |
| | (0.028) |
| *Education* | 0.069 |
| | (0.011) |
| Fixed Effects: | |
| Region × Round | Yes |
| Commodity × Round | Yes |
| R-Squared | 0.175 |
| Observations | 6,170 |

*Notes:* This table reports coefficient estimates of OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on the perceived corruption of members of parliament. The sample is from 1999 to 2015. Conley (1999) standard errors allowing for spatial correlation within a 100km radius and for infinite serial correlation are reported in parentheses. *FCR Exposure* is a binary indicator equal to one if the closest extraction facility within 100 km of a survey respondent has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is headquartered, cross-listed, or operates a segment in the US and is from a signatory country of the OECD Anti-Bribery Convention. *Corrupt Members of Parliament* is a binary indicator equal to one if the response value to the following Afrobarometer survey question equals "Most of them" or "All of them": *How many of the following people do you think are involved in corruption, or haven't you heard enough about them to say: Members of Parliament?*. *Post 2004* is a binary indicator equal to one for years after 2004. *Female* is a binary indicator equal to one if the respondent's gender is female. *Urban* is a binary indicator equal to one if the respondent lives in an urban area. *Age* is the age of the respondent. *Education* is a variable equal to zero, one, two, or three, if the respondent claims to have received the education level of no formal schooling, primary only, secondary, or post-secondary, respectively.

*IA6.3 Cash-Wage Employment Results by Job Category*

In Table IA6.3 below, we decompose the observed increase in cash-wage employment into different job categories to shed light on which sectors expand in local extraction areas after the FCPA enforcement increase. In Column (1), we reproduce the baseline result from Table 5B Column (2) of the Manuscript. In Column (2), we focus on the businesses sector, i.e., individuals who own or work for firms. We observe an increase in cash-wage employment for the business sector, consistent with the mechanism that FCPA enforcement pushes foreign firms to properly fulfill their local content obligations by hiring and training local suppliers. In Column (3), we find higher cash-wage employment for retail and trade-related jobs, suggesting broader increases in local economic activity. In Column (4), the positive coefficient for manual labor is again indicative of FCPA enforcement stimulating local investment by FCPA-regulated firms. However, the lack of statistical significance limits the strength of the inferences we can draw from Column (4) on this point.

**Table IA6.3: Cash-Wage Employment Results by Job Category**

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Dependent Variable: | Full | Business Owners & | Retail & | Manual |
| *Cash-Wage Employment* | Sample | Business Employees | Trade | Labor |
| *FCR Exposure × Post 2004* | 0.116 | 0.283 | 0.249 | 0.081 |
| | (0.044) | (0.116) | (0.105) | (0.095) |
| *FCR Exposure* | -0.004 | -0.111 | -0.145 | -0.026 |
| | (0.037) | (0.102) | (0.096) | (0.069) |
| Controls: | | | | |
| *Female* | -0.153 | 0.055 | -0.102 | -0.088 |
| | (0.025) | (0.094) | (0.040) | (0.089) |
| *Urban* | 0.053 | 0.074 | -0.014 | 0.071 |
| | (0.011) | (0.041) | (0.023) | (0.036) |
| *Ln(Age)* | 0.125 | -0.055 | 0.052 | -0.117 |
| | (0.028) | (0.130) | (0.066) | (0.113) |
| *Education* | 0.176 | 0.179 | 0.129 | 0.069 |
| | (0.011) | (0.053) | (0.025) | (0.046) |
| Fixed Effects: | | | | |
| Region × Round | Yes | Yes | Yes | Yes |
| Commodity × Round | Yes | Yes | Yes | Yes |
| R-Squared | 0.294 | 0.270 | 0.202 | 0.106 |
| Observations | 5,876 | 505 | 1,624 | 728 |

*Notes:* This table reports coefficient estimates of OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on the cash-wage employment. The sample is from 1999 to 2015. Conley (1999) standard errors allowing for spatial correlation within a 100km radius and for infinite serial correlation are reported in parentheses. *FCR Exposure* is a binary indicator equal to one if the closest extraction facility within 100 km of a survey respondent has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is headquartered, cross-listed, or operates a segment in the US and is from a signatory country of the OECD Anti-Bribery Convention. *Cash-Wage Employment* is a binary indicator equal to one if the response value to the following Afrobarometer survey question equals "Yes, part time" or "Yes, full time": *Do you have a job that pays a cash income? If yes, is it full-time or part-time? If no, are you presently looking for a job?. Post 2004* is a binary indicator equal to one for years after 2004. *Female* is a binary indicator equal to one if the respondent's gender is female. *Urban* is a binary indicator equal to one if the respondent lives in an urban area. *Age* is the age of the respondent. *Education* is a variable equal to zero, one, two, or three, if the respondent claims to have received the education level of no formal schooling, primary only, secondary, or post-secondary, respectively.

*IA6.4 Cash-Wage Employment Results including Agriculture, Government, and Mining Jobs*

For the cash-wage employment analysis in Table 5B Column (2) of the Manuscript, we limit our sample to the private sector and exclude mining and agriculture jobs (see footnote #19 for why we exclude these sectors). In Table IA6.4 below, we assess the sensitivity of our employment test to these sample restrictions. In Column (1), we reproduce the cash-wage employment result from the Manuscript as a benchmark. In Columns (2) to (5), we include respondents who work in agriculture, government, and mining jobs, either jointly (Column 2) or one-by-one (Columns 3-5). The estimated treatment effects attenuate in magnitude but remain statistically significant at the 95% level or higher.

**Table IA6.4: Cash-Wage Employment Results including Agriculture, Government, and Mining Jobs**

| Dependent Variable: *Cash-Wage Employment* | (1) Baseline Results | (2) Including Mining, Agriculture, and Government Jobs | (3) Including Mining Jobs | (4) Including Agriculture Jobs | (5) Including Government Jobs |
|---|---|---|---|---|---|
| *FCR Exposure* × *Post 2004* | 0.116 | 0.090 | 0.115 | 0.112 | 0.094 |
| | (0.044) | (0.043) | (0.042) | (0.045) | (0.043) |
| *FCR Exposure* | -0.004 | 0.001 | -0.001 | -0.010 | -0.000 |
| | (0.037) | (0.037) | (0.036) | (0.038) | (0.037) |
| Controls: | | | | | |
| *Female* | -0.153 | -0.145 | -0.146 | -0.153 | -0.124 |
| | (0.025) | (0.033) | (0.024) | (0.029) | (0.026) |
| *Urban* | 0.053 | 0.045 | 0.055 | 0.050 | 0.053 |
| | (0.011) | (0.011) | (0.011) | (0.011) | (0.010) |
| *Ln(Age)* | 0.125 | 0.231 | 0.120 | 0.119 | 0.249 |
| | (0.028) | (0.028) | (0.028) | (0.029) | (0.028) |
| *Education* | 0.176 | 0.171 | 0.176 | 0.179 | 0.161 |
| | (0.011) | (0.013) | (0.011) | (0.013) | (0.011) |
| Fixed Effects: | | | | | |
| Region × Round | Yes | Yes | Yes | Yes | Yes |
| Commodity × Round | Yes | Yes | Yes | Yes | Yes |
| R-Squared | 0.294 | 0.277 | 0.295 | 0.294 | 0.264 |
| Observations | 5,876 | 6,111 | 5,883 | 6,066 | 5,981 |

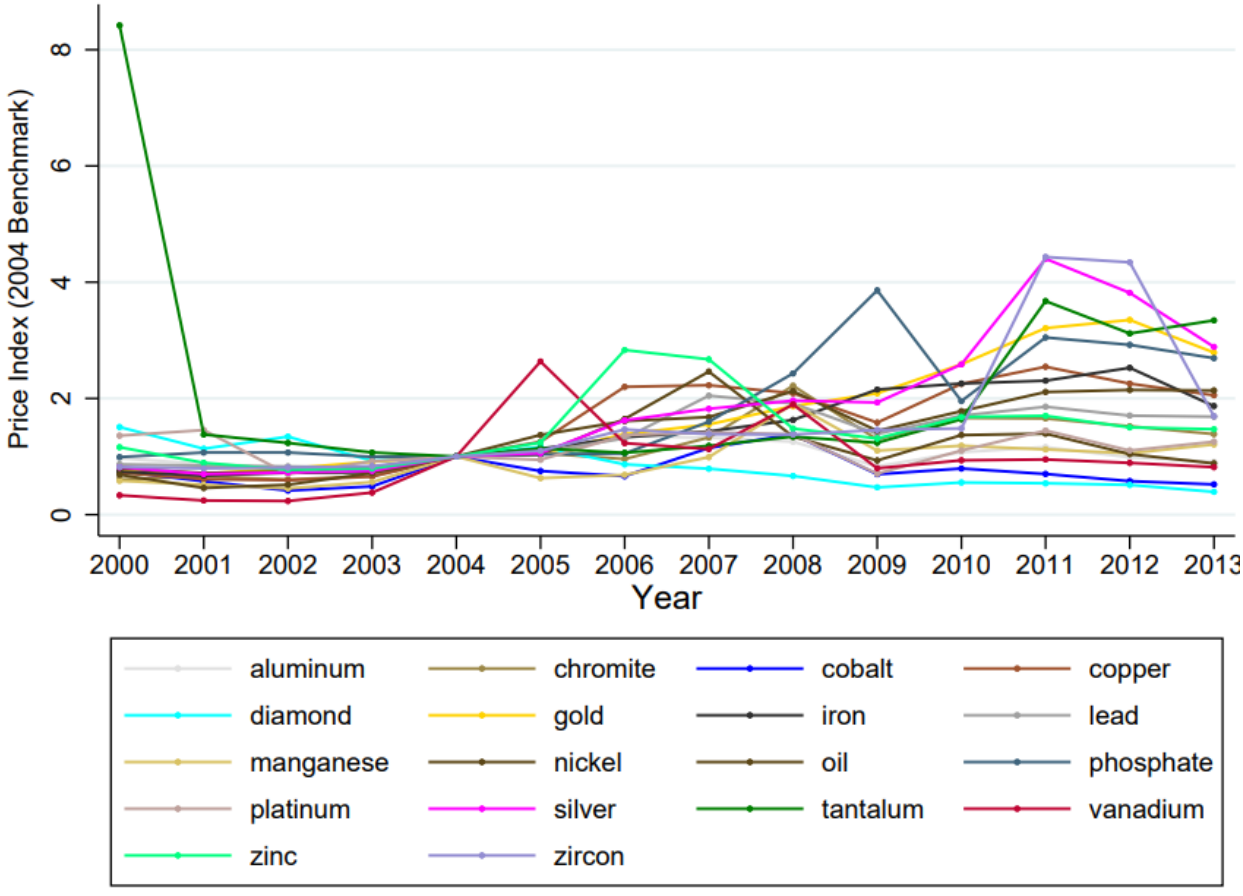
*Notes:* This table reports coefficient estimates of OLS regressions estimating the effect of the post-2004 increase in FCPA enforcement on the cash-wage employment. The sample is from 1999 to 2015. Conley (1999) standard errors allowing for spatial correlation within a 100km radius and for infinite serial correlation are reported in parentheses. *FCR Exposure* is a binary indicator equal to one if the closest extraction facility within 100 km of a survey respondent has at least one significant owner (with an ownership stake of 20% or more) in 2004 who is headquartered, cross-listed, or operates a segment in the US and is from a signatory country of the OECD Anti-Bribery Convention. *Cash-Wage Employment* is a binary indicator equal to one if the response value to the following Afrobarometer survey question equals "Yes, part time" or "Yes, full time": *Do you have a job that pays a cash income? If yes, is it full-time or part-time? If no, are you presently looking for a job?*. *Post 2004* is a binary indicator equal to one for years after 2004. *Female* is a binary indicator equal to one if the respondent's gender is female. *Urban* is a binary indicator equal to one if the respondent lives in an urban area. *Age* is the age of the respondent. *Education* is a variable equal to zero, one, two, or three, if the respondent claims to have received the education level of no formal schooling, primary only, secondary, or post-secondary, respectively.

## Section IA7: Commodity Price Variation

In Section 4.2 of the Manuscript, we use variation in world commodity prices to examine whether foreign corruption regulation increases the commodity-price pass through to local communities surrounding extraction sites. One potential concern with the price variable is that the prices of all our sample commodities change around the same time, and so there is not enough variation to estimate the *FCR×Post2004×Ln(Price)* effect.

To examine how highly commodity prices are correlated over time, we plot the price paths of the 18 commodities in our sample over the sample period (note: there are no world prices for coal and gas, which is why there are only 18 commodities in Table 7 but 20 commodities in Table 4 of the Manuscript). We index all commodities to their respective price level in 2004, the year before the FCPA enforcement increase. In Figure IA7.1, we find that there is significant variation in world prices across commodities over time. Note that the large drop in price of tantalum from 2000 to 2001 is not a data error and can likely be explained by capacitor producers switching to alternative commodities in 2001 (Mancheri et al. 2018). The inclusion of tantalum does not affect our estimates (see Section IA5.1).

**Figure IA7.1: Commodity Prices Over Time**




*Notes:* This figure shows world commodity prices from 2000 to 2013. All prices are indexed to 2004.

**Section IA8: New Firms Entering the Extraction Sector**

In Footnote 13 of the Manuscript, we discuss the role of ownership changes. To assess whether the selection of more productive firms contributes to the observed increase in luminosity, we compare the level of luminosity around mine ownership changes in the post-2004 period, by estimating the following OLS regression:

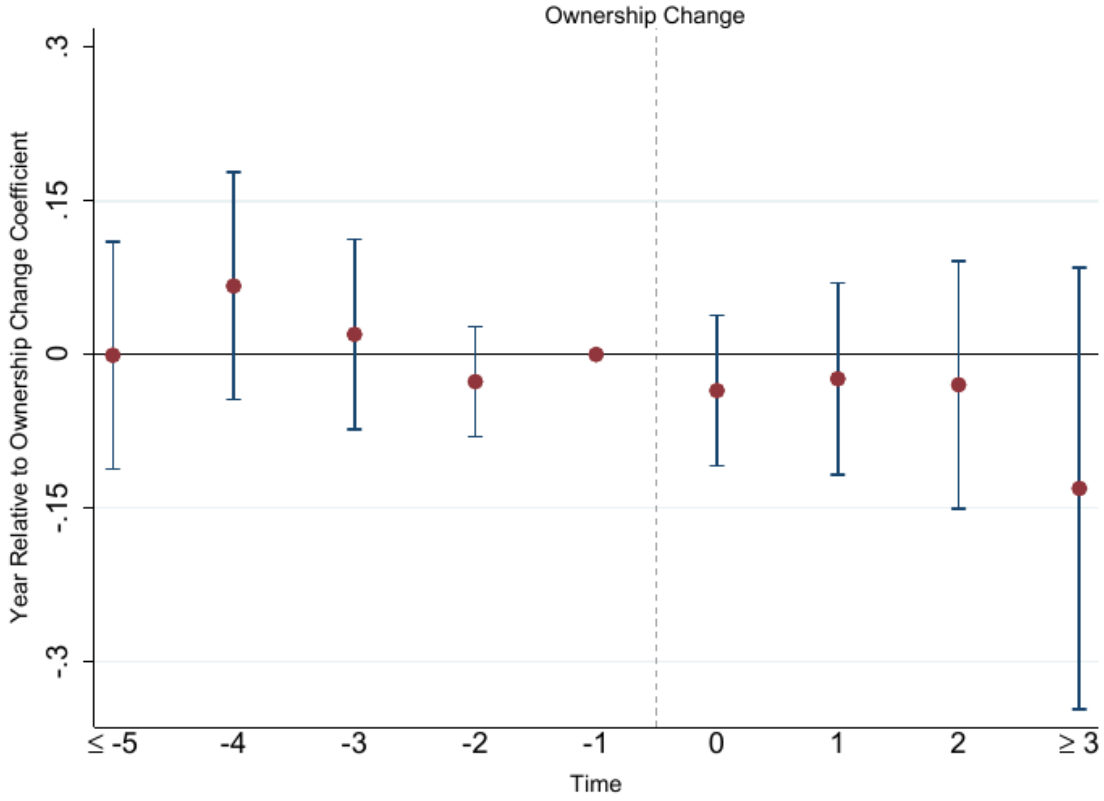
$$Ln(1+Luminosity_{c,t}) = \sum_t \beta_1 Year\ Relative\ to\ Ownership\ Change_{c,t} + Fixed\ Effects + \varepsilon_{c,t} \quad \text{(IA.8)}$$

In Eq. (IA.8), we examine changes in the level of luminosity. *Year Relative to Ownership Change* is a set of event-time indicators for each year relative to the ownership change. The other variables and fixed effects are the same as in Eq. (1) in the Manuscript. We limit our sample to mines because we cannot observe ownership changes at the facility level for oil and gas wells. To be included in our sample, we require a mine to experience at least one ownership change after 2004. To simplify the analysis, we further limit the sample to extraction facilities that are subject to the FCPA, which is why *FCR* is not included in the regression.

In Figure IA8.1, we plot the *Year Relative to Ownership Change* coefficient estimates from estimating Eq. (IA.8). The pattern is inconsistent with the entry of new firms explaining our main results. Instead, the figure shows that the increases in luminosity are concentrated in the years *prior* to an ownership change. After an ownership change, luminosity gradually decreases relative to the benchmark year, *t-1*.

These results suggest that the evidence reported in Table 4 is unlikely explained by ownership changes, but rather are likely more indicative of changes in the activities of existing mining firms.

## Figure IA8.1: Foreign Corruption Regulation and Within Extraction Sector Resource Allocation




*Notes:* Panel A shows coefficient estimates and 95% confidence intervals for OLS regressions examining changes in nighttime luminosity around ownership changes of FCR mines after 2004.

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