

Do U.S. Multinationals Use Income Shifting to Launder Corrupt Activity?

Paul Deméré
pauldemere@uga.edu
University of Georgia
A323 Moore-Rooker Hall
Athens, GA 30602

Jeffrey Gramlich
jeff.gramlich@wsu.edu
Washington State University
Todd Hall, 231B
Pullman, WA 99164

Yoonsoo Nam
yoonsoo.nam@wsu.edu
Washington State University
Todd Hall, 475
Pullman, WA 99164

June 2020

Abstract

We investigate a) whether U.S. multinational companies use income shifting to engage in corruption and b) the effects of this income shifting on the welfare of non-U.S. countries' citizens. We use enforcement actions under the Foreign Corrupt Practices Act (FCPA) as shocks to the costs of corruption to establish initial minimum estimates of the effects of corruption on governmental efficacy and quality of life in affected countries. Consistent with theory, developed countries benefit from FCPA actions while developing countries are harmed. After examining the main effects of FCPA actions, we consider whether income shifting serves as a replacement indirect avenue when more direct corruption means are stifled by FCPA enforcement. We find that U.S. outbound income shifting increases following anti-corruption enforcement, and that this increased outbound income shifting mitigates the positive, and magnifies the negative, effects of anti-corruption enforcement actions. Overall, the results are consistent with income shifting acting as an alternate corruption vehicle.

JEL classification codes: D73, F23, H25, I31, K42, M48

Keywords: Corruption, Income shifting, Foreign Corrupt Practices Act, U.S. Multinational Companies

We appreciate helpful comments from Josué Braga, Peter Brok, Will Deméré, Jenny McCallen, Maximilian Todtenhaupt, and participants of the Berlin-Vallendar Conference on Tax Research.

Do U.S. Multinationals Use Income Shifting to Launder Corrupt Activity?

1. Introduction

Corruption imposes hardship on people around the world, particularly in emerging and developing countries (Pew 2014). The U.N. estimates that corruption costs the world trillions of dollars per year (United Nations 2018), harming governments (Banerjee 1997; Anderson and Tverdova 2003), economies (Mauro 1995; Wei 2000; Lambsdorff 2003), the environment (Smith et al. 2003; Sundström 2016a, 2016b), and individuals (Gupta, Davoodi, and Alonso-Terme 2002; Hunt 2010; Ambraseyes and Bilham 2011; Fisman and Wang 2015). It is therefore important to consider what can be done to reduce corruption (Fisman and Golden 2017). A required step is to understand the forms of corruption (Okonjo-Iweala 2019), which range from direct and simple forms to indirect and sophisticated forms. This study considers the possibility that U.S. multinational companies (MNCs) use indirect cross-border income shifting as an alternative vehicle for corruption when more direct forms of corruption are curtailed through Foreign Corrupt Practices Act enforcement actions. We examine whether income shifting serves as a laundered replacement for more direct forms of corruption and how this income-shifting corruption affects the welfare of partner country citizenry.¹

We argue that income shifting provides a viable means for transferring corporate wealth to corrupt politicians. Income shifting changes the jurisdiction in which corporate income is taxed and generally increases tax revenue for the destination country. Government officials can then extract corruption rents from within the government by embezzling governmental funds, diverting

¹ We define income shifting as a plan or structure employed by MNCs to cause reported accounting income to be recognized across jurisdictions in a different proportion than the locations of the underlying earnings process would dictate. Regulations under U.S. Internal Revenue Code §482 explain that income should be allocated between related parties to clearly reflect each party's economic income. Through transfer pricing, MNCs adjust the prices at which members of their groups trade supplies, labor, or rights to intangible assets across borders. For this purpose, a "partner country" is a country that receives tax revenue as a result of income shifted within a U.S. MNC.

governmental resources, and providing governmental jobs and contracts to family members (Fisman and Golden 2017). Thus, companies may obtain the corruption benefits of a “bribe” by paying additional taxes to the foreign government, which increases the resources available for corrupt officials to extract (Gramlich and Wheeler 2003). As Gramlich and Wheeler (2003) document, the U.S. Treasury subsidizes this form of corruption by granting foreign tax credits to the U.S. MNC (i.e., dollar-for-dollar U.S. tax reductions for taxes paid in foreign countries). In addition, given the opaque and complex nature of income shifting (Desai, Dyck, and Zingales 2007; Chen, Hepfer, Quinn, and Wilson 2018), law enforcement authorities face a daunting task in seeking to identify and successfully prosecute income-shifting corruption. Indeed, income shifting provides the MNC the façade of lawfully paying taxes, consistent with good corporate citizenship.

By its nature, corruption is difficult to observe and measure. To identify the effects of corruption, we rely on anti-corruption enforcement actions by the U.S. under the 1977 Foreign Corrupt Practices Act (FCPA). The FCPA prohibits U.S. companies, and the U.S. operations of non-U.S. companies, from directly or indirectly bribing foreign government officials.² Because the FCPA’s focus is primarily on American companies operating in foreign countries, the setting is unique relative to other anti-corruption settings studied in prior research (e.g., Quah 1995; Reinikka and Svensson 2005; Chen, Xie, You, and Zhang 2018). The FCPA represents the efforts of one country (i.e., the U.S.) to reduce corruption in other nations, rather than an anti-corruption campaign to crack down on corruption within a country’s own borders, such as in China (Hope, Yue, and Zhong 2019). Such intra-country anti-corruption campaigns often fail to effectively

² The U.S. Department of Justice summarizes the *Foreign Corrupt Practices Act of 1977* at <https://www.justice.gov/criminal-fraud/foreign-corrupt-practices-act> (retrieved 4/20/20).

curtail corruption (Quah 1995; Heilman and Ndumbaro 2002; Fisman and Golden 2017), yet it is unclear whether corruption in foreign countries can be mitigated by U.S. anti-corruption efforts.

We use FCPA enforcement actions as plausibly-exogenous changes in the cost of direct forms of corruption (Graham and Stroup 2016; Christensen, Maffett, and Rauter 2019). We argue that an FCPA enforcement action that curtails direct corruption in a given country encourages U.S. MNCs in that country to engage in more indirect corruption (e.g., corruption through income shifting) as a substitute for curtailed corruption forms. To test our primary research question—whether income shifting is an alternate vehicle for corruption—we examine whether income shifting by U.S. MNCs moderates the effects of FCPA enforcement on country-level measures of government effectiveness and citizen well-being. To show this moderation, however, we first document baseline main effects of the FCPA on foreign governments and citizens. Prior corruption research does not document how U.S. enforcement of the FCPA affects foreign governments and citizens, nor does accounting research examine the effects of FCPA enforcement on income shifting activity. Thus, this study provides novel evidence as to the effects of FCPA enforcement on qualities of foreign government services, the detrimental effects of corruption on citizenry, and on U.S. MNCs' income-shifting activity.

FCPA enforcement could either improve or harm local conditions. Reduced corruption caused by FCPA enforcement could benefit governments and citizens by decreasing the significant costs that corruption imposes on them (Banerjee 1997; Anderson and Tverdova 2003; Smith et al. 2003; Ambraseyes and Bilham 2011; Fisman and Wang 2015), either directly by curtailing corruption or indirectly by catalyzing change that prompts cultural disfavor of corruption. Conversely, FCPA enforcement may be a net detriment to citizens, even if it does curtail some harmful corruption. Under the “greasing the wheels” theory (Lui 1985; Dreher and Gassebner

2013; Jiang and Nie 2014), corruption by companies can be beneficial if it allows firms to circumvent needlessly burdensome regulation and thus increase economic activity. FCPA enforcement could remove some of this benefit. The FCPA also presents significant compliance costs and risks related to ambiguous enforcement to U.S. companies (Westbrook 2011; Karpoff, Lee, and Martin 2017) that can lead U.S. firms to invest less in foreign countries (Graham and Stroup 2016; Christensen, Maffett, and Rauter 2019), especially those likely to be subject to FCPA enforcement actions. When investment from less-corrupt source countries is curtailed, this foreign investment is often replaced by investment from more-corrupt source countries (Cuervo-Cazurra 2006). This means that average corruption intensity and harm could increase following FCPA enforcement.

We hypothesize that the effects of FCPA anti-corruption enforcement will differ between developed and developing countries. Expectancy violations theory (Burgoon 1993; Grant, Hodge, and Sinha 2018) leads us to predict that citizens' expectations regarding corruption will affect responses to anti-corruption enforcement. In developed countries where corruption is less common (Ahlin and Pang 2008; Pew 2014), citizens should expect little or no corruption, and will react negatively to news of FCPA anti-corruption enforcement actions. Consistent with expectancy violations theory, we find that citizens' perceptions of their governments are negatively impacted by news of the corruption, but citizen welfare increases after FCPA enforcement, consistent with governments reacting to the negative perceptions by improving government services. This evidence suggests that FCPA anti-corruption enforcement can act as an engine for positive change in developed countries.

Conversely, responses to FCPA enforcement are likely to be different in developing countries, where the populace commonly encounters and expects corruption and not effective anti-

corruption enforcement. Also consistent with expectancy violations theory, we find evidence that citizens view their government more positively following FCPA enforcement actions that curtail corruption. However, citizen welfare decreases substantially after the actions, consistent with either, or both a) anti-corruption enforcement making room for more corrupt actors to enter the country (Cuervo-Cazurra 2006) or b) more favorable governmental ratings enabling greater corruption or complacency by government officials. This evidence suggests that anti-corruption enforcement has an unintuitive unintended effect in developing countries—it leads to *more* harm from corruption.

Finally, we examine whether income shifting into countries by U.S. MNCs acts as a substitute for more direct forms of corruption targeted by recent FCPA enforcement actions. To measure income shifting, we adapt the Dyreng and Markle (2016) approach to construct a measure of income shifted by U.S. MNCs to each country. We then repeat our FCPA analyses with the income shifting measure as an additional independent variable, along with an interaction between income shifting and FCPA enforcement to measure any moderating effects. The results indicate that tax-related income shifting acts as an alternate and harmful corruption vehicle. Within developed countries, we find significant evidence that income shifting reduces the FCPA enforcement-related benefits of greater government effectiveness and improved citizen welfare. In developing countries, income shifting exacerbates the harms associated with FCPA enforcement. Thus, despite the view that certain amounts of corruption can grease the wheels of a developing economy, the income-shifting response to FCPA enforcement appears to be detrimental in both developed and developing countries.

In supplemental analyses, we provide complementary evidence that income shifting acts as an alternate form of corruption. Using a panel of firm-years, we examine whether significant

exposure to FCPA enforcement is a determinant of U.S. outbound income shifting using the Dyreng and Markle (2016) approach. We find that U.S. MNCs with elevated exposure to FCPA enforcement shift more income out of the U.S., consistent with income shifting providing a vehicle for corruption that is more difficult for traditional anti-corruption enforcement to detect and penalize.

Our study contributes to the literature on corruption, both in accounting (Everett, Neu, Rahaman 2007; Neu, Everett, Rahaman, and Martinez 2013) and in other fields (e.g., Fisman and Golden 2017). First, we employ a plausibly-exogenous shock to corruption costs to identify novel evidence on the societal effects of anti-corruption enforcement around the world. Second, we provide large-sample empirical evidence that income shifting can act as a vehicle for corruption. Third, we document evidence that the efficacy of anti-corruption efforts depends on country-level economic development. Fourth, we expand the literature on the effects of FCPA anti-corruption enforcement (Hines 1995; Graham and Stroup 2016; Christensen, Maffett, and Rauter 2019) beyond just examining the effects on investments and firms by considering the effects of FCPA enforcement on social wellbeing.

We also increase our understanding of the effects of income shifting. By documenting that income shifting can act as an alternative form of corruption, we add a nefarious motivation for income shifting other than simply to obtain tax benefits (Picciotto 1992; Collins, Kemsley, and Lang 1998; Klassen and Laplante 2012b; Deméré and Gramlich 2019). Concurrent research documents the effects of source-country influences. Specifically, parent-country corruption can enable outbound income shifting (Bilicka and Seidel 2019) and incentives for home-country corporate social responsibility can motivate corporate parents to engage in income shifting (Hasan, Karavitis, and Kazakis 2019). We focus instead on the target country, and show that income

shifting by U.S. MNCs into foreign countries increases after FCPA enforcement actions curtail direct forms of corruption by U.S. MNCs. Thus, income shifting may serve as a sophisticated corruption response to curtailments of direct corruption. We also are the first to show evidence that accounting-based income shifting broadly impacts quality of government and quality of life measures.

Finally, our findings inform public policy. Our FCPA enforcement results suggest that anti-corruption enforcement by the U.S. (or other countries) in connection with developing countries may need to be accompanied by additional support to local governments or their citizens. This support can help prepare local governments and citizenry for both the introduction of more sophisticated forms of corruption such as income shifting, and the possibility that more nefarious actors will enter the country to take advantage of reduced engagement by monitored U.S. MNCs. The income-shifting results illustrate the importance of strong transfer-pricing rules in tandem with powerful tax enforcement agencies for combatting corruption.³ Additionally, country-by-country disclosures designed to reduce tax-motivated income shifting (Evers, Meier, and Spengel 2016; Joshi, Outslay, and Persson 2020) may have unintended positive spillovers in aiding anti-corruption actions, and public disclosure of country-by-country reporting may further constrain multinational corruption (Healy and Serafeim 2020).

Our paper proceeds by developing theory and hypotheses in Section 2. Section 3 describes the measures, data, and empirical methodology, while Section 4 discusses the results. We conclude in Section 5 with discussion about the implications of our results.

³ The ability of tax enforcement to curtail income-shifting corruption is limited by parameters that limit tax enforcement, such as a) evidence that political connections (i.e., a possible proxy for corruption) weaken the effects of tax enforcement (Lin, Mills, Zhang, and Li 2018), b) erosion of income-shifting rules by corporate lobbyists (Drucker and Tankersley 2019), and c) the significant resource constraints facing the I.R.S. (Nessa, Schwab, Stomberg, and Towery 2019).

2. Theory and hypotheses

2.1 Corruption

Transparency International defines corruption as “the abuse of entrusted power for private gain” (Transparency International 2018). Government officials can abuse their power to enrich themselves by taking bribes, embezzling governmental funds, diverting governmental resources, engaging in voting fraud, and providing governmental jobs and contracts to family members (Fisman and Golden 2017). Corrupt government officials provide a supply of laws, rules, and access to markets and government contracts that can be sold in a marketplace. Corporate managers, on the other hand, can abuse their power by providing a demand for corruption, offering corporate funds as compensation for favoritism with regard to laws, rules, or access. As Fisman and Golden (2017, p. 136) note, “much corruption would end today if companies refused to pay bribes to government officials.”

Corruption is illegal in most cases, and even when not explicitly so it is highly unpopular (Pew 2014; European Commission 2017). As a result, it is difficult to observe and measure corruption. This difficulty has not hindered researchers from measuring corruption in a variety of ways, including citizen and expert surveys, direct observation, imputation, data on anti-corruption enforcement actions, and market reaction tests (Olken and Pande 2012). While estimates of the magnitude of corruption depend on the methodology and setting of each study, corruption clearly bears significant economic costs. For example, a recent estimate cited by the U.N. Secretary-General suggests that the costs of corruption exceed five percent of global GDP (United Nations 2018).

Corruption also harms everyday citizens and general society.⁴ Aside from the direct costs of paying bribes, prior research documents numerous negative indirect consequences of corruption. Corruption is associated with: a) lower economic growth and investment (Mauro 1995; Wei 2000); b) reduced productivity and investment quality (Lambsdorff 2003); c) impaired governmental effectiveness and greater red tape (Banerjee 1997; Kaufmann and Wei 1999); d) weaker infrastructure (Olken 2007); e) less faith in democratic governments and political voice for citizens (Anderson and Tverdova 2003; Chong, De La O, Karlan, and Wantchekon 2015); f) greater income inequality and poverty (Gupta, Davoodi, and Alonso-Terme 2002; Ndikumana and Boyce 2010); g) reduced biodiversity and environmental quality (Smith et al. 2003; Sundström 2016a, 2016b); and h) increased mortality and reduced healthcare access (Vian 2008; Hunt 2010; Ambraseyes and Bilham 2011; Fisman and Wang 2015). Given these many negative effects of corruption, it is little surprise that corruption is considered one of the largest problems facing emerging and developing countries (Pew 2014). However, there appears to be little prior research that examines the effects of corruption that involves U.S. MNCs.

How businesses and foreign investment react to corruption has also been the subject of considerable research. Interestingly, the evidence is mixed as to whether businesses obtain net benefits from corruption. Corruption can impose significant costs on businesses (Shleifer and Vishny 1993; Kaufmann and Wei 1999; Djankov, La Porta, Lopez-de-Silanes, and Shleifer 2002). Studies find lower foreign direct investment (FDI) in countries and regions with greater corruption, which suggests that FDI, and presumably corporate profits, would be higher with less corruption

⁴ From a certain perspective, corruption can provide temporary benefits to everyday citizens who engage in corrupt transactions, such as receiving payments for selling their vote (Hammack 2006) or obtaining access to governmental services by paying a bribe (Hunt 2010). However, the long-term costs of paying unnecessary bribes for services that would otherwise be freely available or giving up one's voice in politics likely exceed any perceived temporary benefits.

(Hines 1995; Habib and Zurawicki 2001, 2002; Hakkala, Norbäck, and Svaleryd 2008; Zakharov 2019). At the firm level, companies in high-corruption environments grow slower (Fisman and Svensson 2007), employ lower-quality management (Athanasouli and Goujard 2015), and alter financial policies in response to corruption concerns (Smith 2016). Innovative firms may be particularly susceptible to corruption costs (Henisz and Macher 2004; Ayyagari, Demirgüç-Kunt, and Maksimovic 2014). Companies' financial statement auditors also view corruption as a significant risk that affects audit fees and outcomes (Gul 2006; Xu, Dao, and Petkevich 2019).

Conversely, corruption can benefit businesses and foreign investors if it helps them develop unfair competitive advantages or circumvent restrictive governmental regulations (Lui 1985; Saha 2001). Indeed, studies that use additional controls and allow for nonlinearity in the association between corruption and FDI find some evidence of a positive association between corruption and FDI (Egger and Winner 2005; Barassi and Zhou 2012). Prior research also shows an association between greater product market competition and corruption (Alexeev and Song 2013). Firm-level studies find evidence that corruption can aid firm entry, growth, and profitability, particularly when financial markets are underdeveloped or when corruption helps firms circumvent governmental regulations (Wang and You 2012; Dreher and Gassebner 2013; Jiang and Nie 2014). The ability to obtain benefits through political connections and corruption can also represent a significant portion of firms' market values (Fisman 2001; Faccio 2006; Zeume 2017).

2.2 The Foreign Corrupt Practices Act and anti-corruption enforcement

The U.S. Congress enacted the FCPA in 1977 following concerns about foreign corruption brought about by Watergate investigations and allegations of foreign corruption brought against several large U.S. oil companies and defense contractors (Westbrook 2011; Koehler 2012). The FCPA made it illegal to give, or promise to give, anything of value to a foreign government official

or political party, either directly or indirectly through an agent, to influence their decisions.⁵ While the FCPA originally only covered U.S. companies and citizens/residents, it was expanded in 1998 to cover payments to foreign government officials and political parties by non-U.S. companies and individuals who use a U.S. presence to convey bribes (Otusanya, Lauwo and Ahmad-Khair 2017).⁶ Although the FCPA has been law since 1977, enforcement of the anti-corruption provisions of the FCPA has been seemingly arbitrary and unpredictable (Westbrook 2011; Graham and Stroup 2016). In recent years, however, FCPA enforcement has increased to the point that settlements now total billions of U.S. dollars per year (Koehler 2018; Christensen, Maffett, and Rauter 2019).

We seek to understand how exploitive corruption by U.S. MNCs affects citizens of non-U.S. countries. To do this, we use anti-corruption enforcement actions under the FCPA as shocks to the cost of U.S. MNCs direct corruption engagement. Thus, we use FCPA-instigated corruption *reductions* to estimate the effects of FCPA enforcement that represent a minimum estimate of corruption by U.S. MNCs.⁷ This approach offers at least three measurement advantages. First, FCPA enforcement actions are easily measurable and avoid the biases and limitations of most corruption measures (Olken and Pande 2012; Fisman and Golden 2017). Second, because the FCPA only applies to U.S. MNCs and non-U.S. MNCs who use their U.S. operations to engage in corrupt activities abroad, examining FCPA enforcement actions ensures that we are not capturing the effects of local corruption or corruption by most non-U.S. MNCs. Third, because the U.S.

⁵ See §78dd-1 and §78dd-2 of Title 15 of the U.S. Code. The FCPA also implemented the first formal explicit requirement that Securities and Exchange Commission registrants maintain accurate books and records, and devise and maintain internal accounting control systems (15 U.S. Code §78m; Koehler 2012).

⁶ See §78dd-3 of Title 15 of the U.S. Code.

⁷ Theoretically, U.S. MNCs should respond to an increase in the costs of corruption by reducing corruption. This reduction could be complete (100 percent) or incomplete (less than 100 percent). By examining FCPA enforcement actions, we are only able to capture the effects of corruption changes. If MNCs do not completely eliminate corruption in response to FCPA enforcement actions, then our results will not capture the full scope of U.S. MNC corruption activities. As such, the U.S. MNC corruption we capture is only a “minimum estimate” of the actual corruption engagement of MNCs.

government unpredictably enforces the FCPA, FCPA enforcement represents a plausibly-exogenous shock to corruption by U.S. MNCs.

Prior research also examines how *anti*-corruption enforcement affects investment. Karpoff, Lee, and Martin (2017) show that firms subject to FCPA enforcement actions generally do not appear to suffer significant reputation losses or incur fines in excess of the potential benefits of corruption, unless the FCPA action involves charges for financial fraud as well. Although this result might suggest that FCPA enforcement is not likely to affect firm behavior, several studies demonstrate that FDI and exports from the U.S. and investment by U.S. MNCs decline following FCPA enforcement (Beck, Maher, and Tschoegl 1991; Hines 1995; Graham and Stroup 2016; Christensen, Maffett, and Rauter 2019).⁸ Anti-corruption enforcement effects vary depending on the extent of corruption in the FDI-source country, as FDI from low-corruption countries declines following anti-corruption enforcement, while FDI from high-corruption countries increases following the same enforcement events (Cuervo-Cazurra 2006). U.S. MNCs also appear to be more cautious about making acquisitions in countries where FCPA actions are more likely, as evidenced by increased due diligence and a greater likelihood of using an external accounting advisor (Christensen, Maffett, and Rauter 2019).

The prior research discussed above documents that corruption harms the quality of government and life around the world. However, the extent that U.S. multinationals contribute to these effects is unclear, particularly given the mixed results regarding whether U.S. multinationals find corruption a cost to be avoided or a benefit to be embraced (Faccio 2006; Fisman and Svensson 2007; Fisman et al. 2012; Dreher and Gassebner 2013; Xu, Dao, and Petkevich 2019).

If U.S. MNCs view corruption as a net cost, they may not engage in an economically

⁸ Zeume (2019) also documents a decrease in sales and investment by U.K. MNCs into more corrupt countries following the passage of anti-corruption enforcement legislation in the U.K.

significant amount of corruption. Evidence that U.S. MNCs invest less when faced with corruption (Hines 1995) is consistent with U.S. MNCs generally trying to avoid exposure to corruption. That U.S. MNCs may not engage substantially in corruption is also more likely in recent years, which have seen increased emphases on risk management, corporate culture, and corporate social responsibility, each of which are harmed by corruption exposures (Donohoe, McGill, and Outslay 2014; Graham, Harvey, Popadak, and Rajgopal 2017; Elliott, Grant, and Rennekamp 2017). If U.S. MNCs generally do not engage in economically significant amounts of corruption in foreign countries, then, on average, we would expect FCPA enforcement actions to have negligible effects on foreign corruption. In such case, FCPA enforcement should not be associated with the welfare of non-U.S. citizens.⁹

On the other hand, if U.S. MNCs view corruption as beneficial to their interests, two potential effects could occur, depending on the nature of the corruption. If the corruption activity improves business efficiency by allowing companies to circumvent needlessly burdensome regulations (Lui 1985; Dreher and Gassebner 2013; Jiang and Nie 2014), the corruption could improve economic efficiency. If this “greasing the wheels” theory holds true, non-U.S. citizens could potentially benefit when U.S. companies engage in corruption, as citizens experience benefits from increased economic activity and greater access to products and services from U.S. MNCs. FCPA enforcement, by increasing the potential costs of engaging in corruption, would then potentially harm non-U.S. citizens.

Alternately, local government efficiency and citizen quality of life could be harmed if U.S.

⁹ FCPA enforcement could also harm the welfare of non-U.S. citizens if U.S. MNCs are not significantly engaged in corruption. This would occur if the significant costs of FCPA compliance and potential risks related to ambiguity in FCPA enforcement and related penalties (Westbrook 2011; Karpoff, Lee, and Martin 2017) cause U.S. firms to invest less in other countries (Graham and Stroup 2016; Christensen, Maffett, and Rauter 2019), which in turn could harm non-U.S. economies and citizen welfare.

MNCs engage in foreign corruption to obtain unfair competitive advantages or to circumvent important governmental regulations designed to protect citizen welfare (Saha 2001; Alexeev and Song 2013; Fisman and Golden 2017). FCPA enforcement that limits or increases the costs of this exploitive corruption could improve the welfare of non-U.S. citizens.¹⁰ Given these competing theories, we state our first hypothesis in the null as:

***Hypothesis 1:** FCPA enforcement is not associated with the welfare of non-U.S. citizens.*

2.3 Anti-corruption enforcement and development

Prior research shows that people perceive and react to events differently depending on their expectations regarding the events (Clor-Proell 2009; Koonce, Seybert, and Smith 2011). Events that are misaligned with expectations, particularly those perceived as having negative consequences, often produce stronger reactions than when events align with expectations (Raudenbush et al. 2002; Grant, Hodge, and Sinha 2018).¹¹ Evidence suggests that corruption is a much greater concern in developing countries than in developed countries (Ahlin and Pang 2008; Aidt 2009; Pew 2014). Thus, we predict that expectations about the amount of corruption in their economy will affect how governments and citizens react to U.S. FCPA anti-corruption enforcement actions.

Revelations of corruption by U.S. MNCs are likely to shock citizens in developed countries, where corruption is less common (Ahlin and Pang 2008; Aidt 2009; Pew 2014). Such revelations may cause citizens to perceive more flaws in their government, both for allowing and potentially benefitting from this corruption, and demand governmental reform. In turn,

¹⁰ A final possibility exists regarding the effect of FCPA enforcement on non-U.S. citizen welfare. Specifically, the FCPA may not have enough teeth to affect the corruption activities of U.S. MNCs, in which case the FCPA would not be associated with non-U.S. citizen welfare. However, given evidence that U.S. firms significantly change their behavior in response to FCPA enforcement (Beck, Maher, and Tschogl 1991; Hines 1995; Graham and Stroup 2016; Christensen, Maffett, and Rauter 2019), this outcome may be unlikely.

¹¹ People also find items that are incongruent with their expectations more memorable (Hastie and Kumar 1979; Kunda 1999).

governments in developed countries are likely to respond to upset citizens by introducing social reforms that benefit and appease citizens.

Conversely, revelations of corruption by U.S. MNCs may not surprise citizens in developing nations. Instead, citizens will be positively surprised by anti-corruption actions, possibly because they come from an outside source, which may lead them to expect the anti-corruption action could lead to improvements in the quality of their government. However, FCPA enforcement actions could have detrimental effects on the lives of citizens in developing countries. The FCPA actions are likely to stifle the flow of job-producing, welfare-improving FDI (Beck, Maher, and Tschoegl 1991; Hines 1995; Cuervo-Cazurra 2006; Graham and Stroup 2016; Christensen, Maffett, and Rauter 2019). In addition, U.S. MNCs could depart from corrupt developing countries when they expect that FCPA enforcement actions will prohibit them from competing effectively in the market for bribes. As a result, worse forms of business corruption not subject to the FCPA may replace the departing U.S. MNCs, and increase corruption and its damaging effects (Cuervo-Cazurra 2006). As such, we hypothesize:

***Hypothesis 2a:** FCPA enforcement has a more **negative (positive)** effect on evaluations of governmental efficiency (direct citizen welfare) among **developed** countries.*

***Hypothesis 2b:** FCPA enforcement has a more **positive (negative)** effect on evaluations of governmental efficiency (direct citizen welfare) among **developing** countries.*

2.4 Income shifting and corruption

A common activity of MNCs, income shifting uses intercompany transactions and pricing to move income from one jurisdiction to another, usually lower-taxed, jurisdiction (Picciotto 1992; Collins and Shackelford 1998). Estimates of the economic impact of income shifting range from \$77 to \$111 billion per year for the U.S. (Clausing 2016), and from 4% to 10% of corporate income

tax revenues worldwide (OECD 2015). While the primary determinant of firms' income shifting strategies is generally considered to be the ability to obtain tax savings by arbitraging tax rates and rules across jurisdictions (Halperin and Srinidhi 1991; Grubert and Mutti 1991; Collins, Kemsley, and Lang 1998), there are other factors that can affect firms' income shifting strategies. For example, firms' income shifting can also be affected by managerial performance evaluation (Baldenius, Melumad, and Reichelstein 2004), financial reporting incentives (Klassen and Laplante 2012a), income shifting regulations (Klassen and Laplante 2012b), tax enforcement (Beuselinck, Deloof, and Vanstraelen 2015), home country tax systems (Markle 2016), financial constraints (Dyreng and Markle 2016), operating losses (Hopland et al. 2018), internal information environment (McGuire, Rane, and Weaver 2018), and corporate governance (Delis, Karavitis, and Klassen 2018).

Prior literature does not address whether income shifting facilitates corruption by acting as a hidden substitute for other types of corruption (e.g., direct bribes). The closest studies to ours are Bilicka and Seidel (2019), who show that corrupt environments can facilitate income shifting, and O'Donovan, Wagner, and Zeume (2019), who show that secret offshore vehicles revealed in the "Panama papers" leak were used to engage in corrupt activities and to facilitate tax savings through income shifting. Additionally, prior literature has linked income shifting and the use of tax haven subsidiaries (a common tool in income shifting strategies) to managerial rent extraction (Bennedsen and Zeume 2018; Demeré and Gramlich 2019), but managerial rent extraction need not involve illegal actions or corrupt government officials.¹²

Anecdotally, however, income shifting can act as a hidden form of corruption. For

¹² Hasan et al. (2019) document a positive association between corporate social responsibility and income shifting. Because engaging in corruption reduces corporate social responsibility ratings, this study could suggest a negative association between corruption and income shifting, although there are too many other determinants of a firm's corporate social responsibility score to put much stock in this inference.

example, Gramlich and Wheeler (2003) consider an income shifting arrangement involving Chevron, Texaco, and the Government of Indonesia. They examine the period from 1964 to 2002 and report that Chevron and Texaco each shifted income from the U.S. to Indonesia by substantially overpaying their Indonesian 50/50 joint venture for crude oil that the venture acquired from the Indonesian Government. This overpayment produced additional taxes paid by the joint venture to the Indonesian Government. Chevron and Texaco received a U.S. foreign tax credit for the additional Indonesian taxes and, in exchange for the additional taxes paid, the Indonesian Government provided the joint venture with additional crude oil to partially offset the additional tax costs. In other words, by shifting income into Indonesia, Chevron and Texaco paid additional taxes one time but received it back twice in the form of foreign tax credits from the U.S. and corrupt oil benefits from Indonesia.

We expect that firms may view income shifting as a means of paying a bribe that is laundered by characterizing payments as taxes instead of bribes. Additional income recognized in a foreign jurisdiction results in additional taxes paid to the foreign government, which increases the governmental resources available for extraction by corrupt officials and may increase firms' ability to request special treatment or benefits as a valued taxpayer. This indirect corruption through income shifting produces at least two benefits beyond those obtained from direct bribes of government officials. First, foreign taxes paid produce U.S. foreign tax credits that, subject to foreign tax credit limitations, can reduce U.S. taxes by the amount of income tax paid to the foreign country. Thus, use of income shifting to engage in corruption can be almost costless to U.S. firms.¹³ Second, the opaque nature of income shifting (Desai, Dyck, and Zingales 2007; Chen, Hepfer,

¹³ This assumes that the U.S. does not challenge the validity of the income shifting structure or a firms' eligibility for foreign tax credits. However, such challenges have not been successful or robust in similar settings (Gramlich and Wheeler 2003), and research suggests that the ability of the Internal Revenue Service to challenge questionable tax positions is increasingly constrained by cuts to their enforcement budget (Nessa et al. 2019).

Quinn, and Wilson 2018) can make such corruption difficult to identify separately from simply paying taxes on normal international business transactions, particularly for resource-constrained tax authorities (Nessa et al. 2019).

If firms do use income shifting as an alternative vehicle to engage in corruption, then we expect that efforts to combat traditional forms of corruption (e.g., bribery) will be less effective in the presence of income shifting. As such, we state our third hypothesis as:

***Hypothesis 3:** Income shifting to a country by U.S. MNCs decreases (increases) any positive (negative) effects of FCPA enforcement and non-U.S. citizen welfare.*

3. Empirical methodology

3.1 Measuring income shifting by U.S. MNCs

We measure the amount of income shifted by U.S. MNCs to each country by starting with the income shifting measurement technique developed by Dyreng and Markle (2016). Specifically, we obtain firm-level data from Compustat on U.S. MNCs, and estimate the following system of two equations simultaneously:

$$\Delta PIFO = \alpha_0 + (1 - \gamma)\rho_f \Delta SALEFO + \theta \rho_d \Delta SALEDOM + \varepsilon$$

$$\Delta PIDOM = \beta_0 + \gamma \rho_f \Delta SALEFO + (1 - \theta)\rho_d \Delta SALEDOM + v$$

where $\Delta PIFO$ is the change in foreign pre-tax income, $\Delta PIDOM$ is the change in U.S. pre-tax income, $\Delta SALEFO$ is the change in foreign sales, and $\Delta SALEDOM$ is the change in U.S. sales. Among the estimated parameters, ρ_d and ρ_f represent the profit margin on U.S. and foreign sales, respectively, while γ and θ represent the portion of income shifted from foreign countries to the U.S. and from the U.S. to foreign countries, respectively.

We next merge Compustat North America data with hand-collected data on the location of

U.S. firms' foreign subsidiaries from Exhibit 21 of firms' annual financial filings (Form 10-K).¹⁴ We use this data to create a series of indicator variables that equal 1 if a given firm-year observation has a subsidiary in a given country, and 0 otherwise. We then add an equation for θ to our system of equations:

$$\theta = \theta_0 + \sum_{n=1}^N \theta_n \text{Country}_n$$

where the portion of income shifted from the U.S. to foreign countries is allowed to vary based on the geographic footprints of firms. From the equation shown above, we get a specific θ for each country, which we interpret as the propensity of U.S. MNCs to shift income to that country. Finally, we multiply each country's θ by the total foreign pre-tax income of all firms in each year that contain a subsidiary in that country. This produces an estimate of the total amount of income shifted to each country by U.S. MNCs, and provides our measure of income shifting by U.S. MNCs with variation across both time and country. Finally, we take the natural logarithm of this product to arrive at our measure of the annual income shifted by U.S. MNCs to each country (*US_Shifting*).

3.2 Empirical design

We start by estimating the following model shown in equation (1):

$$\begin{aligned} \text{Welfare}_{it} = & \beta_0 + \beta_1 \text{FCPA}_{it} + \beta_2 \text{GDP_Growth}_{it} + \beta_3 \text{GDP_Per_Capita}_{it} \\ & + \beta_4 \text{Population}_{it} + \beta_5 \text{FDI}_{it} + \eta_i + \psi_t + \varepsilon_{it} \end{aligned} \quad (1)$$

where the primary independent variable of interest, *FCPA*, is the cumulative number of FCPA enforcement actions brought against U.S.-based entities for activities in country *i* as of time *t*. The

¹⁴ SEC Regulation S-K [Reg. §229.601(b)(21)] requires all publicly traded companies to provide a list of all their significant subsidiaries as part of their annual 10-K filings. Dyreng et al. (2019) demonstrate that Exhibit 21 disclosures generally match well against their confidential tax-return disclosures, although there is some minor underreporting of tax haven subsidiaries (which are not the subject of this paper) that may introduce noise into our analyses.

dependent construct, *Welfare*, is one of several variables we use to evaluate governmental efficiency and citizen welfare for country i at time t . To examine citizen perceptions of governmental efficiency, we use the World Bank Worldwide Governance Indicators data to obtain measures of countries' control over corruption (*CorrCon*), governmental effectiveness (*GovEff*), rule of law (*RulLaw*), regulatory quality (*RegQual*), political stability (*PolStab*), and freedom of expression (*FreeExp*). These citizen survey measures serve as proxies for aspects of governmental effectiveness (Leuz, Nanda, and Wysocki 2003; Dyreng, Hanlon, and Maydew 2012) that possess data and methodological advantages over comparable measures (Bilicka and Seidel 2019). To further measure how citizens view the quality of the political process and governmental efficiency, we use the number of years that a country's chief executive (e.g., president or prime minister) has been in office (*ExTen*) and the index of political competitiveness (*PolComp*) as measured by Beck et al. (2000) and reported in the World Bank Database on Political Institutions. Finally, we use the governmental accountability/transparency index (*GovTran*) from the World Bank Country Policy and Institutional Assessment Data and the number of days required to obtain a business license (*LicTime*) from the World Bank Enterprise Surveys (Dreher and Gassebner 2013).

We also use eight measures to capture different dimensions of citizen welfare. For economic welfare, we use the number of listed domestic companies in a country (*NumCos*) from the World Federation of Exchanges Database, and the GINI coefficient (*GINI*) of income inequality from World Bank World Development Indicators (WDI) data. To capture gender welfare and equity, we use World Bank WDI data to obtain the percentage of women who have control over their own healthcare, travel, and purchasing decisions (*FemPwr*); we also obtain the gender equality rating (*GenEq*) from World Bank Country Policy and Institutional Assessment Data. Finally, to capture general health and social welfare, we use the percentage of low-weight

births (*LWBirth*), life expectancy at birth (*LifeExp*), percentage of children engaged in economic activity (*ChildLabor*), and carbon dioxide emissions (*CO2*), all from World Bank WDI data.

We include control variables for GDP growth (*GDP_Growth*), GDP per capita (*GDP_Per_Capita*), and population (*Population*) to help ensure that our results are not driven by economic activity. To ensure that the variable *FCPA* reflects more than foreign direct investment activity, we control for total inbound FDI to each country (*FDI*) using World Bank WDI data. Further, we control for country (η_i) and year (ψ_t) fixed effects in all analyses.¹⁵ We also utilize two types of standard errors. Because we include country and year fixed effects in all analyses, we use robust standard errors to address heteroscedasticity while relying on fixed effects to eliminate average serial and cross-sectional correlation (Cameron and Miller 2015). Due to the relatively comparable spatial and time dimensions of our panel, we also use Driscoll-Kraay standard errors to address potential variation in serial and cross-sectional correlations (Driscoll and Kraay 1998). See Table 1 for a complete list of variable descriptions and data sources.

To test our second hypothesis, we partition our sample of countries into developed and developing countries.¹⁶ If our hypotheses hold, we would expect the coefficients on *FCPA* to differ between the country groups, with the direction of the difference changing predictably based on the dependent variable being examined.

We modify equation (1) to test our third hypothesis by including an interaction between *FCPA* and *US_Shifting* as follows:

¹⁵ By including country and year fixed effects results, equation (1) becomes a generalized difference-in-differences model, as it controls for both country-specific and period-specific traits (Wooldridge 2010; Roberts and Whited 2013)

¹⁶ Following traditional World Bank classifications, we classify a country as developing if it falls into either the low- or lower-middle-income classifications from the World Bank Country and Lending Groups data, and developed otherwise.

$$\begin{aligned}
Welfare_{it} = & \beta_0 + \beta_1 FCPA_{it} + \beta_2 US_Shifting_{it} + \beta_3 FCPA_{it} \times US_Shifting_{it} \quad (2) \\
& + \beta_4 GDP_Growth_{it} + \beta_5 GDP_Per_Capita_{it} + \beta_6 Population_{it} \\
& + \beta_7 FDI_{it} + \eta_i + \psi_t + \varepsilon_{it},
\end{aligned}$$

using the variables described above. If the third hypothesis holds, we would expect a significant coefficient on β_3 , with the sign being positive (negative) when the dependent variable reflects benefit (harm) to government effectiveness and citizen welfare.

4. Results

4.1 Sample and descriptive statistics

Our sample covers 153 countries over the years 1995 through 2014, for a total of 3,026 country-year observations. We focus on this period given that we only have Exhibit 21 data for this period, which is necessary to compute *US_Shifting*. The number of observations in a particular analysis may differ from 3,026 observations depending on the availability of data for the dependent variable or the number of outlier observations removed.¹⁷

Table 2, Panel A reports descriptive statistics for all variables. The average (median) country-year observation is associated with 1.2 (0.0) current or prior FCPA enforcement actions. Approximately 30% of country-year observations are classified as developing countries. We also report Pearson univariate correlations in Table 2, Panel B. This univariate test shows that FCPA enforcement is negatively associated with several of our governmental quality variables, suggesting initially that FCPA enforcement actions may carry costs for foreign countries' citizens. However, we rely on multivariate analyses before deriving inferences. Because our hypothesis

¹⁷ To address the effects of potential outliers on our results, we report all results after removing observations with a Cook's Distance in excess of $4/N$. We choose this method of addressing outliers as it is superior to winsorizing or truncating data on percentiles, and robust regression is excessively difficult to implement given the fixed effect structure of our panel data (Leone, Minutti-Meza, and Wasley 2019).

related to *US_Shifting* involves a moderating interaction, Table 2, Panel B correlations do not provide insights about Hypothesis 3.

4.2 Tests of Hypothesis 1

We report the results of testing Hypothesis 1 in Table 3. In Panel A, we examine how FCPA enforcement, as a plausibly-exogenous shock to corruption by U.S. MNCs, affects the quality of foreign governments for their citizens. Recall that equation (1) includes a battery of control variables including country and year fixed effects. The results suggest that FCPA enforcement *harms* local rule of law (*RulLaw*, $p < .01$), regulatory quality (*RegQual*, $p < .01$), political stability (as measured by *PolStab* and *ExTen*, both at $p < .01$), freedom of expression (*FreeExp*, $p < .01$), and ease of establishing a business (*LicTime*, $p < .01$). However, we fail to find evidence that FCPA enforcement affects foreign governments' control of corruption, governmental effectiveness, or governmental transparency, as the coefficient on *FCPA* is not significant in explaining *CorrCon*, *GovEff*, or *GovTran*. We also find weak evidence that FCPA enforcement is positively linked with political competitiveness in affected countries (*PolComp*, $p < .10$).

Panel B of Table 3 reports mixed results that generally are more consistent with FCPA enforcement harming rather than benefiting other countries' citizens. There is some evidence that FCPA enforcement is beneficial, as it is weakly associated with lower carbon dioxide emissions (*CO2*, $p < .10$) and associated with lower child labor (*ChildLabor*, $p < .05$). But Panel B also provides evidence that FCPA enforcement increases income inequality (*GINI*, $p < .05$), and strong evidence that FCPA enforcement is associated with worse gender equality (*GenEq*, $p < .01$) and lower life expectancies (*LifeExp*, $p < .01$). Across all countries, we find no evidence that *FCPA* is systematically related to the number of listed companies in a country (*NumCos*), female decision

power (*FemPwr*), or low-weight births (*LWBirth*). Taken together, Table 3, Panels A and B, report mixed evidence that, overall, suggests that FCPA enforcement actions cause harm for local citizens.

Prior literature shows that corruption has significant negative consequences for governments and everyday citizens (e.g., Mauro 1995; Gupta, Davoodi, and Alonso-Terme 2002; Ambraseyes and Bilham 2011). So it may be surprising that anti-corruption enforcement can also have negative consequences. However, two previously-discussed reasons could explain why FCPA enforcement could induce local harm. First, if corruption improves business efficiency (Dreher and Gassebner 2013), then anti-corruption enforcement could increase the costs of corruption that yield business efficiency. This in turn could result in local citizens having reduced access to products and services from U.S. MNCs. Second, if U.S. MNCs tend to engage in more benign forms of corruption, then anti-corruption FCPA actions that apply only to U.S. MNCs may encourage these U.S. firms to withdraw and allow more egregious forms of corruption to enter local markets (Cuervo-Cazurra 2006). Either way, FCPA enforcement would harm other countries' citizens. However, we anticipate that these effects of FCPA enforcement will differ depending on the extent of country-level development, as we examine next.

4.3 Tests of Hypotheses 2a and 2b

We report our tests of Hypotheses 2a and 2b in Tables 4 and 5, respectively. Specifically, we split our sample in to developed (or high-income) countries and developing (or low-income) countries following traditional World Bank classifications, and test equation (1) separately on these subsamples. In Panel A of Table 4, we show that the negative effects of FCPA enforcement on citizen perceptions of governmental quality are found heavily among developed countries, as FCPA enforcement is associated with reductions in perceptions of foreign governments' control

of corruption (*CorrCon*, $p < .05$), rule of law (*RulLaw*, $p < .01$), regulatory quality (*RegQual*, $p < .01$), political stability (as measured by *PolStab* and *ExTen*, both at $p < .01$), freedom of expression (*FreeExp*, $p < .05$), and ease of establishing a business (*LicTime*, $p < .01$). These results are consistent with anti-corruption enforcement coming as a shock to citizens of developed countries, who then view their government with less favorability upon learning of unexpected corruption.

In developed (high-income) countries, negative government perceptions, in apparent response to *FCPA* enforcement actions, lead to increased services to citizens that improve society. Specifically, in Panel B of Table 4, *FCPA* enforcement is generally associated with increased numbers of listed companies (*NumCos*, $p < .01$), reduced low-weight births (*LWBirth*, $p < .05$), increased life expectancies (*LifeExp*, $p < .10$), reduced child labor (*ChildLabor*, $p < .05$), and reduced carbon dioxide emissions (*CO2*, $p < .10$). However, *FCPA* appears unrelated to income inequality (*GINI*) in developed countries, and results pertaining to gender equality are mixed, with *FCPA* leading to decreases in *FemPwr* ($p < .01$) and increases in *GenEq* ($p < .01$).

Overall, the results in Table 4 are consistent with Hypothesis 2a. Anti-corruption enforcement under the *FCPA* appears to lead foreign citizens to discount the quality of their government, which governments attempt to respond to by providing better services. Unlike the broad inference that *FCPA* enforcement harms foreign countries' citizens from testing Hypothesis 1, separate consideration of developed countries leads to the inference that anti-corruption enforcement by the U.S. can act as a positive engine for change.

However, this pattern of results suggests that much of the overall harm from *FCPA* enforcement occurs in developing countries, which we next examine by testing Hypothesis 2b. In Panel A of Table 5, we find that *FCPA* enforcement is associated with improvements in citizens' views of foreign governments' control of corruption (*CorrCon*, $p < .05$), governmental

effectiveness (*GovEff*, $p < .01$), political competition (*PolComp*, $p < .01$), and ease of establishing a business (*LicTime*, $p < .10$). These findings are consistent with citizens of developing countries exhibiting positive surprise when unexpected enforcement occurs against the corruption that is common in these settings. This positive surprise may be attributed to the role of the U.S. as a foreign government, though it is also possible that FCPA actions helps local governments improve.

Table 5, Panel B, reports tests of Hypothesis 2b using measures of social wellbeing in developing countries. Unfortunately, in these countries, FCPA anti-corruption actions consistently lead to impairments in society. FCPA enforcement is associated with reduced numbers of listed companies (*NumCos*, $p < .05$), greater income inequality (*GINI*, $p < .01$), reduced female decision power (*FemPwr*, $p < .05$) and gender equality (*GenEq*, $p < .01$), more low-weight births (*LWBirth*, $p < .05$), lower life expectancies (*LifeExp*, $p < .01$), and greater carbon dioxide emissions (*CO2*, $p < .05$). These findings suggest that corruption by U.S. MNCs in developing countries is relatively benign, and that reduced activity by U.S. MNCs may encourage outside investment from non-U.S. MNCs that bring more harmful forms of corruption (Cuervo-Cazurra 2006). Taken together, the results reported in Table 5 are consistent with Hypothesis 2b.

4.4 Tests of Hypothesis 3

We use equation (2) to examine how income shifting by U.S. MNCs moderates the relation between FCPA enforcement and measures of governmental efficiency and social welfare. The notion is that, if income shifting serves as an alternate means of corruption, the effects of FCPA enforcement may be mitigated to the extent that income-shifting corruption supplants more direct forms of corruption. Results of these tests are separately reported in Table 6 for developed and in Table 7 for developing countries since, as reported in Tables 4 and 5, FCPA enforcement appears to have different main effects for developed and developing countries.

Table 6, Panel A reports evidence that income shifting reduces the positive effects of FCPA enforcement on government quality measures in developed countries. Specifically, after controlling for the main effects, the coefficients of $US_Shifting \times FCPA$ indicate that income shifting results in worse FCPA enforcement outcomes on governmental effectiveness ($GovEff$, $p < .01$), rule of law ($RulLaw$, $p < .01$), regulatory quality ($RegQual$, $p < .10$), political stability ($PolStab$, $p < .01$), governmental transparency ($GovTran$, $p < .01$), and control over corruption ($CorrCon$, $p < .01$). Thus, when we examine how income shifting interacts with the plausibly-exogenous effects of FCPA enforcement, we find consistent evidence that income shifting from U.S. MNCs reduces the benefits, or exacerbates the harm, associated with FCPA enforcement in developed countries.¹⁸ We do not hypothesize the main effects of income shifting, $US_Shifting$, on measures of government quality, but we note the mixed directions and significance of this main effect variable. In Table 6, Panel B, we examine whether income shifting affects FCPA enforcement's propensity to lead to beneficial change in developed countries. The results are a bit mixed and generally weak in significance across multiple measures. However, the results that are stronger indicate that income shifting reduces the positive benefits of FCPA enforcement for low-weight births ($LWBirth$, $p < .01$) and carbon dioxide emissions ($CO2$, $p < .01$).

In Table 7, we examine the moderating effects of income shifting on FCPA enforcement in developing countries. Panel A reports evidence that, in developing countries, the effects of FCPA enforcement actions on citizen perceptions of government quality tend to be less beneficial as income shifting increases. In particular, after controlling for main effects, the coefficients of $US_Shifting \times FCPA$ indicate that income shifting results in worse FCPA enforcement outcomes on rule of law ($RulLaw$, $p < .10$) regulatory quality ($RegQual$, $p < .01$), and governmental

¹⁸ The lone exception is the weak -0.040 coefficient on the interaction, $US_Shifting \times FCPA$, in explaining ease of doing business ($LicTime$, $p < .10$).

transparency (*GovTran*, $p < .01$). Additionally, income shifting makes FCPA enforcement less effective at constraining the term of the (possibly non-democratically “elected”) government leader (*ExTen*, $p < .01$). Results reported in Table 7, Panel B are generally not significant, however, so we make no inferences with regard to the social effects of income shifting that occurs after FCPA enforcement actions in developing countries. These weaker results are consistent with our tests having reduced power in the developing country setting because income shifting to developing countries is less common than income shifting to developed countries (Fuest, Hebous, and Riedel 2011). In total, while there are insignificant results, particularly for the social effects of income shifting, the results are consistent with Hypothesis 3 as it pertains to quality of government. That is, income shifting can act as a form of corruption that explains declines in the quality of government following FCPA enforcement actions.

4.5 Additional analyses

If income shifting can act as a form of corruption that is less detectable by traditional anti-corruption enforcement, then we might also expect that exposure to anti-corruption enforcement might result in an increase in outbound income shifting. This is different than what might be expected given the results of Bilicka and Seidel (2019), who document that source-country corruption can enable income shifting, the converse of which is that anti-corruption enforcement against a source country should *decrease* income shifting. To test whether FCPA enforcement increases or decreases income shifting, we utilize our firm-year panel of U.S. MNCs used to compute *US_Shifting* and the Dyreng and Markle (2016) system of equations as discussed in Section 3.1. We then add an alternative equation for θ to our system of equations:

$$\theta = \theta_0 + \theta_{FCPA}FCPA_Quantile$$

where *FCPA_Quantile* is an indicator variable equal to one if the firm-year is in the top quantile

of FCPA exposure. To calculate FCPA exposure, we multiply (a) the number of entities in each jurisdiction and (b) FCPA enforcement in that jurisdiction, and then sum these country-specific amounts across all countries in which a firm has operations.

We report these results, focusing on the median and quartile of FCPA exposure, in Table 8. The estimate of θ_0 is positive and significant for both quantiles, consistent with U.S. MNCs engaging in significant outbound income shifting during our sample period (Clausing 2016). In addition, we find that the estimate of θ_{FCPA} is positive and significant at both quantiles, consistent with firms shifting more income out of the U.S. when they are exposed to greater FCPA enforcement risk. This evidence is consistent with our inference that income shifting may enable corruption in ways that are less visible to traditional anti-corruption campaigns, and thus allow firms to continue reaping the benefits of corruption without having elevated enforcement risk.¹⁹

5. Conclusion

We examine income shifting as an opaque alternative tool for implementing corruption when anti-corruption efforts stifle more direct forms of corruption. To evaluate the role of income shifting by U.S. MNCs in foreign corruption, we employ FCPA enforcement actions as plausibly-exogenous shocks to ongoing corruption practices. We rely largely on the World Bank data to measure corruption indirectly (since it is not directly observable) using ten measures of governmental efficiency and eight measures of citizen welfare. We first learn that FCPA enforcement actions impact these measures differently in developed and developing countries. Consistent with expectancy violations theory, we find that perceptions of government in developed

¹⁹ In untabulated results that we intend to tabulate in a future draft, we include the control variables from Dyreng and Markle (2016) in these analyses, and find that FCPA enforcement exposure remains a statistically significant determinant of income shifting. Further, we find our results are unaffected when additionally controlling for cash effective tax rates (as a proxy for firms' propensity to avoid taxes), suggesting we are capturing income shifting that is not tax motivated.

countries are impaired by FCPA enforcement actions, but government services and citizen welfare subsequently improve. On the other hand, as the theory suggests, we find improved perceptions of government in developing countries after FCPA enforcement actions even though citizen welfare declines, consistent with the inability of FCPA enforcement actions to substantially change the local culture of corruption.

We then hypothesize and empirically document evidence that income shifting by U.S. MNCs acts as a substitute for more direct forms of corruption curtailed by FCPA enforcement. This income shifting obscurely increases tax payments to governments known to be corrupt at a time when the U.S. is clamping down on more direct forms of corruption. The evidence indicates that corrupt income shifting mitigates effects of FCPA enforcement on local citizenry in both developed and developing countries. We also find evidence that firms respond to exposure to FCPA enforcement by increasing income shifting, consistent with income shifting substituting for more direct forms of corruption.

Our evidence suggests that FCPA enforcement actions, particularly in developing countries, are a necessary but insufficient response to U.S. MNCs that obtain foreign government benefits through corruption. Additional regulation of competitor companies by their home governments is also needed, and this requires substantial international diplomacy. Importantly, we provide evidence suggesting that U.S. enforcement of the FCPA should include tax authorities who should be authorized and trained to detect corruption through income shifting.

References

- Ahlin, C. and J. Pang. 2008. Are Financial Development and Corruption Control Substitutes in Promoting Growth? *Journal of Development Economics* 86: 414-433.
- Aidt, T. 2009. Corruption, Institutions, and Economic Development. *Oxford Review of Economic Policy* 25(2): 271-291.
- Alexeev, M. and Y. Song. 2013. Corruption and Product Market Competition: An Empirical Investigation. *Journal of Development Economics* 103: 154-166.
- Ambraseys, N. and R. Bilham. 2011. Corruption Kills. *Nature* 469: 153-155.
- Anderson, C. and Y. Tverdova. 2003. Corruption, Political Allegiances, and Attitudes Toward Government in Contemporary Democracies. *American Journal of Political Science* 47(1): 91-109.
- Athanasouli, D. and A. Goujard. 2015. Corruption and Management Practices: Firm Level Evidence. *Journal of Comparative Economics* 43: 1014-1034.
- Ayyagari, M., A. Demirgüç-Kunt, and V. Maksimovic. 2014. Bribe Payments and Innovation in Developing Countries: Are Innovating Firms Disproportionately Affected? *Journal of Financial and Quantitative Analysis* 49(1): 51-75.
- Baldenius, T., N. Melumad, and S. Reichelstein. 2004. Integrating Managerial and Tax Objectives in Transfer Pricing. *The Accounting Review* 79(3): 591-615.
- Banerjee, A. 1997. A Theory of Misgovernance. *Quarterly Journal of Economics* 112(4): 1289-1332.
- Barassi, M. and Y. Zhou. 2012. The Effect of Corruption on FDI: A Parametric and Non-Parametric Analysis. *European Journal of Political Economy* 28: 302-312.
- Beck, P., M. Maher, and A. Tschoegl. 1991. The Impact of the Foreign Corrupt Practices Act on US Exports. *Managerial and Decision Economics* 12: 295-303.
- Beck, T., G. Clarke, A. Groff, P. Keefer, and P. Walsh. 2000. New Tools and New Tests in Comparative Political Economy. World Bank policy research working paper 2283.
- Bennedsen, M. and S. Zeume. 2018. Corporate Tax Havens and Transparency. *Review of Financial Studies* 31(4): 1221-1264.
- Beuselinck, C., M. Deloof, and A. Vanstraelen. 2015. Cross-jurisdictional Income Shifting and Tax Enforcement: Evidence from Public versus Private Multinationals. *Review of Accounting Studies* 20(2): 710-746.
- Bilicka, K. and A. Seidel. 2019. Profit Shifting and Corruption. Working paper, Utah State University.
- Burgoon, J. 1993. Interpersonal Expectations, Expectancy Violations, and Emotional Communication. *Journal of Language and Social Psychology* 12(1 & 2): 30-48.
- Cameron, A.C. and D. Miller. 2015. A Practitioner's Guide to Cluster-Robust Inference. *Journal of Human Resources* 50(2): 317-372.
- Chen, C.W., B. Hepfer, P. Quinn, and R. Wilson. 2018. The Effect of Tax-Motivated Income Shifting on Information Asymmetry. *Review of Accounting Studies* 23: 958-1004.
- Chen, Y., Y. Xie, H. You, and Y. Zhang. 2018. Does Crackdown on Corruption Reduce Stock Price Crash Risk? Evidence from China. *Journal of Corporate Finance* 51: 125-141.
- Chong, A., A. De La O, D. Karlan, and L. Wantchekon. 2015. Does Corruption Information Inspire the Fight or Quash the Hope? A Field Experiment in Mexico on Voter Turnout, Choice, and Party Identification. *Journal of Politics* 77(1): 55-71.

- Christensen, H., M. Maffett, and T. Rauter. 2019. Policeman for the World: US Enforcement of Foreign Corruption Regulation and Corporate Investment Policies. Working paper, University of Chicago.
- Clausing, K. 2016. The Effect of Profit Shifting on the Corporate Tax Base in the United States and Beyond. *National Tax Journal* 69(4): 905-934.
- Clor-Proell, S. 2009. The Effects of Expected and Actual Accounting Choices on Judgments and Decisions. *The Accounting Review* 84(5): 1465-1493.
- Collins, J., D. Kemsley, and M. Lang. 1998. Cross-jurisdictional Income Shifting and Earnings Valuation. *Journal of Accounting Research* 36(2): 209-229.
- Collins, J. and D. Shackelford. 1998. Global Organizations and Taxes: An Analysis of the Dividend, Interest, Royalty, and Management Fee Payments between U.S. Multinationals' Foreign Affiliates. *Journal of Accounting and Economics* 24: 151-173.
- Cuervo-Cazurra, A. 2006. Who Cares about Corruption? *Journal of International Business Studies* 37: 807-822.
- Delis, M., P. Karavitis, and K. Klassen. 2018. The Corporate Governance of Profit Shifting. Working paper, Montpellier Business School.
- Deméré, P. and J. Gramlich. 2019. The Value of International Income Shifting to U.S. Multinational Firms. Working paper, University of Georgia.
- Desai, M., A. Dyck, and L. Zingales. 2007. Theft and Taxes. *Journal of Financial Economics* 84: 591-623.
- Djankov, S., R. La Porta, F. Lopez-De-Silanes, and A. Shleifer. 2002. The Regulation of Entry. *Quarterly Journal of Economics* 117(1): 1-37.
- Donohoe, M., G. McGill, and E. Outsley. 2014. Risky Business: The Prosopography of Corporate Tax Planning. *National Tax Journal* 67(4): 851-874.
- Dreher, A. and M. Gassebner. 2013. Greasing the Wheels? The Impact of Regulations and Corruption on Firm Entry. *Public Choice* 155: 413-432.
- Driscoll, J. and A. Kraay. 1998. Consistent Covariance Matrix Estimation with Spatially Dependent Panel Data. *Review of Economics and Statistics* 80(4): 549-560.
- Drucker, J. and J. Tankersley. 2019. How Big Companies Won New Tax Breaks from the Trump Administration. *New York Times* December 30, 2019.
- Dyreng, S., M. Hanlon, and E. Maydew. 2012. Where Do Firms Manage Earnings? *Review of Accounting Studies* 17: 649-687.
- Dyreng, S. and K. Markle. 2016. The Effect of Financial Constraints on Income Shifting by U.S. Multinationals. *The Accounting Review* 91(6): 1601-1627.
- Dyreng, S., J. Hoopes, P. Langetieg, and J. Wilde. 2019. Strategic Subsidiary Disclosure. Working paper, Duke University.
- Egger, P. and H. Winner. 2005. Evidence on Corruption as an Incentive for Foreign Direct Investment. *European Journal of Political Economy* 21: 932-952.
- Elliott, W.B., S. Grant, and K. Rennekamp. 2017. How Disclosure Features of Corporate Social Responsibility Reports Interact with Investor Numeracy to Influence Investor Judgments. *Contemporary Accounting Research* 34(3): 1596-1621.
- European Commission. 2017. Special Eurobarometer 470 Report: Corruption.
- Everett, J., D. Neu., and A.S. Rahaman. 2007. Accounting and the Global Fight Against Corruption. *Accounting, Organizations and Society* 32: 513-542.
- Evers, M.T., I. Meier, and C. Spengel. 2016. Country-by-Country Reporting: Tension between Transparency and Tax Planning. Working paper, University of Mannheim.

- Faccio, M. 2006. Politically Connected Firms. *American Economic Review* 96(1): 369-386.
- Fisman, R. 2001. Estimating the Value of Political Connections. *American Economic Review* 91(4): 1095-1102.
- Fisman, R. and J. Svensson. 2007. Are Corruption and Taxation Really Harmful to Growth? Firm Level Evidence. *Journal of Development Economics* 83: 63-75.
- Fisman, D., R. Fisman, J. Galef, R. Khurana, and Y. Wang. 2012. Estimating the Value of Connections to Vice-President Cheney. *B.E. Journal of Economic Analysis & Policy* 12(3): Article 5.
- Fisman, R. and M. Golden. 2017. *Corruption: What Everyone Needs to Know*. Oxford University Press: New York, NY.
- Fisman, R. and Y. Wang. 2015. The Mortality Cost of Political Connections. *Review of Economic Studies* 82: 1346-1382.
- Fuest, C., S. Hebous, and N. Riedel. 2011. International Debt Shifting and Multinational Firms in Developing Economies. *Economics Letters* 113: 135-138.
- Graham, B. and C. Stroup. 2016. Does Anti-Bribery Enforcement Deter Foreign Investment? *Applied Economics Letters* 23(1): 63-67.
- Graham, J., C. Harvey, J. Popadak, and S. Rajgopal. 2017. Corporate Culture: Evidence from the Field. National Bureau of Economic Research Working Paper 23255.
- Gramlich, J. and J. Wheeler. 2003. How Chevron, Texaco, and the Indonesian Government Structured Transactions to Avoid Billions in U.S. Income Taxes. *Accounting Horizons* 17(3): 107-122.
- Grant, S., F. Hodge, and R. Sinha. 2018. How Disclosure Medium Affects Investor Reactions to CEO Bragging, Modesty, and Humblebragging. *Accounting, Organizations and Society* 68-69: 118-134.
- Grubert, H. and J. Mutti. 1991. Taxes, Tariffs, and Transfer Pricing in Multinational Corporate Decision Making. *Review of Economics and Statistics* 73(2): 285-293.
- Gul, F. 2006. Auditors' Response to Political Connections and Cronyism in Malaysia. *Journal of Accounting Research* 44(5): 931-963.
- Gupta, S., H. Davoodi, and R. Alonso-Terme. 2002. Does Corruption Affect Income Inequality and Poverty? *Economics of Governance* 3: 23-45.
- Habib, M. and L. Zurawicki. 2001. Country-Level Investments and the Effect of Corruption – Some Empirical Evidence. *International Business Review* 10: 687-700.
- Habib, M. and L. Zurawicki. 2002. Corruption and Foreign Direct Investment. *Journal of International Business Studies* 33(2): 291-307.
- Hakkala, K., P. Norbäck, and H. Svaleryd. 2008. Asymmetric Effects of Corruption on FDI: Evidence from Swedish Multinational Firms. *Review of Economics and Statistics* 90(4): 627-642.
- Halperin, R. and B. Srinidhi. 1991. U.S. Income Tax Transfer-Pricing Rules and Resource Allocation: The Case of Decentralized Multinational Firms. *The Accounting Review* 66(1): 141-157.
- Hammack, L. 2006. Ex-Mayor to Plead Guilty in Vote Fraud Case. *The Roanoke Times*, November 9, 2006.
- Hasan, I., P. Karavitis, P. Kazakis, and W.S. Leung. 2019. Corporate Social Responsibility and Profit Shifting. Working paper, Fordham University.
- Hastie, R. and P.A. Kumar. 1979. Person Memory: Personality Traits as Organizing Principles in Memory for Behaviors. *Journal of Personality and Social Psychology* 37(1): 25-38.

- Healy, P. and G. Serafeim. 2020. Voluntary, Self-Regulatory, and Mandatory Disclosure of Oil and Gas Company Payments to Foreign Governments. *Accounting Horizons* 34(1): 111-129.
- Heilman, B. and L. Ndumbaro. 2002. Corruption, Politics, and Societal Values in Tanzania: An Evaluation of the Mkapa Administration's Anti-Corruption Efforts. *African Journal of Political Science* 7(1): 1-19.
- Henisz, W. and J. Macher. 2004. Firm- and Country-Level Trade-offs and Contingencies in the Evaluation of Foreign Investment: The Semiconductor Industry, 1994-2002. *Organization Science* 15(5): 537-554.
- Hines, J. 1995. Forbidden Payment: Foreign Bribery and American Business after 1977. National Bureau of Economic Research Working Paper 5266.
- Hope, O.K., H. Yue, and Q. Zhong. 2019. China's Anti-Corruption Campaign and Financial Reporting Quality. *Contemporary Accounting Research*, Forthcoming.
- Hopland, A., P. Lisowsky, M. Mardan, and D. Schindler. 2018. Flexibility in Income Shifting under Losses. *The Accounting Review* 93(3): 163-183.
- Hunt, J. 2010. Bribery in Health Care in Uganda. *Journal of Health Economics* 29: 699-707.
- Jiang, T. and H. Nie. 2014. The Stained China Miracle: Corruption, Regulation, and Firm Performance. *Economics Letters* 123: 366-369.
- Joshi, P., E. Outslay, and A. Persson. 2020. Does Public Country-by-Country Reporting Deter Tax Avoidance and Income Shifting? Evidence from the European Banking Industry. *Contemporary Accounting Research*, Forthcoming.
- Karpoff, J., D.S. Lee, and G. Martin. 2017. Foreign Bribery: Incentives and Enforcement. Working paper, University of Washington.
- Kaufmann, D. and S. Wei. 1999. Does "Grease Money" Speed Up the Wheels of Commerce? National Bureau of Economic Research Working Paper 7093.
- Klassen, K. and S. Laplante. 2012a. The Effect of Foreign Reinvestment and Financial Reporting Incentives on Cross-jurisdictional Income Shifting. *Contemporary Accounting Research* 29(3): 928-955.
- Klassen, K. and S. Laplante. 2012b. Are U.S. Multinational Corporations Becoming More Aggressive Income Shifters? *Journal of Accounting Research* 50(5): 1245-1285.
- Koehler, M. 2012. The Story of the Foreign Corrupt Practices Act. *Ohio State Law Journal* 73(5): 929-1014.
- Koehler, M. 2018. The FCPA's Record-Breaking Year. *Connecticut Law Review* 50(1): 91-160.
- Koonce, L., N. Seybert, and J. Smith. 2011. Causal Reasoning in Financial Reporting and Voluntary Disclosure. *Accounting, Organizations and Society* 36: 209-225.
- Kunda, Z. 1999. *Social Cognition: Making Sense of People*. The MIT Press: Cambridge, MA.
- Lambsdorff, J. 2003. How Corruption Affects Productivity. *Kyklos* 56(4): 457-474.
- Leone, A., M. Minutti-Meza, and C. Wasley. 2019. Influential Observations and Inference in Accounting Research. *The Accounting Review* 94(6): 337-364.
- Leuz, C., D. Nanda, and P. Wysocki. 2003. Earnings Management and Investor Protection: An International Comparison. *Journal of Financial Economics* 69: 505-527.
- Lin, K., L. Mills, F. Zhang, and Y. Li. 2018. Do Political Connections Weaken Tax Enforcement Effectiveness? *Contemporary Accounting Research* 35(4): 1941-1972.
- Lui, F. 1985. An Equilibrium Queuing Model of Bribery. *Journal of Political Economy* 93(4): 760-781.
- Markle, K. 2016. A Comparison of the Tax-Motivated Income Shifting of Multinationals in Territorial and Worldwide Countries. *Contemporary Accounting Research* 33(1): 7-43.

- Mauro, P. 1995. Corruption and Growth. *Quarterly Journal of Economics* 110(3): 681-712.
- McGuire, S., S. Rane, and C. Weaver. 2018. Internal Information Quality and Tax-Motivated Income Shifting. *Journal of the American Taxation Association* 40(2): 25-44.
- Ndikumana, L. and J. Boyce. 2010. Measurement of Capital Flight: Methodology and Results for Sub-Saharan African Countries. *African Development Review* 22(4): 471-481.
- Nessa, M., C. Schwab, B. Stomberg, and E. Towery. 2019. How Do IRS Resources Affect the Corporate Audit Process? *The Accounting Review*, Forthcoming.
- Neu, D., J. Everett, A.S. Rahaman, and D. Martinez. 2013. Accounting and Networks of Corruption. *Accounting, Organizations and Society* 38: 505-524.
- Newey, W. and K. West. 1994. Automatic Lag Selection in Covariance Matrix Estimation. *Review of Economic Studies* 61: 631-653.
- O'Donovan, J., H. Wagner, and S. Zeume. 2019. The Value of Offshore Secrets: Evidence from the Panama Papers. *Review of Financial Studies*, Forthcoming.
- OECD (Organisation for Economic Cooperation and Development). 2015. *Explanatory Statement, OECD/G20 Base Erosion and Profit Shifting Project*. Available at: <https://www.oecd.org/ctp/beps-explanatory-statement-2015.pdf>.
- Okonjo-Iweala, N. 2019. Strategies for winning the fight against corruption. In *Foresight Africa: Top Priorities for the Continent in 2019*. Brookings Institution, Washington, DC: 17-18.
- Olken, B. 2007. Monitoring Corruption: Evidence from a Field Experiment in Indonesia. *Journal of Political Economy* 115(2): 200-249.
- Olken, B. and R. Pande. 2012. Corruption in Developing Countries. *Annual Review of Economics* 4: 479-509.
- Otusanya, O.J., S. Lauwo, and A. Ahmad-Khair. 2017. The Culpability of Accounting Practice in Promoting Bribery and Corruption in Developing Countries. *International Journal of Economics and Accounting* 8(2): 106-137.
- Pew Research Center. 2014. *Crime and Corruption: Top Problems in Emerging and Developing Countries*. Pew Research Center: Washington, DC.
- Picciotto, S. 1992. International Taxation and Intrafirm Pricing in Transnational Corporate Groups. *Accounting, Organizations and Society* 17(8): 759-792.
- Quah, J. 1995. Controlling Corruption in City-States: A Comparative Study of Hong Kong and Singapore. *Crime, Law & Social Change* 22: 391-414.
- Raudenbush, B., B. Meyer, W. Eppich, N. Corley, and S. Petterson. 2002. Ratings of Pleasantness and Intensity for Beverages Served in Containers Congruent and Incongruent with Expectancy. *Perceptual and Motor Skills* 94: 671-674.
- Reinikka, R. and J. Svensson. 2005. Fighting Corruption to Improve Schooling: Evidence from a Newspaper Campaign in Uganda. *Journal of the European Economic Association* 3(2-3): 259-267.
- Roberts, M. and T. Whited. 2013. Endogeneity in Empirical Corporate Finance. *Handbook of the Economics of Finance* 2(A): 493-572.
- Saha, B. 2001. Red Tape, Incentive Bribe and the Provision of Subsidy. *Journal of Development Economics* 65: 113-133.
- Shleifer, A. and R. Vishny. 1993. Corruption. *Quarterly Journal of Economics* 108(3): 599-617.
- Silberstein, C. 2009. Transfer Pricing: A Challenge for Developing Countries. *OECD Observer* 266-277: 29-31.
- Smith, R., R. Muir, M. Walpole, A. Balmford, and N. Leader-Williams. 2003. Governance and the Loss of Biodiversity. *Nature* 426: 67-70.

- Smith, J. 2016. US Political Corruption and Firm Financial Policies. *Journal of Financial Economics* 121: 350-367.
- Sundström, A. 2016a. Corruption and Violations of Conservation Rules: A Survey Experiment with Resource Users. *World Development* 85: 73-83.
- Sundström, A. 2016b. Understanding Illegality and Corruption in Forest Governance. *Journal of Environmental Management* 181: 779-790.
- Transparency International. 2018. *Anti-Corruption Glossary*. Available at: <https://www.transparency.org/glossary/term/corruption> (Last Accessed 8/12/2019).
- United Nations. 2018. Security Council 8346th Meeting (AM). September 10, 2018.
- Vian, T. 2008. Review of Corruption in the Health Sector: Theory, Methods and Interventions. *Health Policy and Planning* 23: 83-94.
- Wang, Y. and J. You. 2012. Corruption and Firm Growth: Evidence from China. *China Economic Review* 23: 415-433.
- Wei, S. 2000. How Taxing is Corruption on International Investors? *Review of Economics and Statistics* 82(1): 1-11.
- Westbrook., A. 2011. Enthusiastic Enforcement, Informal Legislation: The Unruly Expansion of the Foreign Corrupt Practices Act. *Georgia Law Review* 45(2): 489-578.
- Wooldridge, J. 2010. *Econometric Analysis of Cross Section and Panel Data*. Second Edition. The MIT Press: Cambridge, MA.
- Xu, H., M. Dao, and A. Petkevich. 2019. Political Corruption and Auditor Behavior: Evidence from US Firms. *European Accounting Review* 28(3): 513-540.
- Zakharov, N. 2019. Does Corruption Hinder Investment? Evidence from Russian Regions. *European Journal of Political Economy* 56: 39-61.
- Zeume, S. 2017. Bribes and Firm Value. *Review of Financial Studies* 30(5): 1457-1489.

Table 1: Variable Definitions and Data Sources

Variable	Definition	Data Source
<i>FCPA</i>	The cumulative number of FCPA enforcement actions associated with a given country in the current and prior years	Stanford Law School FCPA Clearinghouse
<i>Developing</i>	An indicator variable equal to 1 if a country is classified as low-income or lower-middle-income by the World Bank, and 0 otherwise	World Bank Country and Lending Groups Data
<i>US_Shifting</i>	The natural logarithm of the estimated amount of income shifted by U.S. MNCs to each country per year. See Section 3.1 for further detail.	Compustat, Hand-collected Exhibit 21 data
<i>CorrCon</i>	Control over corruption, or the extent to which limits are placed on the exercise of public power for private gain as well as "capture" of the state	World Bank Worldwide Governance Indicators Data
<i>GovEff</i>	Governmental effectiveness, or the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies	World Bank Worldwide Governance Indicators Data
<i>RulLaw</i>	Rule of law, or the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence	World Bank Worldwide Governance Indicators Data
<i>RegQual</i>	Regulatory quality, or the ability of the government to formulate and implement sound policies and regulations that promote private sector development	World Bank Worldwide Governance Indicators Data
<i>PolStab</i>	Political Stability, or the likelihood of political stability and/or an absence of politically-motivated violence, including terrorism	World Bank Worldwide Governance Indicators Data
<i>FreeExp</i>	The extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media	World Bank Worldwide Governance Indicators Data
<i>ExTen</i>	Executive tenure, or the number of years that the chief executive of a country has been in office	World Bank Database on Political Institutions

<i>PolComp</i>	The executive index of political competitiveness, which classifies executive branch elections on a scale increasing in competitiveness (see Beck et al. 2000)	World Bank Database on Political Institutions
<i>GovTran</i>	Governmental transparency, or the extent to which the executive can be held accountable by the electorate and by the legislature and judiciary, and the extent to which public employees within the executive are required to account for administrative decisions, use of resources, and results obtained	World Bank Country Policy and Institutional Assessment Data
<i>LicTime</i>	The average number of days required to obtain a business operating license	World Bank Enterprise Surveys
<i>NumCos</i>	The number of listed domestic companies	World Federation of Exchanges Data
<i>GINI</i>	GINI Index of the extent to which the distribution of income in a country deviates from an equal distribution	World Bank World Development Indicators Data
<i>FemPwr</i>	The percentage of women age 15-49 who have control over decisions related to their own health care, major household purchases, and visiting family and friends	World Bank World Development Indicators Data
<i>GenEq</i>	Gender equality, or the extent to which a country has rules and institutions to ensure equality between men and women in health, justice, education, and the workforce	World Bank Country Policy and Institutional Assessment Data
<i>LWBirth</i>	The percentage of births where newborns weigh less than 2,500 grams (approximately 5.51 pounds)	World Bank World Development Indicators Data
<i>LifeExp</i>	The number of years a newborn can expect to live given current conditions	World Bank World Development Indicators Data
<i>ChildLabor</i>	The percentage of children ages 7-14 regularly engaged in economic activity	World Bank World Development Indicators Data
<i>CO2</i>	The kilograms of carbon dioxide emitted, scaled by the kilograms of carbon dioxide that would have been emitted by oil equivalent energy use	World Bank World Development Indicators Data
<i>GDP_Growth</i>	Annual percentage growth in GDP	World Bank World Development Indicators Data
<i>GDP_Per_Capita</i>	The natural logarithm of per capita GDP	World Bank World Development Indicators Data

<i>Population</i>	The natural logarithm of country population	World Bank World Development Indicators Data
<i>FDI</i>	The total amount of inbound foreign direct investment	World Bank World Development Indicators Data
<i>FCPA_Quantile</i>	An indicator variable equal to 1 if the firm-year is in the top quantile of FCPA exposure, calculated as the sum across all countries a firm has operations in of the product of (a) the number of entities in each jurisdiction and (b) FCPA enforcement in that jurisdiction, and 0 otherwise	Stanford Law School FCPA Clearinghouse and hand-collected Exhibit 21 data
<i>ΔPIFO</i>	The annual change in foreign pre-tax income for a U.S. MNC	Compustat
<i>ΔPIDOM</i>	The annual change in U.S. pre-tax income for a U.S. MNC	Compustat
<i>ΔSALEFO</i>	The annual change in foreign sales for a U.S. MNC	Compustat Segments
<i>ΔSALEDOM</i>	The annual change in U.S. sales for a U.S. MNC	Compustat Segments

Table 2: Descriptive Statistics

Panel A of this table reports the descriptive statistics for our variables. Panel B of this table reports Pearson univariate correlations between all of our variables. * denotes two-tailed statistical significance of Pearson correlations at the $p < 0.10$ level . Variables are defined in Table 1.

Panel A: Summary Statistics

Variable	N	Mean	Median	Std. Dev.
<i>FCPA</i>	3,026	1.240	0.000	4.429
<i>US_Shifting</i>	3,026	5.399	6.794	4.283
<i>Developing</i>	2,926	0.299	0.000	0.458
<i>GDP_Growth</i>	3,003	4.082	3.924	6.179
<i>GDP_Per_Capita</i>	3,026	8.446	8.387	1.614
<i>Population</i>	3,026	15.790	15.978	1.968
<i>FDI</i>	2,879	8.074	2.842	46.894
<i>CorrCon</i>	2,826	0.080	-0.196	1.032
<i>GovEff</i>	2,826	0.136	-0.064	0.975
<i>RulLaw</i>	2,851	0.051	-0.128	0.989
<i>RegQual</i>	2,826	0.158	0.052	0.945
<i>PolStab</i>	2,830	-0.026	0.038	0.954
<i>FreeExp</i>	2,851	0.052	0.002	0.964
<i>Exten</i>	2,746	7.300	4.000	8.383
<i>PolComp</i>	2,746	6.099	7.000	1.703
<i>GovTran</i>	480	2.806	3.000	0.547
<i>LicTime</i>	705	34.101	25.600	31.855
<i>NumCos</i>	1,813	4.728	4.828	1.648
<i>GINI</i>	1,900	40.220	39.050	9.407
<i>FemPwr</i>	468	48.645	49.200	21.823
<i>GenEq</i>	480	3.499	3.500	0.651
<i>LWBirth</i>	2,296	10.161	8.900	5.387
<i>LifeExp</i>	2,988	70.107	72.357	9.031
<i>ChildLabor</i>	978	18.015	14.300	13.947
<i>CO2</i>	2,625	2.604	2.350	6.542

Panel B: Pearson Univariate Correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1 <i>FCPA</i>	1.00																								
2 <i>US_Shifting</i>	0.16*	1.00																							
3 <i>Developing</i>	-0.01	-0.31*	1.00																						
4 <i>GDP_Growth</i>	0.03*	-0.11*	0.07*	1.00																					
5 <i>GDP_Per_Capita</i>	0.02	0.39*	-0.73*	-0.14*	1.00																				
6 <i>Population</i>	0.29*	0.41*	0.28*	0.03*	-0.35*	1.00																			
7 <i>FDI</i>	-0.03	-0.05*	-0.06*	0.00	0.12*	-0.21*	1.00																		
8 <i>CorrCon</i>	-0.16*	0.40*	-0.51*	-0.14*	0.77*	-0.28*	0.09*	1.00																	
9 <i>GovEff</i>	-0.11*	0.50*	-0.55*	-0.15*	0.80*	-0.20*	0.09*	0.94*	1.00																
10 <i>RulLaw</i>	-0.15*	0.41*	-0.53*	-0.14*	0.78*	-0.28*	0.09*	0.94*	0.94*	1.00															
11 <i>RegQual</i>	-0.12*	0.49*	-0.53*	-0.15*	0.75*	-0.23*	0.09*	0.87*	0.93*	0.91*	1.00														
12 <i>PolStab</i>	-0.21*	0.18*	-0.46*	-0.09*	0.67*	-0.48*	0.11*	0.76*	0.73*	0.79*	0.71*	1.00													
13 <i>FreeExp</i>	-0.15*	0.39*	-0.45*	-0.18*	0.62*	-0.31*	0.07*	0.78*	0.79*	0.81*	0.81*	0.69*	1.00												
14 <i>Exten</i>	-0.04*	-0.22*	0.10*	0.07*	-0.05*	-0.08*	-0.02	-0.19*	-0.22*	-0.20*	-0.25*	-0.08*	-0.44*	1.00											
15 <i>PolComp</i>	0.00	0.22*	-0.07*	-0.14*	0.08*	0.04*	0.02	0.19*	0.23*	0.21*	0.30*	0.14*	0.56*	-0.50*	1.00										
16 <i>GovTran</i>	0.12*	0.13*	-0.08*	0.11*	0.13*	-0.11*	0.06	0.70*	0.62*	0.69*	0.63*	0.42*	0.68*	-0.40*	0.31*	1.00									
17 <i>LicTime</i>	0.03	0.22*	-0.15*	0.01	0.23*	0.09*	-0.05	0.01	0.00	-0.04	-0.05	0.01	0.08*	-0.11*	0.08*	0.00	1.00								
18 <i>NumCos</i>	0.15*	0.54*	-0.06*	-0.07*	0.13*	0.64*	-0.21*	0.22*	0.27*	0.23*	0.19*	-0.07*	0.08*	-0.06*	0.05*	0.10	-0.03	1.00							
19 <i>GINI</i>	-0.03	-0.10*	0.14*	0.08*	-0.33*	-0.04	-0.10*	-0.28*	-0.32*	-0.36*	-0.28*	-0.20*	-0.17*	-0.03	0.05*	0.15*	0.11*	-0.17*	1.00						
20 <i>FemPwr</i>	-0.03	0.23*	-0.28*	-0.10*	0.50*	-0.20*	0.19*	0.10*	0.22*	0.03	0.22*	0.08*	0.19*	-0.19*	0.06	-0.05	0.10*	0.14*	-0.10*	1.00					
21 <i>GenEq</i>	-0.07	0.00	-0.31*	0.11*	0.20*	-0.23*	0.06	0.40*	0.54*	0.43*	0.51*	0.47*	0.25*	-0.29*	0.10*	0.42*	-0.05	-0.15*	-0.16*	0.44*	1.00				
22 <i>LWBirth</i>	0.02	-0.22*	0.43*	0.04*	-0.47*	0.16*	-0.07*	-0.38*	-0.41*	-0.37*	-0.36*	-0.46*	-0.29*	0.14*	-0.04*	-0.14*	-0.19*	0.02	0.19*	-0.35*	-0.57*	1.00			
23 <i>LifeExp</i>	0.00	0.42*	-0.65*	-0.15*	0.79*	-0.16*	0.08*	0.62*	0.68*	0.66*	0.64*	0.51*	0.53*	-0.17*	0.10*	0.15*	0.24*	0.24*	-0.42*	0.55*	0.50*	-0.49*	1.00		
24 <i>ChildLabor</i>	-0.12*	-0.39*	0.42*	0.07*	-0.52*	-0.01	0.00	-0.29*	-0.40*	-0.29*	-0.24*	-0.17*	-0.24*	0.08*	-0.02	0.02	-0.18*	-0.13*	0.06*	-0.39*	-0.12*	0.10*	-0.52*	1.00	
25 <i>CO2</i>	-0.01	-0.05*	0.05*	0.01	-0.02	-0.07*	0.00	0.02	-0.01	0.01	-0.03	0.03	0.01	0.02	0.00	0.20*	-0.05	0.15*	0.09*	-0.03	0.13*	0.00	-0.10*	-0.16*	1.00

Table 3: Foreign Corrupt Practices Act Effects – All Countries

This table reports the results of testing equation (1). All specifications include country and year fixed effects. *t*-statistics using heteroscedasticity-robust standard errors are reported immediately below the coefficient in parentheses, and *t*-statistics are reported underneath using Driscoll-Kraay standard errors with lags determined by an integer Bartlett kernel (Newey and West 1994; Driscoll and Kraay 1998). *, **, and *** denote two-tailed statistical significance at the $p < 0.10$, 0.05, and 0.01 levels, respectively. Variables are defined in Table 1.

Panel A: Measures of the Quality of Government in All Countries

	<i>CorrCon</i>	<i>GovEff</i>	<i>RulLaw</i>	<i>RegQual</i>	<i>PolStab</i>	<i>FreeExp</i>	<i>ExTen</i>	<i>PolComp</i>	<i>GovTran</i>	<i>LicTime</i>
<i>FCPA</i>	-0.000 (-0.24) (-0.28)	0.000 (0.50) (0.52)	-0.004 (-5.27)*** (-4.32)***	-0.003 (-2.92)*** (-3.79)***	-0.010 (-7.56)*** (-5.42)***	-0.003 (-3.84)*** (-3.53)***	-0.099 (-5.18)*** (-7.11)***	0.002 (1.30) (1.82)*	0.002 (1.35) (1.63)	0.843 (4.01)*** (4.47)***
<i>GDP_Growth</i>	0.004 (6.13)*** (6.23)***	0.003 (3.74)*** (4.41)***	0.001 (1.18) (1.26)	0.002 (1.92)* (1.41)	0.004 (4.11)*** (5.04)***	0.003 (4.04)*** (3.76)***	-0.028 (-2.27)** (-1.93)*	0.001 (1.32) (2.52)**	0.012 (5.52)*** (10.00)***	0.337 (3.73)*** (3.83)***
<i>GDP_Per_Capita</i>	0.105 (6.81)*** (5.40)***	0.208 (13.75)*** (8.67)***	0.205 (14.76)*** (18.78)***	0.254 (16.21)*** (19.29)***	0.307 (13.28)*** (11.42)***	0.046 (3.36)*** (2.79)**	2.653 (10.24)*** (6.30)***	0.010 (0.56) (0.74)	0.093 (1.38) (1.90)*	-11.987 (-3.68)*** (-3.22)***
<i>Population</i>	-0.009 (-0.17) (-0.35)	-0.303 (-5.79)*** (-4.90)***	-0.079 (-1.99)** (-4.43)***	-0.158 (-3.26)*** (-4.04)***	0.151 (2.61)*** (1.57)	-0.248 (-6.47)*** (-11.58)***	3.715 (2.61)*** (2.85)**	-0.270 (-6.28)*** (-7.70)***	-0.562 (-2.41)** (-3.80)***	47.899 (5.01)*** (5.52)***
<i>FDI</i>	0.001 (3.77)*** (3.18)***	0.001 (3.01)*** (2.79)**	0.001 (5.52)*** (4.02)***	0.000 (1.81)* (2.15)**	-0.000 (-0.45) (-0.48)	0.000 (3.25)*** (4.66)***	-0.008 (-2.93)*** (-3.42)***	-0.000 (-0.92) (-1.19)	-0.001 (-0.62) (-0.47)	0.023 (0.67) (0.69)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	2,556	2,551	2,552	2,555	2,550	2,556	2,522	2,485	445	660
Adj. R ²	0.974	0.978	0.980	0.971	0.936	0.978	0.809	0.986	0.906	0.962

Panel B: Measures of Social Welfare in All Countries

	<i>NumCos</i>	<i>GINI</i>	<i>FemPwr</i>	<i>GenEq</i>	<i>LWBirth</i>	<i>LifeExp</i>	<i>ChildLabor</i>	<i>CO2</i>
<i>FPCA</i>	0.001 (0.82) (1.13)	0.059 (1.34) (2.14)**	0.057 (1.01) (1.28)	-0.004 (-2.98)*** (-6.92)***	-0.002 (-0.28) (-0.32)	-0.010 (-2.05)** (-6.32)***	-0.076 (-2.40)** (-2.71)**	-0.003 (-1.73)* (-1.53)
<i>GDP_Growth</i>	0.000 (0.00) (0.00)	-0.077 (-3.51)*** (-2.20)**	0.204 (2.27)** (2.12)*	0.002 (1.05) (1.50)	-0.006 (-1.68)* (-1.55)	0.014 (3.97)*** (3.57)***	0.074 (1.90)* (2.49)**	0.003 (1.36) (1.64)
<i>GDP_Per_Capita</i>	0.221 (6.89)*** (6.27)***	-1.347 (-4.23)*** (-6.07)***	4.027 (2.03)** (1.79)*	0.243 (4.99)*** (10.43)***	-0.810 (-7.95)*** (-11.79)***	0.478 (6.89)*** (5.80)***	-5.853 (-6.55)*** (-5.55)***	0.211 (7.90)*** (5.80)***
<i>Population</i>	-0.000 (-0.00) (-0.00)	-5.962 (-4.42)*** (-5.49)***	-11.085 (-1.55) (-1.66)	0.509 (2.22)** (2.37)**	-1.570 (-5.23)*** (-5.20)***	3.152 (9.20)*** (10.42)***	14.585 (3.25)*** (6.03)***	0.120 (1.24) (1.41)
<i>FDI</i>	0.001 (1.92)* (1.37)	-0.003 (-1.08) (-0.92)	0.229 (3.23)*** (3.71)***	0.003 (1.81)* (2.08)*	-0.001 (-1.69)* (-2.26)**	0.002 (1.86)* (1.61)	-0.061 (-2.07)** (-2.56)**	0.000 (0.53) (0.39)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	1,655	1,199	444	454	2,096	2,673	906	2,537
Adj. R ²	0.979	0.968	0.942	0.947	0.968	0.990	0.905	0.924

Table 4: Foreign Corrupt Practices Act Effects – Developed Countries

This table reports the results of testing equation (1) on the subset of developed countries. All specifications include country and year fixed effects. t -statistics using heteroscedasticity-robust standard errors are reported immediately below the coefficient in parentheses, and t -statistics are reported underneath using Driscoll-Kraay standard errors with lags determined by an integer Bartlett kernel (Newey and West 1994; Driscoll and Kraay 1998). *, **, and *** denote two-tailed statistical significance at the $p < 0.10$, 0.05, and 0.01 levels, respectively. Variables are defined in Table 1.

Panel A: Measures of the Quality of Government in Developed Countries

	<i>CorrCon</i>	<i>GovEff</i>	<i>RulLaw</i>	<i>RegQual</i>	<i>PolStab</i>	<i>FreeExp</i>	<i>ExTen</i>	<i>PolComp</i>	<i>GovTran</i>	<i>LicTime</i>
<i>FCPA</i>	-0.002 (-1.64) (-2.10)**	0.000 (0.21) (0.19)	-0.005 (-5.30)*** (-4.71)***	-0.005 (-3.79)*** (-6.03)***	-0.007 (-4.61)*** (-4.47)***	-0.003 (-2.82)*** (-2.24)**	-0.112 (-3.88)*** (-4.10)***	-0.001 (-0.75) (-0.72)	-0.003 (-0.17) (-0.15)	1.341 (6.83)*** (8.40)***
<i>GDP_Growth</i>	0.005 (6.26)*** (6.43)***	0.003 (3.50)*** (3.65)***	0.002 (2.37)** (2.22)**	0.003 (2.52)** (2.35)**	0.003 (2.99)*** (3.37)***	0.002 (2.69)*** (2.44)**	-0.035 (-2.54)** (-1.80)*	-0.000 (-0.74) (-0.89)	0.011 (2.71)*** (2.89)**	0.374 (2.93)*** (3.96)***
<i>GDP_Per_Capita</i>	0.126 (6.70)*** (3.80)***	0.232 (12.43)*** (6.93)***	0.216 (12.85)*** (16.69)***	0.284 (14.61)*** (18.01)***	0.296 (11.35)*** (8.00)***	-0.003 (-0.24) (-0.18)	2.795 (9.56)*** (6.28)***	0.039 (2.63)*** (3.48)***	-0.070 (-0.35) (-0.54)	-13.862 (-3.34)*** (-5.87)***
<i>Population</i>	0.046 (0.73) (1.14)	-0.268 (-4.29)*** (-3.51)***	-0.133 (-2.88)*** (-6.45)***	-0.128 (-2.37)** (-3.53)***	-0.006 (-0.09) (-0.07)	-0.418 (-12.79)*** (-10.44)***	1.082 (0.61) (0.71)	-0.142 (-5.02)*** (-11.29)***	0.828 (0.69) (1.09)	32.825 (2.39)** (4.62)***
<i>FDI</i>	0.001 (3.86)*** (3.19)***	0.001 (2.91)*** (2.57)**	0.001 (5.59)*** (4.37)***	0.000 (1.79)* (1.87)*	0.000 (0.09) (0.08)	0.000 (4.11)*** (5.31)***	-0.007 (-2.51)** (-4.03)***	0.000 (1.26) (1.35)	-0.010 (-3.10)*** (-3.09)**	0.128 (0.91) (0.78)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	1,697	1,683	1,698	1,683	1,723	1,707	1,637	1,686	76	358
Adj. R ²	0.975	0.977	0.980	0.967	0.934	0.982	0.835	0.992	0.881	0.966

Panel B: Measures of Social Welfare in Developed countries

	<i>NumCos</i>	<i>GINI</i>	<i>FemPwr</i>	<i>GenEq</i>	<i>LWBirth</i>	<i>LifeExp</i>	<i>ChildLabor</i>	<i>CO2</i>
<i>FPCA</i>	0.005 (2.30)** (3.48)***	0.040 (0.76) (1.17)	-3.280 (-5.62)*** (-3.46)***	0.046 (2.83)*** (3.71)***	-0.015 (-2.58)*** (-2.67)**	0.006 (1.16) (1.75)*	-0.098 (-2.22)** (-2.33)**	-0.004 (-1.55) (-1.81)*
<i>GDP_Growth</i>	0.001 (0.57) (0.50)	-0.066 (-2.78)*** (-1.73)	-0.122 (-0.93) (-0.61)	0.002 (0.66) (0.79)	-0.002 (-0.58) (-0.48)	-0.002 (-0.61) (-0.63)	0.020 (0.37) (0.33)	0.004 (1.63) (1.77)*
<i>GDP_Per_Capita</i>	0.199 (5.41)*** (4.93)***	-1.612 (-4.61)*** (-7.20)***	7.965 (2.21)** (1.55)	0.017 (0.11) (0.16)	-0.811 (-7.27)*** (-14.28)***	0.377 (6.41)*** (4.26)***	-7.852 (-5.88)*** (-8.42)***	0.111 (4.73)*** (3.90)***
<i>Population</i>	0.075 (0.68) (0.81)	-8.043 (-5.26)*** (-6.08)***	-18.468 (-1.98)* (-2.04)*	0.374 (0.43) (0.51)	-0.504 (-1.61) (-3.83)***	-0.047 (-0.22) (-0.27)	21.392 (2.70)*** (3.99)***	-0.147 (-1.28) (-1.42)
<i>FDI</i>	0.001 (1.92)* (1.33)	-0.003 (-1.28) (-1.16)	-0.301 (-1.36) (-1.27)	0.002 (0.62) (0.84)	-0.001 (-1.74)* (-2.23)**	0.000 (0.44) (0.45)	-0.158 (-2.97)*** (-3.45)***	0.000 (0.61) (0.69)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	1,329	1,009	75	82	1,370	1,812	377	1,729
Adj. R ²	0.977	0.968	0.878	0.942	0.944	0.988	0.820	0.883

Table 5: Foreign Corrupt Practices Act Effects – Developing Countries

This table reports the results of testing equation (1) on the subset of developing countries. All specifications include country and year fixed effects. *t*-statistics using heteroscedasticity-robust standard errors are reported immediately below the coefficient in parentheses, and *t*-statistics are reported underneath using Driscoll-Kraay standard errors with lags determined by an integer Bartlett kernel (Newey and West 1994; Driscoll and Kraay 1998). *, **, and *** denote two-tailed statistical significance at the $p < 0.10$, 0.05, and 0.01 levels, respectively. Variables are defined in Table 1.

Panel A: Measures of the Quality of Government in Developing Countries

	<i>CorrCon</i>	<i>GovEff</i>	<i>RulLaw</i>	<i>RegQual</i>	<i>PolStab</i>	<i>FreeExp</i>	<i>ExTen</i>	<i>PolComp</i>	<i>GovTran</i>	<i>LicTime</i>
<i>FCPA</i>	0.006 (2.19)** (2.10)**	0.008 (3.46)*** (3.49)***	-0.004 (-1.29) (-1.40)	0.003 (1.11) (1.63)	-0.006 (-1.02) (-0.90)	-0.001 (-0.46) (-0.66)	-0.019 (-0.31) (-0.27)	0.014 (2.84)*** (3.27)***	0.004 (1.09) (1.58)	-0.376 (-1.64) (-1.82)*
<i>GDP_Growth</i>	0.004 (2.26)** (1.89)*	0.005 (2.83)*** (3.45)***	-0.001 (-0.51) (-0.44)	0.002 (1.35) (1.23)	0.006 (2.33)** (2.83)**	0.000 (0.18) (0.24)	-0.045 (-1.34) (-1.66)	0.008 (3.16)*** (3.79)***	0.014 (4.55)*** (6.23)***	0.108 (0.96) (1.18)
<i>GDP_Per_Capita</i>	0.072 (2.36)** (2.94)***	0.133 (4.69)*** (7.99)***	0.193 (7.15)*** (14.58)***	0.178 (5.96)*** (9.27)***	0.344 (6.59)*** (7.99)***	0.151 (4.99)*** (3.68)***	1.983 (3.31)*** (4.24)***	-0.100 (-1.78)* (-1.68)	0.059 (0.66) (0.98)	-1.623 (-0.42) (-0.31)
<i>Population</i>	0.110 (0.80) (0.84)	0.010 (0.08) (0.07)	0.556 (4.86)*** (4.87)***	0.197 (1.64) (4.12)***	1.064 (5.40)*** (5.04)***	0.333 (2.35)** (2.31)**	5.553 (2.30)** (2.05)*	-1.174 (-5.66)*** (-8.10)***	-0.871 (-1.89)* (-2.62)**	69.094 (3.88)*** (4.32)***
<i>FDI</i>	0.001 (0.48) (0.72)	0.001 (0.63) (1.06)	0.001 (1.50) (1.65)	0.000 (0.15) (0.14)	-0.006 (-2.22)** (-3.10)***	-0.003 (-2.63)*** (-3.24)***	-0.041 (-2.30)** (-2.07)*	-0.005 (-1.33) (-1.40)	-0.000 (-0.07) (-0.05)	-0.009 (-0.35) (-0.53)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	768	777	764	785	746	764	805	750	339	264
Adj. R ²	0.809	0.885	0.900	0.897	0.857	0.934	0.767	0.973	0.901	0.962

Panel B: Measures of Social Welfare in Developing Countries

	<i>NumCos</i>	<i>GINI</i>	<i>FemPwr</i>	<i>GenEq</i>	<i>LWBirth</i>	<i>LifeExp</i>	<i>ChildLabor</i>	<i>CO2</i>
<i>FCPA</i>	-0.013 (-2.57)** (-2.77)**	0.351 (3.77)*** (3.61)***	-0.341 (-2.49)** (-2.95)**	-0.019 (-3.76)*** (-6.86)***	0.039 (1.73)* (2.69)**	-0.102 (-6.39)*** (-9.79)***	0.002 (0.04) (0.04)	0.015 (3.11)*** (2.20)**
<i>GDP_Growth</i>	-0.007 (-1.96)* (-2.14)**	-0.095 (-1.95)* (-1.76)*	0.292 (2.26)** (1.68)	0.002 (0.61) (1.15)	-0.001 (-0.09) (-0.12)	0.021 (1.91)* (2.17)**	0.117 (2.39)** (3.67)***	-0.005 (-1.71)* (-1.89)*
<i>GDP_Per_Capita</i>	0.383 (5.12)*** (4.09)***	1.686 (2.05)** (1.69)	4.711 (2.03)** (1.70)	0.309 (4.92)*** (8.05)***	-0.538 (-2.30)** (-4.99)***	0.317 (1.62) (1.85)*	-4.573 (-3.88)*** (-2.41)**	0.358 (6.06)*** (6.19)***
<i>Population</i>	-1.645 (-3.51)*** (-4.58)***	7.092 (2.21)** (3.17)***	-23.111 (-1.96)* (-2.85)**	0.176 (0.35) (0.44)	-1.114 (-0.96) (-0.93)	8.310 (10.61)*** (5.52)***	20.092 (3.54)*** (4.42)***	0.403 (1.76)* (2.48)**
<i>FDI</i>	-0.017 (-1.78)* (-1.91)*	0.088 (2.03)** (1.89)*	0.330 (5.09)*** (5.32)***	0.002 (1.66)* (2.14)*	0.006 (1.01) (1.40)	0.016 (3.27)*** (2.23)**	-0.000 (-0.01) (-0.01)	0.002 (0.33) (0.24)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	266	158	325	343	656	761	477	708
Adj. R ²	0.985	0.965	0.945	0.945	0.969	0.983	0.908	0.939

Table 6: The Moderating Effect of Income Shifting on the Governmental and Social Effects of Anti-Corruption Enforcement in Developed Countries

This table reports the results of testing equation (2) on the subset of developed countries. All specifications include country and year fixed effects. All variables included in an interaction are demeaned to facilitate interpretation. *t*-statistics using heteroscedasticity-robust standard errors are reported immediately below the coefficient in parentheses, and *t*-statistics are reported underneath using Driscoll-Kraay standard errors with lags determined by an integer Bartlett kernel (Newey and West 1994; Driscoll and Kraay 1998). *, **, and *** denote two-tailed statistical significance at the $p < 0.10, 0.05,$ and 0.01 levels, respectively. Variables are defined in Table 1.

Panel A: Measures of the Quality of Government in Developed Countries

	<i>CorrCon</i>	<i>GovEff</i>	<i>RulLaw</i>	<i>RegQual</i>	<i>PolStab</i>	<i>FreeExp</i>	<i>ExTen</i>	<i>PolComp</i>	<i>GovTran</i>	<i>LicTime</i>
<i>US_Shifting</i>	-0.001 (-0.18) (-0.15)	0.012 (4.77)*** (4.84)***	0.005 (2.14)** (3.19)***	0.007 (2.30)** (2.54)**	-0.019 (-4.82)*** (-6.28)***	0.001 (0.24) (0.25)	-0.053 (-0.89) (-0.74)	-0.000 (-0.10) (-0.13)	-0.002 (-0.22) (-0.16)	0.586 (2.99)*** (2.71)**
<i>FCPA</i>	0.000 (0.22) (0.25)	0.003 (2.44)** (1.98)*	-0.002 (-1.84)* (-1.85)*	-0.003 (-1.86)* (-2.50)**	-0.000 (-0.10) (-0.09)	-0.002 (-1.19) (-0.91)	-0.042 (-0.72) (-0.96)	0.008 (2.65)*** (1.96)*	0.011 (0.60) (0.67)	1.569 (6.43)*** (7.26)***
<i>US_Shifting</i> × <i>FCPA</i>	-0.001 (-3.78)*** (-4.38)***	-0.001 (-2.99)*** (-3.40)***	-0.001 (-5.07)*** (-6.70)***	-0.000 (-1.71)* (-1.77)*	-0.002 (-7.24)*** (-8.46)***	-0.001 (-1.96)** (-1.71)	-0.014 (-1.19) (-2.35)**	-0.002 (-3.46)*** (-2.83)**	-0.004 (-2.91)*** (-4.56)***	-0.040 (-1.33) (-2.05)*
<i>GDP_Growth</i>	0.004 (6.51)*** (7.39)***	0.003 (3.65)*** (3.62)***	0.002 (2.38)** (2.11)**	0.002 (1.50) (1.36)	0.003 (2.80)*** (2.96)***	0.002 (2.81)*** (2.66)**	-0.036 (-2.62)*** (-1.90)*	-0.000 (-1.21) (-1.39)	0.011 (2.74)*** (2.83)**	0.382 (3.03)*** (4.26)***
<i>GDP_Per_Capita</i>	0.109 (5.68)*** (4.04)***	0.205 (10.12)*** (7.03)**	0.204 (11.92)*** (16.15)***	0.269 (13.58)*** (18.60)***	0.303 (11.59)*** (8.13)***	-0.001 (-0.09) (-0.07)	2.751 (8.99)*** (6.32)***	0.026 (1.77)* (2.10)**	-0.078 (-0.36) (-0.48)	-14.729 (-3.54)*** (-6.26)***
<i>Population</i>	-0.004 (-0.06) (-0.09)	-0.224 (-3.49)*** (-2.45)**	-0.148 (-3.26)*** (-5.21)***	-0.132 (-2.42)** (-3.94)***	-0.038 (-0.63) (-0.51)	-0.418 (-12.62)*** (-11.11)***	1.031 (0.58) (0.66)	-0.153 (-5.34)*** (-13.29)***	0.982 (0.65) (1.16)	36.041 (2.63)*** (4.63)***
<i>FDI</i>	0.001 (3.89)*** (3.47)***	0.001 (3.70)*** (2.92)***	0.001 (5.49)*** (4.27)***	0.000 (1.99)** (2.13)**	-0.000 (-0.28) (-0.24)	0.000 (4.12)*** (5.15)***	-0.007 (-2.64)*** (-3.87)***	0.000 (1.46) (1.75)*	-0.013 (-3.13)*** (-3.36)***	0.156 (1.13) (0.99)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	1,698	1,689	1,697	1,683	1,729	1,705	1,639	1,688	77	357
Adj. R ²	0.975	0.977	0.980	0.968	0.935	0.982	0.833	0.992	0.869	0.967

Panel B: Measures of Social Welfare in Developed Countries

	<i>NumCos</i>	<i>GINI</i>	<i>FemPwr</i>	<i>GenEq</i>	<i>LWBirth</i>	<i>LifeExp</i>	<i>ChildLabor</i>	<i>CO2</i>
<i>US_Shifting</i>	0.004 (0.78) (0.61)	0.060 (1.15) (1.35)	0.348 (1.52) (1.34)	0.012 (1.40) (1.00)	0.017 (1.06) (1.27)	-0.000 (-0.01) (-0.01)	-0.081 (-0.56) (-0.48)	0.005 (1.14) (1.88)*
<i>FCPA</i>	0.010 (2.49)** (2.79)**	0.066 (1.37) (2.27)**	-2.998 (-4.71)*** (-3.79)***	0.044 (2.45)** (2.50)**	-0.021 (-3.84)*** (-3.14)***	0.024 (2.50)** (3.87)***	-0.133 (-2.45)** (-2.22)**	-0.010 (-3.19)*** (-3.06)***
<i>US_Shifting</i> × <i>FCPA</i>	-0.002 (-1.28) (-1.48)	-0.010 (-1.12) (-0.94)	-0.054 (-1.69)* (-1.86)*	-0.001 (-0.56) (-0.46)	0.003 (2.97)*** (4.12)***	-0.002 (-1.32) (-1.59)	0.010 (1.14) (1.38)	0.003 (4.21)*** (3.19)***
<i>GDP_Growth</i>	0.001 (0.41) (0.37)	-0.065 (-2.74)*** (-1.69)	-0.074 (-0.58) (-0.39)	0.002 (0.75) (1.54)	-0.002 (-0.65) (-0.53)	-0.004 (-1.60) (-1.65)	0.094 (1.71)* (1.43)	0.003 (1.48) (1.16)
<i>GDP_Per_Capita</i>	0.180 (5.11)*** (4.39)***	-1.763 (-4.57)*** (-6.39)***	10.271 (2.66)** (1.91)*	0.027 (0.17) (0.25)	-0.815 (-7.31)*** (-12.31)***	0.367 (6.29)*** (4.55)***	-7.590 (-5.59)*** (-8.00)***	0.124 (4.86)*** (4.13)***
<i>Population</i>	0.052 (0.47) (0.64)	-7.988 (-5.18)*** (-5.79)***	-15.865 (-1.56) (-1.53)	0.264 (0.27) (0.30)	-0.442 (-1.38) (-3.48)***	-0.136 (-0.69) (-1.04)	20.314 (2.58)** (4.06)***	-0.109 (-0.95) (-1.04)
<i>FDI</i>	0.001 (1.59) (1.18)	-0.003 (-1.12) (-0.99)	-0.269 (-1.09) (-1.01)	0.002 (0.76) (0.95)	-0.001 (-1.53) (-2.02)*	0.000 (0.52) (0.53)	-0.173 (-3.02)*** (-3.58)***	0.000 (1.07) (1.29)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	1,327	1,010	75	82	1,370	1,809	376	1,729
Adj. R ²	0.977	0.967	0.880	0.943	0.944	0.988	0.822	0.887

Table 7: The Moderating Effect of Income Shifting on the Governmental and Social Effects of Anti-Corruption Enforcement in Developing Countries

This table reports the results of testing equation (2) on the subset of developing countries. All specifications include country and year fixed effects. All variables included in an interaction are demeaned to facilitate interpretation. *t*-statistics using heteroscedasticity-robust standard errors are reported immediately below the coefficient in parentheses, and *t*-statistics are reported underneath using Driscoll-Kraay standard errors with lags determined by an integer Bartlett kernel (Newey and West 1994; Driscoll and Kraay 1998). *, **, and *** denote two-tailed statistical significance at the $p < 0.10$, 0.05, and 0.01 levels, respectively. Variables are defined in Table 1.

Panel A: Measures of the Quality of Government in Developing Countries

	<i>CorrCon</i>	<i>GovEff</i>	<i>RulLaw</i>	<i>RegQual</i>	<i>PolStab</i>	<i>FreeExp</i>	<i>ExTen</i>	<i>PolComp</i>	<i>GovTran</i>	<i>LicTime</i>
<i>US_Shifting</i>	0.009 (2.35)** (2.43)**	0.013 (4.13)*** (4.16)***	0.007 (2.39)** (1.83)*	0.003 (0.86) (0.86)	0.003 (0.43) (0.40)	0.004 (1.10) (1.24)	0.034 (0.48) (0.33)	-0.016 (-3.27)*** (-3.13)***	-0.004 (-0.57) (-0.39)	0.137 (0.69) (1.28)
<i>FCPA</i>	0.010 (2.05)** (1.81)*	0.003 (0.70) (0.63)	-0.001 (-0.17) (-0.34)	0.015 (3.97)*** (4.48)***	-0.001 (-0.11) (-0.10)	-0.004 (-0.93) (-1.24)	-0.159 (-1.79)* (-1.89)*	0.016 (1.80)* (2.67)**	0.048 (4.44)*** (3.76)***	-0.614 (-1.95)* (-2.01)*
<i>US_Shifting</i> × <i>FCPA</i>	-0.001 (-1.04) (-1.02)	0.001 (1.58) (1.60)	-0.002 (-1.70)* (-2.07)*	-0.003 (-4.10)*** (-3.25)***	-0.001 (-0.85) (-1.22)	0.001 (0.91) (1.21)	0.042 (2.43)** (3.07)***	-0.000 (-0.18) (-0.21)	-0.007 (-4.73)*** (-3.91)***	0.103 (1.61) (1.35)
<i>GDP_Growth</i>	0.005 (2.46)** (2.17)**	0.005 (3.11)*** (4.25)***	-0.000 (-0.20) (-0.18)	0.003 (1.65)* (1.65)	0.006 (2.40)** (2.91)***	0.000 (0.18) (0.24)	-0.051 (-1.52) (-1.63)	0.007 (3.02)*** (3.26)***	0.013 (4.36)*** (6.67)***	0.100 (0.91) (1.12)
<i>GDP_Per_Capita</i>	0.063 (2.09)** (2.77)**	0.110 (3.99)*** (6.38)***	0.183 (6.87)*** (12.92)***	0.183 (6.42)*** (9.84)***	0.359 (6.82)*** (9.58)***	0.146 (4.77)*** (3.46)***	1.849 (2.96)*** (4.04)***	-0.078 (-1.43) (-1.51)	0.149 (1.71)* (3.84)***	-2.006 (-0.51) (-0.38)
<i>Population</i>	0.191 (1.37) (1.12)	0.056 (0.46) (0.35)	0.637 (5.49)*** (4.18)***	0.195 (1.61) (3.24)***	1.089 (5.15)*** (4.29)***	0.364 (2.52)** (2.32)**	5.446 (2.08)** (1.76)*	-1.311 (-6.22)*** (-6.18)***	-0.719 (-1.63) (-3.61)***	69.306 (3.85)*** (4.48)***
<i>FDI</i>	0.001 (0.44) (0.65)	0.001 (0.85) (1.41)	0.001 (1.37) (1.47)	-0.000 (-0.14) (-0.13)	-0.006 (-2.31)** (-3.32)***	-0.003 (-2.60)*** (-3.16)***	-0.038 (-2.08)** (-2.02)*	-0.005 (-1.39) (-1.44)	-0.001 (-0.62) (-0.49)	-0.001 (-0.02) (-0.03)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	768	772	762	783	745	764	803	749	340	264
Adj. R ²	0.810	0.892	0.903	0.902	0.854	0.934	0.769	0.973	0.905	0.962

Panel B: Measures of Social Welfare in Developing Countries

	<i>NumCos</i>	<i>GINI</i>	<i>FemPwr</i>	<i>GenEq</i>	<i>LWBirth</i>	<i>LifeExp</i>	<i>ChildLabor</i>	<i>CO2</i>
<i>US_Shifting</i>	0.020 (1.54) (1.27)	0.067 (0.90) (0.79)	-0.474 (-2.93) ^{***} (-1.72)	-0.002 (-0.50) (-0.64)	0.001 (0.02) (0.05)	0.030 (1.53) (1.28)	0.208 (1.06) (1.47)	0.007 (1.26) (1.17)
<i>FCPA</i>	-0.018 (-1.58) (-1.42)	0.388 (3.71) ^{***} (3.47) ^{***}	0.013 (0.05) (0.07)	-0.015 (-1.87) [*] (-2.22) [*]	0.065 (1.80) [*] (2.17) ^{**}	-0.073 (-2.82) ^{***} (-2.77) ^{**}	0.096 (0.40) (0.48)	0.018 (3.13) ^{***} (1.87) [*]
<i>US_Shifting</i> × <i>FCPA</i>	0.001 (0.30) (0.29)	-0.026 (-1.58) (-1.79) [*]	-0.076 (-2.09) ^{**} (-1.96) [*]	-0.001 (-0.55) (-0.55)	-0.007 (-1.05) (-1.25)	-0.008 (-1.66) [*] (-1.45)	-0.017 (-0.41) (-0.39)	-0.001 (-0.64) (-0.49)
<i>GDP_Growth</i>	-0.005 (-1.39) (-1.86) [*]	-0.094 (-1.87) [*] (-2.08) [*]	0.281 (2.24) ^{**} (1.62)	0.002 (0.64) (1.25)	0.001 (0.05) (0.08)	0.019 (1.76) [*] (2.05) [*]	0.118 (2.36) ^{**} (3.85) ^{***}	-0.005 (-1.68) [*] (-1.88) [*]
<i>GDP_Per_Capita</i>	0.401 (5.42) ^{***} (4.65) ^{***}	1.412 (1.63) (1.41)	4.465 (1.90) [*] (1.50)	0.307 (4.74) ^{***} (7.85) ^{***}	-0.501 (-2.15) ^{**} (-5.02) ^{***}	0.302 (1.54) (1.74) [*]	-4.902 (-4.16) ^{***} (-2.46) ^{**}	0.348 (5.82) ^{***} (5.50) ^{***}
<i>Population</i>	-1.471 (-3.16) ^{***} (-3.69) ^{***}	6.339 (1.89) [*] (2.24) ^{**}	-21.614 (-1.82) [*] (-1.99) [*]	0.179 (0.36) (0.45)	-1.202 (-1.03) (-1.03)	8.717 (11.00) ^{***} (5.49) ^{***}	21.819 (3.80) ^{***} (5.45) ^{***}	0.483 (1.96) ^{**} (3.03) ^{***}
<i>FDI</i>	-0.021 (-2.10) ^{**} (-2.07) [*]	0.093 (2.08) ^{**} (1.86) [*]	0.291 (4.35) ^{***} (3.76) ^{***}	0.002 (1.59) (2.09) [*]	0.005 (0.83) (1.23)	0.014 (2.87) ^{***} (1.78) [*]	0.031 (0.65) (0.74)	0.002 (0.35) (0.26)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	265	159	325	343	657	756	478	708
Adj. R ²	0.986	0.964	0.945	0.944	0.969	0.984	0.905	0.939

Table 8: The Effects of FCPA Anti-Corruption Enforcement on Income Shifting

This table reports the results of testing corruption enforcement as a determinant of income shifting following Dyreng and Markle (2016). All specifications include year fixed effects. z -statistics using firm-clustered standard errors are reported below the coefficient in parentheses. *, **, and *** denote two-tailed statistical significance at the $p < 0.10$, 0.05, and 0.01 levels, respectively. Variables are defined in Table 1.

	<i>FCPA Quantile = Median</i>	<i>FCPA Quantile = Quartile</i>
Outbound Transfers		
θ_0	0.128 (1.70)*	0.187 (3.98)***
θ_{FCPA}	0.311 (3.12)***	0.291 (3.16)***
Inbound Transfers		
γ_0	0.296 (1.64)	0.152 (0.67)
γ_{FCPA}	0.224 (1.09)	0.411 (1.67)*
Return on Domestic Sales		
ρ_{d0}	0.147 (3.50)***	0.189 (6.19)***
ρ_{dFCPA}	0.188 (3.28)***	0.185 (3.09)***
Return on Foreign Sales		
ρ_{f0}	0.213 (4.08)***	0.136 (3.76)***
ρ_{fFCPA}	0.020 (0.27)	0.112 (1.61)
Intercept ($\Delta PIDOM$)	0.067 (9.06)***	0.070 (9.98)***
Intercept ($\Delta PIFO$)	0.046 (12.28)***	0.049 (13.42)***
Obs.	10,421	10,421
Adj. R ² ($\Delta PIDOM$)	0.054	0.056
Adj. R ² ($\Delta PIFO$)	0.115	0.131