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Journal of Economic Behavior and Organization, 2020; 171:132-152

Expropriations, Property Confiscations and New Offshore Entities: Evidence from the Panama Papers

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February 10, 2020

Abstract

We study a motive for why individuals may hide wealth in offshore entities that has received scant attention in the academic literature and the public debate: the fear of expropriation. We use the Panama Papers and data on media reporting on expropriations and property confiscations. We document that such news reports increase the probability that offshore entities are incorporated by agents from the same country in the same month. This result is robust to the use of country-year- and month-fixed effects and the exclusion of tax havens. The effect is stronger in countries with well-functioning governments. We argue that individuals start hiding their proceeds from illegal activities in offshore entities when reasonably well-intended and well-functioning governments become more serious about law enforcement.

Keywords: Expropriations and confiscations; offshore entities; tax havens; Panama Papers.

JEL classification: H26, K42

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1 Introduction

The wealth hidden in offshore entities in tax havens has become a hotly debated topic. The recent academic work by Zucman (2013, 2015) and the leaking of the so-called Panama Papers have been instrumental in the increased attention the topic has received. The Panama Papers contain information on more than 200,000 offshore entities and are in a de-identified form in the public domain due to a leak at the Panamanian law firm and corporate service provider Mossack Fonseca & Co. From a policy perspective, it is important to understand why individuals and firms decide to hide their wealth in offshore entities. Most certainly, the firms and individuals compare the expected costs and benefits from hiding and not hiding their wealth. Many studies (reviewed below) thus focus on tax minimization as the driver behind offshore entities.

A so far little discussed motivation is the fear of expropriation. Individuals and firms facing the risk of expropriation may respond by shifting assets offshore. While such behavior occurs in many countries, the motives of the government as well as the asset-shifting individuals and firms may well depend on the governance in a country. In countries with benevolent governments and law enforcement agencies, individuals and firms that have been breaking the rules may move assets offshore when their perceived risk of expropriation increases. In contrast, in weakly institutionalized countries with Leviathan governments or thieving politicians, both law-abiding and criminal individuals and firms could reasonably be expected to react by shifting assets offshore when the fear of expropriation increases. Our study aims at understanding whether changes in the perceived risk of expropriation and property confiscation can induce individuals and firms to incorporate offshore entities.

We use information on the incorporation of offshore entities from the Panama Papers, as well as information on news reports on expropriations and property confiscations from the GDELT Project. The underlying idea is that such news reports induce private individuals and organizations to update their beliefs about the expropriation risk by the government. Hence, for some individuals it may become optimal to incorporate an offshore entity and to transfer their wealth offshore. Using a sample of 160 countries and monthly observations from 2007 to 2012, we find that the beginning of a spell of news reports on expropriations and property confiscations in a country increases the probability that an offshore entity is incorporated by an agent from the same country in the same month by around three percentage points. This result is robust to the use of country-year fixed effects, which control for all characteristics that are constant within any country and year, and the exclusion of tax havens as countries of origin.

In the next step, we split the sample using various measures of governance and institutional quality (and economic development) to investigate which type of countries are driving our main result. We find that the positive effect of the beginning of a spell of news

reports on expropriations and property confiscations on the incorporation of offshore entities remains large and statistically significant for (rich) countries with non-corrupt and effective governments. These results support the notion that rule-breaking individuals and firms may use offshore entities to protect their wealth from reasonably well-intended and well-functioning governments and law enforcement agencies. In contrast, we find no statistically significant effects in countries with poor governance. Hence, we provide no evidence for the notion that individuals and firms use offshore entities to protect their wealth from Leviathan governments.[1]

Our study is related to the extensive literature on tax evasion and, more specifically, to contributions on tax evasion through the use of tax havens (e.g., Allingham and Sandmo, 1972, Klepper and Nagin, 1989, Slemrod, 2007, Dharmapala and Hines, 2009, Gravelle, 2009, Hines, 2010, Elsayyad and Konrad, 2012, Dharmapala, 2016, Davies et al., 2018, Johannesen et al., 2018).[2] These contributions focus, among other things, on how tax evasion and offshore sheltering depends on the fiscal environment, including tax rates, enforcement and legal consequences of detection. Bennedsen and Zeume (2018) show that sometimes managers use complex nets of offshore entities to cover embezzlement of company funds. Desai et al. (2006) and Gumpert et al. (2016) identify characteristics of American and German firms that use offshore affiliates for tax purposes. We focus on a different driver of demand and investigate whether the perceived risk of expropriation and property confiscation (and changes thereof) has an impact on offshore activity.

We are not the first to make use of the Panama Papers. Alstadsæter et al. (2019) estimate the size and distribution of tax evasion in Sweden and document that the wealthiest individuals evade a much higher share of their personal taxes than the average citizen. Alstadsæter et al. (2018) take this approach to the global level and show that wealth inequality is much higher than measures computed with tax data suggest. Building on earlier work by Johannesen (2014), the studies by Caruana-Galizia and Caruana-Galizia (2016) and Omartian (2016) use the Panama Papers to study the effectiveness of the European Savings Directive and other policies aimed at fighting tax evasion. In a line of research that is complementary to the focus on tax evasion and our focus on the risk of expropriations and property confiscations, Andersen et al. (2017) and the International Consortium of Investigative Journalists (ICIJ), which made the Panama Papers publicly available, focus on the use of offshore entities by political leaders and public officials.[3]

This paper also relates to the literature on corporate strategy in the presence of appropriation risk. Caprio et al. (2013) use data on more than 30,000 publicly traded firms from 109 countries and find that firms located in countries with a higher threat of political

[1] We discuss possible reasons for this negative result in Section 5.

[2] See Dharmapala, ed (2017) for a recent overview of the literature.

[3] The ICIJ finds 246 offshore entities with a direct or indirect connection to political leaders or public officials, which corresponds to 0.1% of all the offshore entities in the Panama Papers. For more information on their investigation, see https://panamapapers.icij.org/the_power_players/.

extraction have lower holdings in liquid assets and have higher investments in fixed assets. The intuition is that cash and other liquid holdings are more susceptible to the greedy hand of corrupt politicians compared to fixed assets. Similarly, firms conduct less direct investment in countries with high expropriation risk (e.g., Azzimonti, 2018).

Findings from cross-country studies further suggest that in countries with more extractive or corrupt political institutions firms avoid the risk of expropriation by going underground (Johnson et al., 1998) or by having a more concentrated corporate ownership structure (Stulz, 2005). Our study complements this literature by focusing on off-shoring assets as another channel of avoiding the risk of expropriation.

While lawful organizations might react to the risk of being expropriated by corrupt governments, organizations involved in illegal activity (such as drug or arms trafficking) in many countries face the risk of confiscation of proceeds from crime and the freezing of assets. Bowles et al. (2000, 2005) conduct an economic analysis of forfeiture laws and conclude that they are a useful complement to other enforcement instruments. Reliable evidence for the effect of confiscation laws is not readily available. To our knowledge, we are the first to demonstrate that the perceived risk of confiscation of proceeds from crime leads to an increase in offshore activity.

The remainder of this paper is structured as follows: Section 2 provides a simple conceptual framework for thinking about a private individual's decision about whether to hide her wealth in an offshore entity. Section 3 introduces the data, and Section 4 the empirical specification. Section 5 presents our results. Section 6 briefly concludes.

2 Decision to hide wealth offshore

In this section, we present a simple decision problem of an individual who (i) needs to decide whether to hide her wealth offshore and (ii) may be expropriated by the government if she decided against hiding her wealth offshore. This simple decision problem may represent the situation of a shady individual with illegally acquired or undeclared wealth who faces a reasonably well-meaning and well-functioning government; or the situation of an individual facing a Leviathan government.

For this individual i, hiding her wealth offshore is associated with transaction costs and perhaps some opportunity costs as her wealth cannot be invested elsewhere, as well as the risk that she may not be able to repatriate her wealth later on. We simply denote her expected (net) benefit from hiding her wealth offshore by W_i^o. Similarly, we denote by W_i^n her expected benefit from not hiding her wealth if the government does not expropriate her. Finally, we denote by μ_i her belief that the government expropriates her and confiscates her assets if she does not transfer them offshore. Assuming risk neutrality,

this individual decides to hide her wealth offshore if and only if

$$W_i^o > (1-\mu_i)W_i^n \;\Leftrightarrow\; \mu_i > \frac{W_i^n - W_i^o}{W_i^n} \equiv \hat{\mu}_i, \tag{1}$$

where $\hat{\mu}_i$ is an (individual-specific) threshold.

Individual i's belief μ_i may differ from the true probability that the government expropriates her, and she may not be aware of the true probability. Thus, she may use additional information, such as a news report on expropriations and property confiscations, to update her belief about the government's type (e.g., how seriously the government enforces the rules or how aggressively it expropriates wealthy individuals). More importantly, such a news report may increase her belief μ_i that the government will expropriate her if she does not hide her wealth offshore. If μ_i was below $\hat{\mu}_i$ prior to the news report but is above it thereafter, then the news report induces the individual to hide her wealth offshore.

3 Data description

We collect data from various sources to collect a balanced monthly panel for 160 countries and the years 2007–2012. The main variables are the incorporation of offshore entities based on the Panama Papers and news reports on expropriations and property confiscations from the GDELT data.

3.1 Panama Papers and the incorporation of offshore entities

The International Consortium of Investigative Journalists (ICIJ) obtained data on around 214,000 offshore entities due to a leak at the Panamanian law firm and corporate service provider Mossack Fonseca & Co. These data became known as the so-called Panama Papers.[4] At the time of the leak, Mossack-Fonseca was a major provider of offshore financial services. Alstadsæter et al. (2018) argue that Mossack-Fonseca was one of the world's five largest purveyors of shell companies. We therefore think it is informative to analyze the Panama papers even though it is difficult to make statements about the external validity of our results.

Offshore entities are companies, trusts, or funds registered in so-called tax havens, i.e., low-tax jurisdictions. Most of the offshore entities in the Panama Papers have jurisdiction in the British Virgin Islands (53%) or in Panama (23%). Many others have jurisdiction in the Bahamas (7%), the Seychelles (7%) and Niue (5%).[5] The agents registering offshore

[4] The ICIJ provides the Panama Papers at https://offshoreleaks.icij.org/pages/database. We retrieved the data in May 2016. The ICIJ further provides the data from the so-called "Offshore Leaks." However, the latter data are only available until 2010. We nevertheless provide robustness tests where we use both these data sets on offshore entity incorporations (see Section 5.2 and Table A.6 in the Appendix).

[5] Table A.1 in the Appendix lists the jurisdictions of all offshore entities in the Panama Papers.

entities can be natural or legal persons, and they are typically located in a country or jurisdiction outside the offshore jurisdiction. The Panama Papers include offshore entities registered by agents from 160 different countries and jurisdictions.

The information provided by the Panama Papers includes detailed incorporation dates for the offshore entities.[6] Figure 1 reports the observed number of incorporations of offshore entities by year.

Figure 1 around here.

There are more incorporations in the years 1996–2012 than in earlier or later years. The highest number of incorporations are from 2005 to 2007, with around 12,000 incorporations per year. Figure 2 shows a histogram of the number of incorporations of offshore entities by the registering agents' country/jurisdiction and month.

Figure 2 around here.

The distribution is highly skewed to the right, with the mean number of incorporations per country and month being 13 and the median being 4. The maximum of 551 offshore entities was incorporated by Swiss agents in April 2005.

Given the highly right-skewed number of incorporations and the extreme outliers, we use a binary variable as our dependent variable. This variable, $Offshore_{imy}$, indicates whether there is at least one incorporation of an offshore entity in a specific country/jurisdiction i and month my (with m indicating the month of the year and y the year). In the raw data starting in 1980, the share of countries and months with at least one incorporation of an offshore entity is 19%. For the time period 2007–2012 used in our analysis, the corresponding share is 27%. In robustness tests we further present results based on the log number of incorporations (see Section 5.2 and Table A.7 in the Appendix).

Table 1 reports the countries and jurisdictions with the highest number of months in which an offshore entity was incorporated. Panel A does so for countries and jurisdictions classified as tax-havens (see below for details), and Panel B for non-tax havens. Table A.2 in the Appendix provides this information for all countries and jurisdictions.

Table 1 around here.

We see that offshore entities are most regularly registered by agents in Hong Kong, Jersey, Luxembourg and Panama. One possible concern is that agents from such tax havens may often register offshore entities for clients located elsewhere. If so, the connection between news reports on expropriations and property confiscation within a specific country and

[6] We drop 816 offshore entities because of missing incorporation dates. We also drop the 246 offshore entities with a direct or indirect connection to political leaders or public officials according to the ICIJ.

the incorporation of an offshore entity from an agent from the same country breaks down. For example, a Luxembourgian agent may register an entity in the British Virgin Islands for a German client. Although the German client's decision may have been driven by news reports in Germany, our reliance on the agent's country implies that we would link the incorporation of the corresponding offshore unit to news reports on Luxembourg. Therefore, we drop the countries classified as tax havens by Hines (2010) and Johannesen and Zucman (2010) in most of our estimates. Following the definition of Hines (2010), tax havens provide low tax rates and favorable regulatory policies to foreign investors offshore. Johannesen and Zucman (2010) exploit that G20 countries compelled offshore countries to sign bilateral treaties providing for exchange of bank information. Table A.3 in the Appendix lists the 53 countries or jurisdictions of our sample that have been classified as tax havens by at least one of these studies.

3.2 GDELT data and property confiscations

Our data on expropriations and property confiscations are sourced from the GDELT 1.0 Database. The GDELT Project collects daily news-event information from "the world's broadcast, print, and web news from nearly every corner of every country in over 100 languages" (Leetaru and Schrodt, 2013). News reports from other languages are translated into English through a collaboration with Google Ideas.[7] Each news report is fed into a parsing algorithm that automatically extracts information about the time and location of the event, as well as classifies it into categories and defines the actors involved.

The GDELT Project uses 20 main event classifications based on the Conflict and Mediation Event Observations (CAMEO) Event and Actor Codebook. For the construction of our main explanatory variable, $Confiscation_{imy}$, we use all events from the CAMEO category "1711: Confiscate property." These events are characterized by the verbs "[u]se force to take control of somebody else's property, confiscate, expropriate." For simplicity, we will often refer to these events as property confiscations, but one should keep in mind that they include expropriations. For each event, GDELT defines a source and a target actor. We exclude all events without information on the actors as well as events for which source and target actors are from different countries.[8] Some examples of the summaries of the media reports related to the property confiscation events are as follows:

[7] There is some uncertainty about the extent to which the translations can account for language-specific semantics. The use of country-year-fixed effects should mitigate concerns arising from this uncertainty.

[8] We retrieved the GDELT data in September 2016, when it included observations until the end of 2013. For most observations in 2013, GDELT did not contain any information on the event actors. Therefore, we omit the last available year from our analysis.

GDELT Event 329911441 (United Kingdom): *"Who says crime doesn't pay? The luxury yachts, cars and homes worth more than £22m were seized from some of Britain's biggest drug dealers, fraudsters and tax dodgers"*

GDELT Event 476269618 (Thailand): *"Thai civil court has confiscated $1.4 million from a former high ranking finance ministry employee – a rare sentencing of a local official on the charges of being 'unusually wealthy'."*

GDELT Event 570659163 (Turkey): *"The Government of Turkey ordered the seizure of the assets of 187 businessmen suspected of having links to the US-based Islamic preacher Fethullah Gulen."*

GDELT Event 606140042 (Italy): *"Police in the southern Italian city of Cosenza seized more than 4.5 million euros of assets from two suspected tax dodgers Wednesday, on the orders of local prosecutors."*

A major advantage of the GDELT data is the high temporal resolution, which allows construction of monthly aggregates. The use of monthly rather than annual aggregates has at least two advantages. First, from a theoretical perspective, news reports on property confiscations may lead to immediate changes in beliefs and therefore, potentially to prompt decisions to incorporate an offshore entity. Such prompt effects are easier to capture using monthly rather than annual data. Second, from a methodological perspective, the use of monthly aggregates allows exploitation of within-year and country variation in property confiscations and the corresponding news reports.

One caveat of the GDELT data is that they are sourced from online news reports and rely on automatic coding. This has two important implications: First, a property confiscation event can reflect a change in laws or policy, the successful enforcement of existing laws or polices, or unlawful expropriations. Second, data coverage and quality can vary over time. There are 3,306 reported property confiscations since 2000 in the GDELT data. Figure 3 shows the annual number of reported property confiscations for the years 2000–2012.

Figure 3 around here.

There are only around 100 reported property confiscations per year before 2007. Then there is a strong and steady increase from 2007 onward. The number of reported property confiscations peaks in 2012 with 661 confiscations. A main reason for the low incidence of reported property confiscation before 2007 is that GDELT was less able to detect news reports on property confiscations in these early years than in later years, when improved algorithms were employed. Therefore, we focus on the years from 2007 to 2012 in our

subsequent analysis.[9] In addition, we will use various fixed effects to account for country- and time-specific shocks in data coverage and quality.

Figure 4 documents the histogram of reported property confiscations by country.

Figure 4 around here.

The distribution is again skewed to the right. There are no reports on property confiscations for 27% of all the countries. The average number of reported property confiscations is 17, and the median is 4. The countries with the most reported property confiscations are Australia (135) and the United States (694).

Many of the reported property confiscations happen in the same country and month, or in consecutive months within the same country. Figure 5 provides information on the number of reported property confiscations by country and month.

Figure 5 around here.

Of all the country-months with a positive number of reported property confiscations, 39% have more than one reported property confiscation. The maximum is 27 reported property confiscations in a single month in the United States. Figure 6 documents the duration of property confiscation spells, which we define as time periods of consecutive months with a positive number of reported property confiscations within a country.

Figure 6 around here.

27% of the reported property confiscations appear in consecutive months. For the United States, we observe the longest property confiscation spell, with a duration of 65 months. Overall, we observe 782 independent property confiscation spells, which corresponds to 63% of the total number of reported property confiscations.

Our preferred explanatory variable, $Confiscation_{imy}$, is a binary variable that indicates the beginning of a property confiscation spell and is set to missing in months that are part of an ongoing property confiscation spell, which started in an earlier month. Panel C in Table 1 lists the countries with most reported property confiscation spells, and Table A.2 in the Appendix provides the number of reported property confiscation spells for all countries and jurisdictions. We later present robustness tests using alternative ways of dealing with confiscation spells: the same binary variable, but without setting it to missing during ongoing property confiscation spells; the duration of ongoing property confiscation spells; the total number of independent new reports on property confiscations.

[9] We provide robustness tests using all years from 2000 to 2012 (see Section 5.2 and Table A.5 in the Appendix).

3.3 Other data sources

To investigate effect heterogeneity, we use GDP per capita (in current USD) from the World Development Indicators, as well as various measures of perceived corruption, government effectiveness and the rule of law. For each of these three dimensions of governance and institutional quality, we use an individual measure from the Worldwide Governance Indicators (WGIs) by Kaufmann et al. (2011) as well as a commonly used alternative.[10] We measure corruption using the WGI Control of Corruption and the Corruption Perceptions Index by Transparency International (TI). To measure government effectiveness, we use the WGI Government Effectiveness and the Quality of Government indicator by the International Country Risk Guide (ICRG), which may arguably capture a slightly broader notion of government effectiveness. We also use the Rule of Law indicators by the WGIs and Freedom House.

3.4 Descriptive statistics

Table 2 reports descriptive statistics for the two main variables for the time period 2007–2012.[11]

Table 2 around here.

Panel A includes all 160 countries. In an average country and month, the probability that a property confiscation spell starts is 7%, and the probability that at least one offshore entity is incorporated is 27%. Panel B excludes all countries that were classified as tax havens by Hines (2010) or Johannesen and Zucman (2010). We see that observing the beginning of property confiscation spells is more common, but incorporations of offshore entities are considerably less common in the sample of non-tax haven countries.

4 Empirical specification

Our first objective is to estimate the effect of the beginning of a property confiscation spell on the probability that an offshore entity is incorporated in the same country in the same month. We are concerned about reverse causality and omitted variables that confound the relationship between the two. To account for these concerns, we estimate the following linear probability model:

$$Offshore_{imy} = \alpha_{iy} + \beta\, Confiscation_{imy} + \varepsilon_{imy}. \tag{2}$$

[10] The WGIs are based on many variables provided by different organizations that all measure perceptions about some aspect of governance or institutional quality. The individual WGIs are then constructed using an unobserved component model.

[11] Table A.4 in the Appendix reports descriptive statistics for the longer sample from 2000 to 2012.

Subscripts i, m, and y indicate the country, the month and the calendar year, respectively. The parameter of main interest is β. We exploit within-country and -year variation to identify this parameter. The country-year dummies α_{iy} control, in the most flexible way, for all confounders that are constant within a calendar year and country. This includes all country-level variables that are available on a yearly granularity, such as measures of GDP, population, institutional quality, governance, tax revenues, etc. In other specifications, we further include month dummies γ_m to control for seasonal effects and the lagged dependent variable to account for unobserved within-year and -country variation. The error term ε_{imy} absorbs unexplained variations in offshore entity incorporations. We cluster the standard errors of the estimated coefficients at the country level.

The specification above looks to identify a contemporaneous effect. In other words, our conjecture is that news reports on confiscations and expropriations lead to the incorporation of offshore companies within the same month. The rationale for this is the ease and speed with which offshore companies can be incorporated. Many agents provide their services publicly on the Internet. The process of advising an agent to set up an offshore company takes about ten minutes. Within a couple of days, the agent prepares the documents and registers the incorporation.

While the fixed effects and lagged-dependent variables control for unobserved heterogeneity, reverse causality could still be a concern. One could think of a scenario where an individual or an organization incorporates an offshore entity, which then leads to a government expropriating assets at home to either remedy the tax avoidance and evasion committed by this act. In the case of a "bad" government the motivation would be to expropriate assets not moved yet. Our specification exploits the different time frames for the incorporation of an offshore entity and the expropriation of assets. For reverse causality to be responsible for our results, confiscation or expropriation would need to be reported by media in the same month as the incorporation that caused the confiscation or expropriation.

Confiscation processes typically take a long time. First, the incorporation has to be detected and confirmed. This typically, if it happens at all, takes some time, well beyond a month, as the incorporation of an offshore entity and the person behind it, are not observed by enforcement agencies. One major attraction of registering a company offshore is secrecy. The two main target countries identified in the Panama Papers, the British Virgin Islands and Panama itself, are in the top 20 of the current Financial Secrecy Index (Tax Justice Network, 2018, Cobham et al., 2015) with strict privacy laws.[12] For a government to detect the relation of an entity and a local person or firm controlling it, in most cases a leak is required. For the period under investigation, there were no systematic

[12]Both destinations allow the use of so-called bearer shares. The physical holder of the bearer shares controls the company, without the owner's name being recorded in a shareholder register or anywhere else.

large-scale leaks (such as the leaking of the Panama Papers). Moreover, just finding out about the incorporation in the same month is not enough for potential reverse causality. The actual confiscation or expropriation process has to be at least so far evolved in the same month that it is featured in the news. Typically, a lengthy legal process is necessary before confiscation or expropriation occurs.[13] Thus, our specification practically rules out reverse causality.

Our second objective is to investigate effect heterogeneity. The key question is whether the beginning of reports on property confiscations mainly leads to the incorporation of offshore entities in countries with benevolent and effective governments or in countries with weak governance. In the former case, $\beta > 0$ is consistent with the notion that rule-breaking individuals and firms use offshore entities to protect their wealth from reasonably well-intended and well-functioning government agencies that have become more serious about enforcing the rules. In the latter case, $\beta > 0$ is consistent with the notion that individuals and firms use offshore entities to protect their wealth from Leviathan governments. We use interactions of several additional variables with property confiscation and investigate whether the effect heterogeneity is consistent with one of the two possible channels. The additional variables are various measures of governance (and economic development).

5 Empirical findings

5.1 Main results

Table 3 documents our main estimation results.

Table 3 around here.

Panel A uses all observations from the sample period 2007–2012. In column (1), we report the results of a binary ordinary least squares regression. We find a positive correlation between the beginning of a property confiscation spell and the probability of the incorporation of an offshore entity. However, this correlation is not statistically significant.

We sequentially increase the complexity of the model. In column (2), we include year and country fixed effects. In column (3), we include country-year fixed effects to estimate specification 2. This enables us to account for unobserved variables that are constant within a calendar year but may vary across calendar years within countries (such as measures for macroeconomic and political developments). The estimated coefficients are positive and statistically significant and very similar in magnitude in these specifications. This finding suggest that the beginning of a property confiscation spell increases the probability of the incorporation of an offshore entity by 3 percentage points.

[13] See, e.g., U.S. Department of State (2018), Transparency International (2015) and Bartels (2010) for descriptions of the process in the United States, the European Union and Australia, respectively.

We then add month-fixed effects in column (4) and the lagged dependent variable as a control in column (5). The estimated coefficient drops by around half a percentage point but is still statistically significant at the 5% level in the most conservative specification reported in column (5).

In Panels B, C and D of Table 3, we report the estimation results for models where we drop countries classified as tax havens by Hines (2010), Johannesen and Zucman (2010) or either of the two studies. Although the simple binary estimates in column (1) are quite strongly affected by the omission of tax havens, the estimates in all the other columns remain very similar. This pattern suggests that our identification strategy can account for a large amount of between-country and between-year unobserved heterogeneity. More importantly, these results show that the positive effect of the beginning of news reports on property confiscations on the incorporation of offshore entities is not driven by the (mostly small) tax havens.

5.2 Robustness tests

We now discuss various robustness tests based on alternative samples and alternative ways of using the Panama Papers and the GDELT data to construct our main outcome and explanatory variables.

First, we extend the sample period to 2000–2012. The results remain qualitatively similar to our main results. The effects size becomes somewhat smaller, though (see Table A.5 in the Appendix).

Second, we add the data from the "Offshore Leaks." As these data are only available until 2010, we restrict the sample period to 2000–2010. The coefficient of interest remains positive, but is no longer statistically significant in the more conservative specifications (see Table A.6 in the Appendix).

Third, we replace our binary outcome variable with the log number of incorporations of offshore entities (plus one). This measure includes the intensive margin of offshore entity incorporations. The coefficient of interest remains positive and statistically significant (see Table A.7 in the Appendix).

Fourth, we use three alternative explanatory variables: A binary variable indicating news reports on property confiscations (which differs from our main explanatory variable, as it is not set to missing during ongoing property confiscation spells); the duration of ongoing property confiscation spells; and the total number of independent new reports on property confiscations. These alternative explanatory variables all lead to qualitatively similar results, but in some cases higher p-values (see Tables A.8–A.10 in the Appendix).

Finally, we study the effects of leads and lags of our main explanatory variable. The estimated coefficients on contemporaneous property confiscations remain very similar in magnitude and statistically significant (see Table A.11). The estimated coefficients on

lagged confiscations are negative and statistically insignificant in specifications with a rich set of fixed effects. The negative coefficient may reflect a preemption effect, i.e., that news reports of property confiscations may incentivize some individuals who had already planned to hide their wealth in an offshore entity to do so more quickly. The estimated coefficients on the lead of confiscations are positive and marginally significant in some specifications. This latter finding is consistent with, e.g., policy changes that are announced but have not yet led to property confiscations, or confiscations that have already taken place but have not yet been reported in the media.[14]

We conclude that our main results are by and large robust to the use of alternative samples, alternative ways of constructing our main variables, and controlling for leads and lags of our main explanatory variable.

5.3 Effect heterogeneity

In this section, we investigate what kind of countries drive our results. We thereby exclude countries that have been classified as tax havens, and we focus on specifications that include country-year as well as month-fixed effects. We start by studying the role of GDP per capita. We add an interaction term between $Confiscation_{imy}$ and the binary variable $HighGDP_i$, which indicates whether a country's GDP per capita was above or below the median in 2006 (i.e., before our sample period). The results are reported in column (1) of Table 4.

Table 4 around here.

The coefficient estimates suggest that the increase in the probability of the incorporation of an offshore entity in response to the beginning of a property confiscation spell is almost four times larger in relatively rich countries than in relatively poor ones. This difference, however, is not statistically significant.

We next investigate the role of good governance and sound institutions. For this purpose, we use interaction terms with a binary variable ($LowCorruption_i$) that indicates whether a country's level of perceived corruption was below or above the median in 2006. We do so in Table 4 using the Worldwide Government Indicator (WGI) Control of Corruption in column (2), and the Corruption Perceptions Index by Transparency International in column (3). The coefficient estimates suggest that the beginning of a property confiscation spell increases the probability of the incorporation of an offshore entity by around three or four percentage points in countries with relatively low levels of corruption, while the effect is close to zero in relatively corrupt countries. These differences, however, are at best marginally statistically significant.

[14]The positive coefficient on the simple lead could also be consistent with a pre-treatment trend, but the inclusion of the second and third leads shows that there is no clear trend within the few months before the treatment (see Table A.11, column (6)).

Next, we use interaction terms with a binary variable ($HighGovEff_i$) that indicates whether the government was more or less effective than the median government in 2006. We base this variable on the WGI Government Effectiveness in column (4), and the ICRG's Quality of Government Indicator in column (5). The coefficient estimates suggest that the beginning of a property confiscation spell has no effect on the probability of the incorporation of an offshore entity in countries with relatively ineffective governments, but increases this probability by around five percentage points in countries with relatively effective governments. The difference in these effects is statistically significant.

We now turn to the rule of law, using interaction terms with a binary variable ($StrongRuleLaw_i$) that indicates whether the country had stronger or weaker rule of law than the median country in 2006. We base this variable on the WGI Rule of Law in column (6), and the Rule-of-Law measure by Freedom House in column (7). The coefficient estimates suggest that the effects are larger in countries with relatively sound rule of law, but that these differences are not statistically significant.

We report results from a horse race between these different country characteristics in column (8). The results show that the positive effects of property confiscation on offshore entity incorporations occur predominantly in countries with an effective government.

Finally, we redo the entire heterogeneity analysis for the intensive margin (using the log number of offshore entity incorporations as outcome variable) rather than the extensive margin in Table A.12 in the Appendix. The results are qualitatively similar. The main difference is that we find some evidence that the positive effects of property confiscation on offshore entity incorporations occur not only in countries with relatively effective governments, but also in countries where corruption is relatively rare.

The pattern emerging from Tables 4 and A.12 is consistent with the notion that rule-breaking individuals and firms use offshore entities to protect their wealth from relatively well-intended and well-functioning governments that have become more serious about enforcing the rules. In contrast, our results provide no evidence for the notion that individuals use offshore entities to protect their wealth from Leviathan governments that start expropriating firms and individuals more aggressively. This absence of evidence suggests that either this latter use of offshore entities is rare, or that our data and our approach fail to capture it. There are reasons to believe that the latter could be the case. For example, the GDELT Project might be less successful in extracting information from the relevant news sources in the (mostly developing) countries with Leviathan governments. Moreover, in some countries, the belief that the government is Leviathan and likely to extort successful individuals who are not part of its inner circle may already be close to one. This means that in response to news reports on expropriations or property confiscations, individuals would neither update their beliefs nor change their course of action. In addition, individuals from these countries may rely on agents located in tax havens rather than their own country to incorporate offshore entities.

6 Conclusions

We have argued that news reports on expropriations and property confiscations may increase the beliefs of some private individuals and firms that the government will expropriate them and confiscate their assets unless they hide them in an offshore entity. Using the Panama Papers, we have shown that the beginning of media reporting on expropriations and property confiscations in a country indeed increases the probability that offshore entities are incorporated by agents from the same country in the same month. We have documented that this effect is mainly driven by countries with relatively non-corrupt and effective governments. These findings suggest that offshore entities are used to hide wealth as honest and effective governments become more serious about enforcing the rules.

The policy debate on how to deal with tax havens has been strongly influenced by the large literature showing that individuals and firms hide wealth in offshore entities to evade (and avoid) taxes. The focus on tax evasion (and avoidance) makes sense on many grounds. Nevertheless, policy makers should not neglect that offshore entities are also used to hide wealth from non-corrupt and effective governments that become more serious about law enforcement.

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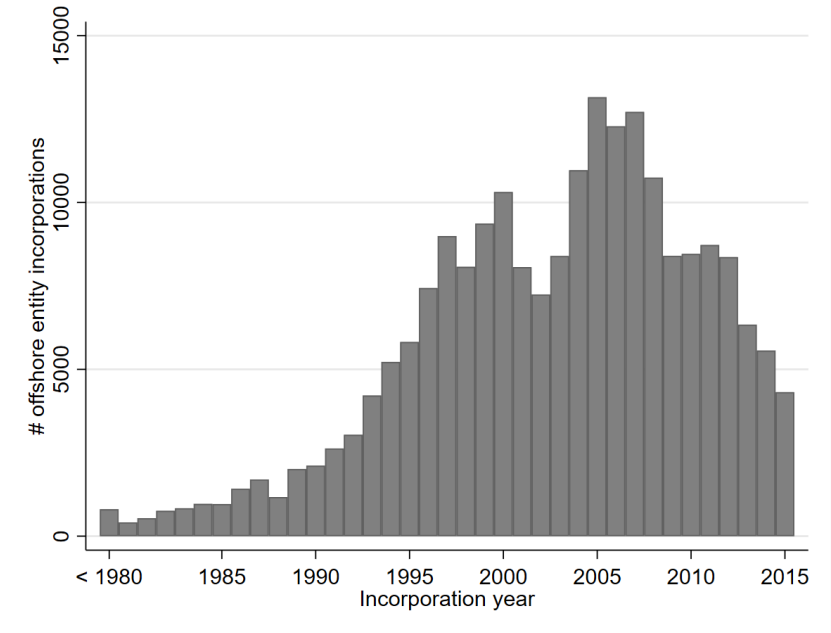
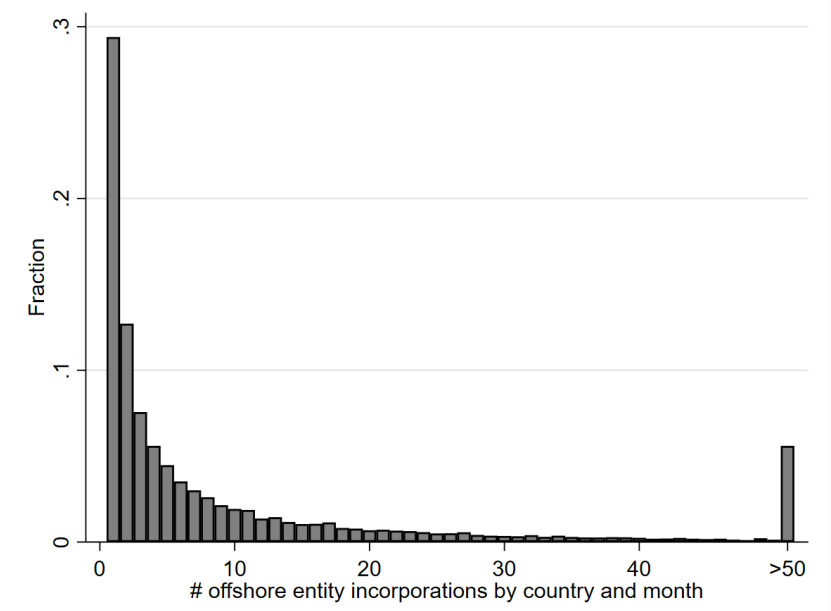
Figures and Tables

Figure 1: Number of offshore entity incorporations by year.



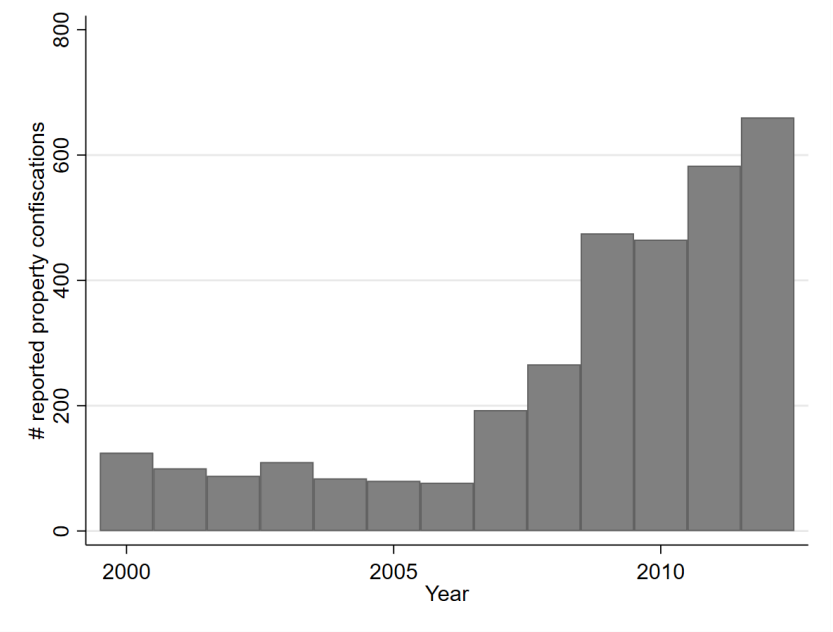
Note: Own calculations based on data from the Panama Papers.

Figure 2: Histogram of the number of offshore entity incorporations by country and month.



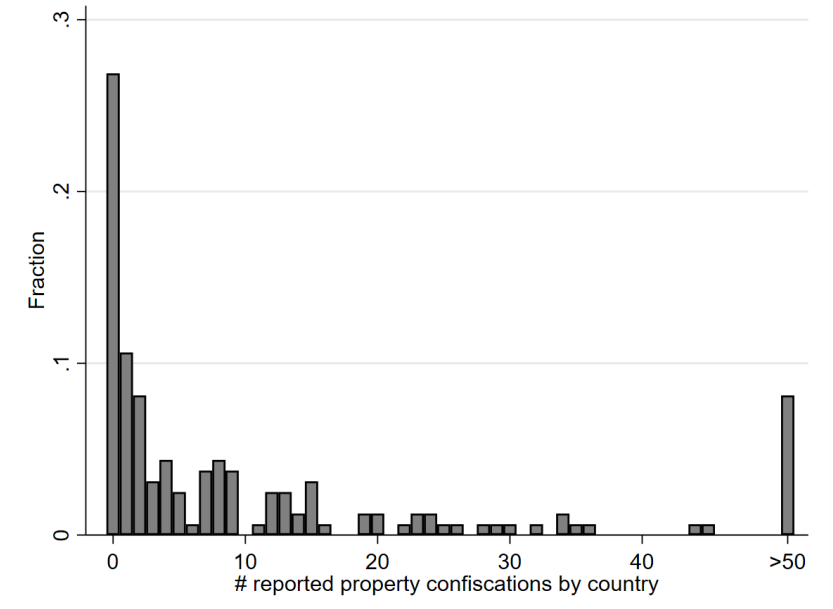
Note: Own calculations based on data from the Panama Papers. We include only countries and months with a positive number of offshore entity incorporations.

Figure 3: Number of reported property confiscations by year.



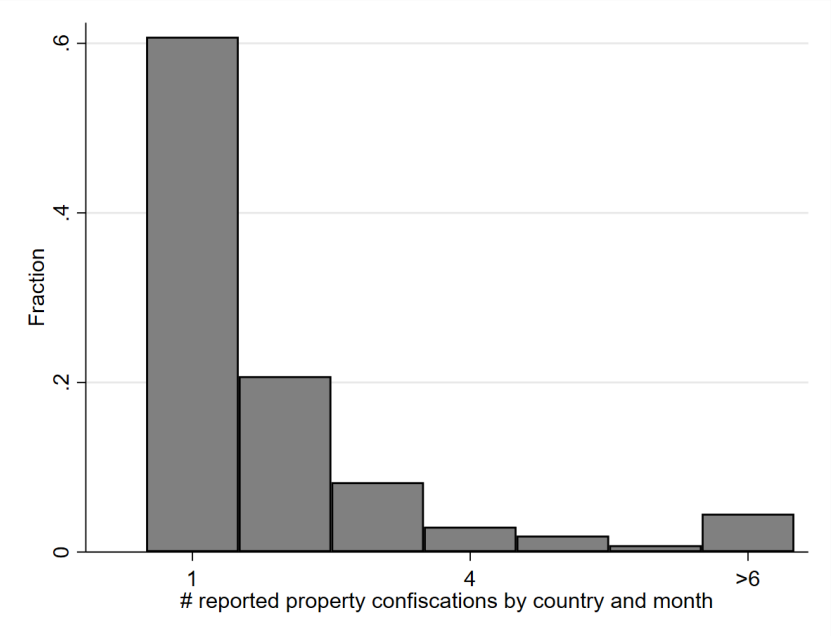
Note: Own calculations based on data from GDELT from the years 2000-2012.

Figure 4: Histogram of the number of reported property confiscations by country.



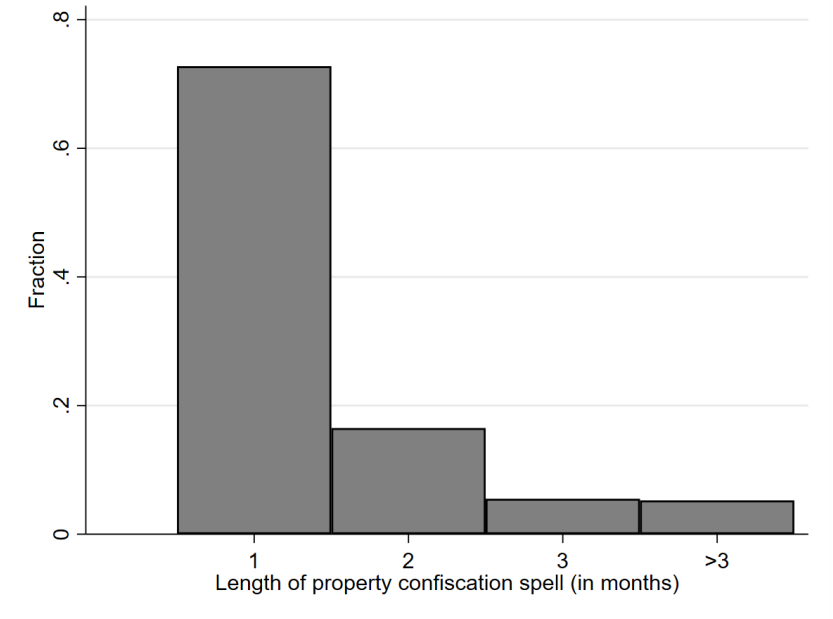
Note: Own calculations based on data from GDELT from the years 2007-2012.

Figure 5: Histogram of the number of reported property confiscations by country and month.



Note: Own calculations based on data from GDELT from the years 2007-2012. We include only countries and months with a positive number of reported property confiscations.

Figure 6: Histogram of the duration of property confiscating spells.



Note: Own calculations based on data from GDELT from the years 2007-2012.

Table 1: Countries/jurisdictions of agents' registering offshore entities.

Agents' country/ jurisdiction	Months with offshore entity incorporations	Property confiscation spells
Panel A: Tax havens with most months with offshore entity incorporations		
Hong Kong	64	0
Jersey	63	0
Luxembourg	62	1
Panama	62	2
Bahamas	61	1
Isle of Man	61	0
Singapore	61	5
Uruguay	61	0
Gibraltar	60	0
Guernsey	60	0
Panel B: Non-tax havens with most months with offshore entity incorporations		
United Arab Emirates	62	11
UAE	62	11
Ecuador	60	4
Brazil	57	5
Guatemala	57	2
Colombia	56	13
Venezuela	53	13
Estonia	51	2
Dominican Republic	50	6
Taiwan	50	7
China	46	18
Panel C: Countries with most property confiscation spells		
Iran	0	19
China	46	18
Ukraine	43	18
India	6	17
Israel	37	17
Canada	27	16
Germany	18	16
Italy	28	16
Nigeria	2	16
Russia	40	16

Note: Own calculations based on Panama Papers and GDELT data for the years 2007-2012. Panels A and B present information for the countries and jurisdictions with most months with offshore entity incorporations. Panel A only includes countries and jurisdictions classified as tax havens by Hines (2010) or Johannesen and Zucman (2014; see Table A.3 in the Appendix for details), and Panel B all other countries. Panel C presents information for the ten countries with most property confiscation spells. Table A.2 presents this information for all countries and jurisdictions in our sample.

Table 2: Descriptive statistics, 2007-2012.

Variable	Observations	Mean	Std. Dev.	Min.	Max.
Panel A: Full sample					
$Offshore_{imy}$	11,063	0.2662	0.4420	0	1
$Confiscation_{imy}$	11,063	0.0707	0.2563	0	1
Panel B: Tax havens dropped					
$Offshore_{imy}$	7,268	0.1878	0.3906	0	1
$Confiscation_{imy}$	7,268	0.0951	0.2933	0	1

Note: Time period is 2007–2012. Panel B excludes countries classified as tax havens by Hines (2010) or Johannesen and Zucman (2014; see Table A.3 in the Appendix for details). $Confiscation_{imy}$ is a binary variable indicating the beginning of a spell of months with news reports on expropriations and property confiscations in country i; and $Offshore_{imy}$ is a binary variable indicating the incorporation of at least one offshore entity by agents from country i (see Section 3 for details).

Table 3: Main results.

	(1)	(2)	(3)	(4)	(5)
Panel A: Full sample					
$Confiscation_{imy}$	0.047	0.028**	0.030**	0.023*	0.024**
	(0.036)	(0.013)	(0.013)	(0.012)	(0.012)
Observations	11,063	11,063	11,063	11,063	11,063
Panel B: Hines' tax havens dropped					
$Confiscation_{imy}$	0.109***	0.027**	0.029**	0.022*	0.024*
	(0.035)	(0.014)	(0.014)	(0.013)	(0.013)
Observations	7,910	7,910	7,910	7,910	7,910
Panel C: Johannesen and Zucman's tax havens dropped					
$Confiscation_{imy}$	0.112***	0.033**	0.034**	0.027**	0.029**
	(0.034)	(0.013)	(0.014)	(0.012)	(0.012)
Observations	7,625	7,625	7,625	7,625	7,625
Panel D: All tax havens dropped					
$Confiscation_{imy}$	0.116***	0.029**	0.030**	0.024*	0.026**
	(0.034)	(0.014)	(0.014)	(0.013)	(0.013)
Observations	7,268	7,268	7,268	7,268	7,268
Country-fixed effects	No	Yes	No	No	No
Year-fixed effects	No	Yes	No	No	No
Country-year-fixed effects	No	No	Yes	Yes	Yes
Month-fixed effects	No	No	No	Yes	Yes
Lagged dependent variable	No	No	No	No	Yes

Note: Dependent variable is $Offshore_{imy}$. Time period is 2007–2012. Panels B, C and D exclude countries classified as tax havens by Hines (2010), Johannesen and Zucman (2014) or any of the two studies, respectively (see Table A.3 in the Appendix for country lists). $Confiscation_{imy}$ is a binary variable indicating the beginning of a spell of months with news reports on expropriations and property confiscations in country i; and $Offshore_{imy}$ is a binary variable indicating the incorporation of at least one offshore entity by agents from country i (see Section 3 for details). Standard errors are clustered at the country level. ***, **, * indicate significance at the 1, 5 and 10%-level, respectively.

Table 4: Effect heterogeneity.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Confiscation_{imy}$	0.008	0.014	-0.002	-0.009	-0.007	0.011	0.022	-0.003
	(0.015)	(0.015)	(0.013)	(0.012)	(0.015)	(0.014)	(0.016)	(0.014)
$\times HighGDP_i$	0.029							0.008
	(0.026)							(0.026)
$\times LowCorruption_i$		0.020	0.046*					-0.009
		(0.026)	(0.024)					(0.034)
$\times HighGovEff_i$				0.064***	0.057**			0.095***
				(0.024)	(0.025)			(0.020)
$\times StrongRuleLaw_i$						0.025	0.004	-0.044
						(0.026)	(0.026)	(0.033)
Observations	7,053	7,052	6,908	7,052	6,549	7,052	7,052	6,981
Country-year-fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month-fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Institutional data	n.a.	WGI	TI	WGI	ICRG	WGI	FH	WGI

Note: Dependent variable is $Offshore_{imy}$. Time period is 2007–2012. Countries classified as tax havens by Hines (2010) or Johannesen and Zucman (2014) are excluded (see Table A.3 in the Appendix for country lists). $Confiscation_{imy}$ is a binary variable indicating the beginning of a spell of months with news reports on expropriations and property confiscations in country i; and $Offshore_{imy}$ is a binary variable indicating the incorporation of at least one offshore entity by agents from country i (see Section 3 for details). $HighGDP_i$ is a binary variable indicating that country i's GDP is above the median in 2006, based on GDP per capita (in current US-Dollars) from the World Development Indicators. $LowCorruption_i$ is a binary variable indicating that country i's level of corruption (control of corruption) is below (above) the median in 2006, based on the Worldwide Governance Indicator (WGI) Control of Corruption in columns (2) and (8), and the Corruption Perceptions Index by Transparency International (TI) in column (3). $HighGovEff_i$ is a binary variable indicating that country i's government effectiveness is above the median in 2006, based on the WGI Government Effectiveness in columns (4) and (8), and the Quality of Government indicator by the International Country Risk Guide (ICRG) in column (5). $StrongRuleLaw_i$ is a binary variable indicating that country i's rule of law is above the median in 2006, based on the WGI Rule of Law in columns (6) and (8), and the Rule of Law indicator by Freedom House (FH) in colum (7). Standard errors are clustered at the country level. ***, **, * indicate significance at the 1, 5 and 10%-level, respectively.

Appendix: Additional tables

Table A.1: Jurisdictions of offshore entities in the Panama Papers.

Jurisdiction	Absolute frequency	Relative frequency	Cumulated frequency
British Virgin Islands	112,915	53.12%	53.12%
Panama	48,214	22.68%	75.80%
Bahamas	15,870	7.466%	83.27%
Seychelles	15,133	7.119%	90.39%
Niue	9,567	4.501%	94.89%
Samoa	5,292	2.490%	97.38%
Anguilla	3,232	1.520%	98.90%
United States (NV & WY)	1,292	0.607%	99.49%
Hong Kong	452	0.213%	99.71%
United Kingdom	145	0.068%	99.78%
Belize	130	0.061%	99.84%
Costa Rica	78	0.037%	99.88%
Cyprus	76	0.036%	99.91%
Uruguay	52	0.024%	99.94%
New Zealand	47	0.022%	99.96%
Jersey	39	0.018%	99.98%
Malta	28	0.013%	100.00%
Isle of Man	7	0.003%	100.00%
Ras al Khaimah	2	0.001%	100.00%
Singapore	1	0.0005%	100.00%
Total	212,572	100%	

Note: Own calculations based on data from the Panama Papers.

Table A.2: Countries/jurisdictions of agents' registering offshore entities.

Agents' country/ jurisdiction	Months with offshore entity incorporations	Property confiscation spells	Agents' country/ jurisdiction	Months with offshore entity incorporations	Property confiscation spells
Albania	0	1	Ecuador	60	4
Am. Samoa	1	0	Egypt	3	10
Andorra	35	0	El Salvador	42	1
Angola	7	0	Estonia	51	2
Anguilla	14	0	Finland	9	2
Antigua & Barb.	8	2	France	20	6
Argentina	36	3	Georgia	0	0
Aruba	10	0	Germany	18	16
Australia	6	13	Ghana	1	8
Austria	2	5	Gibraltar	60	0
Azerbaijan	2	3	Greece	25	9
Bahamas	61	1	Guam	0	0
Bahrain	0	4	Guatemala	57	2
Bangladesh	2	13	Guernsey	60	0
Barbados	8	1	Haiti	1	3
Belarus	4	5	Honduras	5	5
Belgium	6	0	Hong Kong	64	0
Belize	51	0	Hungary	8	7
Bermuda	1	2	Iceland	2	3
Bolivia	32	3	India	6	17
Botswana	0	1	Indonesia	3	15
Brazil	57	5	Iran	0	19
Brunei Darus.	1	0	Ireland	16	11
Bulgaria	7	6	Isle of Man	61	0
Cameroon	2	0	Israel	37	17
Canada	27	16	Italy	28	16
Cayman Islands	17	1	Jamaica	0	5
Centr. Afr. Rep.	1	1	Japan	5	10
Chad	3	0	Jersey	63	0
Chile	25	2	Jordan	60	7
China	46	18	Kazakhstan	0	2
Colombia	56	13	Kenya	4	10
Cook Islands	0	0	Korea	2	11
Costa Rica	55	2	Kuwait	7	3
Croatia	2	1	Latvia	44	1
Cuba	1	7	Lebanon	51	9
Curaçao	6	0	Lesotho	0	0
Cyprus	59	3	Liberia	0	7
Czech Republic	10	8	Libya	0	9
Côte d'Ivoire	4	1	Liechtenst.	60	0
Denmark	2	0	Lithuania	4	4
Djibouti	1	0	Luxemb.	62	1
Dominica	24	0	Macao	6	0
Dominican Rep.	50	6	Macedonia	0	2

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Table A.2: < continued >

Agents' country/ jurisdiction	Months with offshore entity incorporations	Property confiscation spells	Agents' country/ jurisdiction	Months with offshore entity incorporations	Property confiscation spells
Malawi	0	1	Saudi Arabia	13	12
Malaysia	3	12	Senegal	0	1
Mali	0	1	Seychelles	60	1
Malta	54	2	Singapore	61	5
Marshall Is.	0	0	Sint Maarten	0	0
Mauritius	59	0	Slovakia	0	3
Mexico	14	15	Slovenia	4	0
Moldova	0	0	South Africa	12	5
Monaco	60	1	Spain	46	12
Montenegro	5	0	Sri Lanka	0	6
Morocco	13	3	Sudan	0	13
Mozambique	0	1	Sweden	2	3
Namibia	1	2	Switzerland	59	8
Nauru	1	0	Syria	0	8
Netherlands	18	6	Taiwan	50	7
New Zealand	7	9	Tanzania	0	5
Nicaragua	1	3	Thailand	46	12
Nigeria	2	16	Trin. & Tob.	1	2
Niue	0	0	Tunisia	0	10
Norway	0	5	Turkey	11	14
Oman	2	1	Turks & C. Is.	2	0
Pakistan	0	13	Uganda	0	11
Panama	62	2	Ukraine	43	9
Paraguay	19	2	Un. Arab Em.	62	11
Peru	12	3	Ukraine	43	18
Philippines	2	12	US	5	3
Poland	13	7	Uruguay	61	0
Portugal	16	2	Uzbekistan	2	5
Puerto Rico	0	0	Vanuatu	0	0
Qatar	4	1	Venezuela	53	13
Romania	1	10	Vietnam	2	5
Russian Fed.	40	16	Virgin Is., Br.	58	0
St. Kitts & N.	31	0	Virgin Is., US	1	0
St. Lucia	0	0	Yemen	0	10
St. Vinc. & G.	1	0	Zambia	0	11
Samoa	60	0	Zimbabwe	0	12

Note: Own calculations based on Panama Papers and GDELT data for the years 2007-2012.

Table A.3: List of countries/jurisdictions classified as tax havens.

Country/jurisdiction	Hines (2010)	Johannesen and Zucman (2010)
Andorra	x	x
Anguilla	x	x
Antigua and Barbuda	x	x
Aruba	x	x
Austria		x
Bahamas	x	x
Bahrain	x	x
Barbados	x	x
Belgium		x
Belize	x	x
Bermuda	x	x
Cayman Islands	x	x
Chile		x
Cook Islands	x	x
Costa Rica	x	x
Curacao		x
Cyprus	x	x
Djibouti	x	
Dominica	x	x
Gibraltar	x	x
Guernsey	x	x
Hong Kong	x	x
Ireland	x	
Isle of Man	x	x
Jersey	x	x
Jordan	x	
Lebanon	x	
Liberia	x	x
Liechtenstein	x	x
Luxembourg	x	x
Macao	x	x
Malaysia		x
Malta	x	x
Marshall Islands	x	x
Mauritius	x	
Monaco	x	x
Nauru	x	x
Niue	x	x
Panama	x	x
Saint Kitts and Nevis	x	x
Saint Lucia	x	x
Saint Vincent and the G.	x	x
Samoa	x	x
Seychelles	x	x
Singapore	x	x
Sint Maarten		x
Switzerland	x	x
Trinidad and Tobago		x
Turks and Caicos Islands	x	x
Uruguay		x
Vanuatu	x	x
Virgin Islands, British	x	x
Virgin Islands, U.S.		x

Note: This list is based on Table A.1 in Kolstad and Wiig (2015).

Table A.4: Descriptive statistics for time period 2000–2012.

Variable	Observations	Mean	Std. Dev.	Min.	Max.
Panel A: Full sample					
$Offshore_{imy}$	24,406	0.2655	0.4416	0	1
$Confiscation_{imy}$	24,406	0.0497	0.2172	0	1
Panel B: Tax havens dropped					
$Offshore_{imy}$	16,161	0.1880	0.3907	0	1
$Confiscation_{imy}$	16,161	0.0674	0.2507	0	1

Note: Time period is 2000–2012. Panel B excludes countries classified as tax havens by Hines (2010) or Johannesen and Zucman (2014; see Table A.3 in the Appendix for details). $Confiscation_{imy}$ is a binary variable indicating the beginning of a spell of months with news reports on expropriations and property confiscations in country i; and $Offshore_{imy}$ is a binary variable indicating the incorporation of at least one offshore entity by agents from country i (see Section 3 for details).

Table A.5: Results for sample period from 2000–2012.

	(1)	(2)	(3)	(4)	(5)
Panel A: Full sample					
$Confiscation_{imy}$	0.048	0.019**	0.017*	0.014	0.015*
	(0.036)	(0.009)	(0.010)	(0.009)	(0.009)
Observations	24,406	24,406	24,406	24,406	24,406
Panel B: Hines' tax havens dropped					
$Confiscation_{imy}$	0.109***	0.021**	0.018*	0.015	0.016*
	(0.034)	(0.009)	(0.010)	(0.009)	(0.009)
Observations	17,559	17,559	17,559	17,559	17,559
Panel C: Johannesen and Zucman's tax havens dropped					
$Confiscation_{imy}$	0.107***	0.023**	0.022**	0.018**	0.019**
	(0.033)	(0.009)	(0.010)	(0.009)	(0.009)
Observations	16,938	16,938	16,938	16,938	16,938
Panel D: All tax havens dropped					
$Confiscation_{imy}$	0.114***	0.022**	0.019*	0.016*	0.017*
	(0.034)	(0.009)	(0.010)	(0.009)	(0.009)
Observations	16,161	16,161	16,161	16,161	16,161
Country-fixed effects	No	Yes	No	No	No
Year-fixed effects	No	Yes	No	No	No
Country-year-fixed effects	No	No	Yes	Yes	Yes
Month-fixed effects	No	No	No	Yes	Yes
Lagged dependent variable	No	No	No	No	Yes

Note: Dependent variable is $Offshore_{imy}$. Time period is 2000–2012. Panels B, C and D exclude countries classified as tax havens by Hines (2010), Johannesen and Zucman (2014) or any of the two studies, respectively (see Table A.3 in the Appendix for country lists). $Confiscation_{imy}$ is a binary variable indicating the beginning of a spell of months with news reports on expropriations and property confiscations in country i; and $Offshore_{imy}$ is a binary variable indicating the incorporation of at least one offshore entity by agents from country i (see Section 3 for details). Standard errors are clustered at the country level. ***, **, * indicate significance at the 1, 5 and 10%-level, respectively.

Table A.6: Results including data from "Offshore Leaks" (sample period 2000-2010).

	(1)	(2)	(3)	(4)	(5)
Panel A: Full sample					
$Confiscation_{imy}$	0.052	0.015	0.013	0.013	0.013
	(0.039)	(0.013)	(0.013)	(0.012)	(0.011)
Observations	20,778	20,778	20,778	20,778	20,778
Panel B: Hines' tax havens dropped					
$Confiscation_{imy}$	0.129***	0.021	0.018	0.017	0.017
	(0.037)	(0.013)	(0.013)	(0.012)	(0.012)
Observations	14,978	14,978	14,978	14,978	14,978
Panel C: Johannesen and Zucman's tax havens dropped					
$Confiscation_{imy}$	0.126***	0.024*	0.022*	0.021*	0.022*
	(0.037)	(0.013)	(0.013)	(0.012)	(0.012)
Observations	14,451	14,451	14,451	14,451	14,451
Panel D: All tax havens dropped					
$Confiscation_{imy}$	0.134***	0.024*	0.021	0.020*	0.020*
	(0.037)	(0.013)	(0.013)	(0.012)	(0.012)
Observations	13,792	13,792	13,792	13,792	13,792
Country-fixed effects	No	Yes	No	No	No
Year-fixed effects	No	Yes	No	No	No
Country-year-fixed effects	No	No	Yes	Yes	Yes
Month-fixed effects	No	No	No	Yes	Yes
Lagged dependent variable	No	No	No	No	Yes

Note: Dependent variable is $Offshore\ (P+O)_{imy}$, which is a binary variable indicating the incorporation of at least one offshore entity in the Panama Papers or the "Offshore Leaks" by agents from country i. Time period is 2000–2010. Panels B, C and D exclude countries classified as tax havens by Hines (2010), Johannesen and Zucman (2014) or any of the two studies, respectively (see Table A.3 in the Appendix for country lists). $Confiscation_{imy}$ is a binary variable indicating the beginning of a spell of months with news reports on expropriations and property confiscations in country i (see Section 3 for details). Standard errors are clustered at the country level. ***, **, * indicate significance at the 1, 5 and 10%-level, respectively.

Table A.7: Results using the log number of offshore entity incorporations.

	(1)	(2)	(3)	(4)	(5)
Panel A: Full sample					
$Confiscation_{imy}$	0.057	0.032	0.037	0.024	0.028
	(0.105)	(0.026)	(0.026)	(0.024)	(0.024)
Observations	11,063	11,063	11,063	11,063	11,063
Panel B: Hines' tax havens dropped					
$Confiscation_{imy}$	0.229**	0.039*	0.045**	0.035*	0.038**
	(0.098)	(0.021)	(0.021)	(0.019)	(0.019)
Observations	7,910	7,910	7,910	7,910	7,910
Panel C: Johannesen and Zucman's tax havens dropped					
$Confiscation_{imy}$	0.247***	0.053**	0.058**	0.048**	0.050**
	(0.093)	(0.022)	(0.022)	(0.020)	(0.020)
Observations	7,625	7,625	7,625	7,625	7,625
Panel D: All tax havens dropped					
$Confiscation_{imy}$	0.252**	0.041*	0.047**	0.038*	0.041**
	(0.096)	(0.022)	(0.022)	(0.020)	(0.020)
Observations	7,268	7,268	7,268	7,268	7,268
Country-fixed effects	No	Yes	No	No	No
Year-fixed effects	No	Yes	No	No	No
Country-year-fixed effects	No	No	Yes	Yes	Yes
Month-fixed effects	No	No	No	Yes	Yes
Lagged dependent variable	No	No	No	No	Yes

Note: Dependent variable is $\ln(1 + \#Offshore_{imy})$, where $\#Offshore_{imy}$ is the number of incorporations of offshore entities. Time period is 2007–2012. Panels B, C and D exclude countries classified as tax havens by Hines (2010), Johannesen and Zucman (2014) or any of the two studies, respectively (see Table A.3 in the Appendix for country lists). $Confiscation_{imy}$ is a binary variable indicating the beginning of a spell of months with news reports on expropriations and property confiscations in country i (see Section 3 for details). Standard errors are clustered at the country level. ***, **, * indicate significance at the 1, 5 and 10%-level, respectively.

Table A.8: Results including subsequent months with property confiscation.

	(1)	(2)	(3)	(4)	(5)
Panel A: Full sample					
$Confiscation^{all}_{imy}$	0.074	0.015	0.017	0.012	0.013
	(0.051)	(0.011)	(0.011)	(0.010)	(0.010)
Observations	11,520	11,520	11,520	11,520	11,520
Panel B: Hines' tax havens dropped					
$Confiscation^{all}_{imy}$	0.145***	0.015	0.016	0.011	0.013
	(0.052)	(0.011)	(0.011)	(0.010)	(0.010)
Observations	8,352	8,352	8,352	8,352	8,352
Panel C: Johannesen and Zucman's tax havens dropped					
$Confiscation^{all}_{imy}$	0.141***	0.020*	0.021*	0.015	0.017*
	(0.051)	(0.011)	(0.011)	(0.010)	(0.010)
Observations	8,064	8,064	8,064	8,064	8,064
Panel D: All tax havens dropped					
$Confiscation^{all}_{imy}$	0.151***	0.017	0.018	0.013	0.014
	(0.052)	(0.011)	(0.011)	(0.010)	(0.010)
Observations	7,704	7,704	7,704	7,704	7,704
Country-fixed effects	No	Yes	No	No	No
Year-fixed effects	No	Yes	No	No	No
Country-year-fixed effects	No	No	Yes	Yes	Yes
Month-fixed effects	No	No	No	Yes	Yes
Lagged dependent variable	No	No	No	No	Yes

Note: Dependent variable is $Offshore_{imy}$. Time period is 2007–2012. Panels B, C and D exclude countries classified as tax havens by Hines (2010), Johannesen and Zucman (2014) or any of the two studies, respectively (see Table A.3 in the Appendix for country lists). $Confiscation^{all}_{imy}$ is a binary variable equal to one whenever there are news reports on expropriations and property confiscations in country i; and $Offshore_{imy}$ is a binary variable indicating the incorporation of at least one offshore entity by agents from country i (see Section 3 for details). Standard errors are clustered at the country level. ***, **, * indicate significance at the 1, 5 and 10%-level, respectively.

Table A.9: Results using the duration of property confiscation spells.

	(1)	(2)	(3)	(4)	(5)
Panel A: Full sample					
Duration Confiscation$_{imy}$	0.021**	0.010	0.008	0.007	0.007
	(0.009)	(0.006)	(0.006)	(0.005)	(0.005)
Observations	11,063	11,063	11,063	11,063	11,063
Panel B: Hines' tax havens dropped					
Duration Confiscation$_{imy}$	0.031**	0.010	0.008	0.007	0.007
	(0.013)	(0.006)	(0.006)	(0.005)	(0.005)
Observations	7,910	7,910	7,910	7,910	7,910
Panel C: Johannesen and Zucman's tax havens dropped					
Duration Confiscation$_{imy}$	0.031**	0.010	0.009	0.008	0.008
	(0.013)	(0.007)	(0.006)	(0.005)	(0.005)
Observations	7,625	7,625	7,625	7,625	7,625
Panel D: All tax havens dropped					
Duration Confiscation$_{imy}$	0.032**	0.010	0.009	0.007	0.008
	(0.014)	(0.007)	(0.006)	(0.005)	(0.005)
Observations	7,268	7,268	7,268	7,268	7,268
Country-fixed effects	No	Yes	No	No	No
Year-fixed effects	No	Yes	No	No	No
Country-year-fixed effects	No	No	Yes	Yes	Yes
Month-fixed effects	No	No	No	Yes	Yes
Lagged dependent variable	No	No	No	No	Yes

Note: Dependent variable is *Offshore*$_{imy}$. Time period is 2007–2012. Panels B, C and D exclude countries classified as tax havens by Hines (2010), Johannesen and Zucman (2014) or any of the two studies, respectively (see Table A.3 in the Appendix for country lists). *Duration Confiscation*$_{imy}$ is a variable indicating the duration (in months) of a spell with news reports on expropriations and property confiscations in country i; and *Offshore*$_{imy}$ is a binary variable indicating the incorporation of at least one offshore entity by agents from country i (see Section 3 for details). Standard errors are clustered at the country level. ***, **, * indicate significance at the 1, 5 and 10%-level, respectively.

Table A.10: Results using the number of news reports on confiscation intensity.

	(1)	(2)	(3)	(4)	(5)
Panel A: Full sample					
$\#Confiscation_{imy}$	0.029	0.012**	0.015**	0.011*	0.012**
	(0.018)	(0.006)	(0.006)	(0.006)	(0.006)
Observations	11,063	11,063	11,063	11,063	11,063
Panel B: Hines' tax havens dropped					
$\#Confiscation_{imy}$	0.053***	0.010*	0.013*	0.010	0.010
	(0.017)	(0.006)	(0.007)	(0.006)	(0.006)
Observations	7,910	7,910	7,910	7,910	7,910
Panel C: Johannesen and Zucman's tax havens dropped					
$\#Confiscation_{imy}$	0.054***	0.013**	0.015**	0.012*	0.012*
	(0.017)	(0.006)	(0.007)	(0.006)	(0.006)
Observations	7,625	7,625	7,625	7,625	7,625
Panel D: All tax havens dropped					
$\#Confiscation_{imy}$	0.055***	0.011*	0.013*	0.010	0.011*
	(0.017)	(0.006)	(0.007)	(0.006)	(0.006)
Observations	7,268	7,268	7,268	7,268	7,268
Country-fixed effects	No	Yes	No	No	No
Year-fixed effects	No	Yes	No	No	No
Country-year-fixed effects	No	No	Yes	Yes	Yes
Month-fixed effects	No	No	No	Yes	Yes
Lagged dependent variable	No	No	No	No	Yes

Note: Dependent variable is $Offshore_{imy}$. Time period is 2007–2012. Panels B, C and D exclude countries classified as tax havens by Hines (2010), Johannesen and Zucman (2014) or any of the two studies, respectively (see Table A.3 in the Appendix for country lists). $\#Confiscation_{imy}$ is a variable indicating the monthly number of independent news reports on expropriations and property confiscations in country i; and $Offshore_{imy}$ is a binary variable indicating the incorporation of at least one offshore entity by agents from country i (see Section 3 for details). Standard errors are clustered at the country level. ***, **, * indicate significance at the 1, 5 and 10%-level, respectively.

Table A.11: Results including leads and lags of property confiscation spells.

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Full sample						
$Confiscation_{imy}$	0.049	0.025*	0.029**	0.029**	0.031**	0.031**
	(0.041)	(0.013)	(0.014)	(0.013)	(0.013)	(0.014)
$Lagged\ Confiscation_{imy}$	-0.000	-0.020	-0.017	-0.005	-0.004	-0.001
	(0.031)	(0.013)	(0.013)	(0.012)	(0.012)	(0.013)
$Lead\ Confiscation_{imy}$	0.025	0.005	0.007	0.018*	0.018*	0.017
	(0.033)	(0.010)	(0.012)	(0.010)	(0.011)	(0.013)
$Lead2\ Confiscation_{imy}$						0.000
						(0.016)
$Lead3\ Confiscation_{imy}$						0.010
						(0.014)
Observations	10,903	10,903	10,903	10,903	10,903	10,583
Panel B: All tax havens dropped						
$Confiscation_{imy}$	0.134***	0.029**	0.030**	0.029**	0.031**	0.030**
	(0.040)	(0.014)	(0.015)	(0.014)	(0.014)	(0.015)
$Lagged\ Confiscation_{imy}$	0.056**	-0.026*	-0.025*	-0.015	-0.014	-0.011
	(0.028)	(0.013)	(0.014)	(0.013)	(0.013)	(0.014)
$Lead\ Confiscation_{imy}$	0.095***	0.011	0.012	0.018	0.018	0.014
	(0.032)	(0.010)	(0.012)	(0.011)	(0.011)	(0.014)
$Lead2\ Confiscation_{imy}$						-0.005
						(0.018)
$Lead3\ Confiscation_{imy}$						0.012
						(0.015)
Observations	7,161	7,161	7,161	7,161	7,161	6,947
Country-fixed effects	No	Yes	No	No	No	No
Year-fixed effects	No	Yes	No	No	No	No
Country-year-fixed effects	No	No	Yes	Yes	Yes	Yes
Month-fixed effects	No	No	No	Yes	Yes	Yes
Lagged dependent variable	No	No	No	No	Yes	Yes

Note: Dependent variable is $Offshore_{imy}$. Time period is 2007–2012. Panel B exclude countries classified as tax havens by Hines (2010) or Johannesen and Zucman (2014) (see Table A.3 in the Appendix for country lists). $Confiscation_{imy}$ is a binary variable indicating the beginning of a spell of months with news reports on expropriations and property confiscations in country i; and $Offshore_{imy}$ is a binary variable indicating the incorporation of at least one offshore entity by agents from country i (see Section 3 for details). $Lagged\ Confiscation_{imy}$ is the lag of $Confiscation_{imy}$. $Lead\ Confiscation_{imy}$, $Lead2\ Confiscation_{imy}$ and $Lead3\ Confiscation_{imy}$ are the first, second and third lead of $Confiscation_{imy}$. Standard errors are clustered at the country level. ***, **, * indicate significance at the 1, 5 and 10%-level, respectively.

Table A.12: Effect heterogeneity using the log number of offshore entity incorporations.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Confiscation_{imy}$	0.007	0.009	-0.002	-0.002	0.004	0.012	0.037	-0.007
	(0.013)	(0.013)	(0.013)	(0.013)	(0.016)	(0.013)	(0.030)	(0.016)
$\times HighGDP_i$	0.061							0.016
	(0.039)							(0.029)
$\times LowCorruption_i$		0.058	0.068**					0.035
		(0.040)	(0.034)					(0.037)
$\times HighGovEff_i$				0.077**	0.061*			0.079***
				(0.037)	(0.037)			(0.028)
$\times StrongRuleLaw_i$						0.052	0.001	-0.041
						(0.038)	(0.042)	(0.034)
Observations	7,053	7,052	6,908	7,052	6,549	7,052	7,052	6,981
Country-year-fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month-fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Institutional data	n.a.	WGI	TI	WGI	ICRG	WGI	FH	WGI

Note: Dependent variable is $\ln(1+\#Offshore_{imy})$, where $\#Offshore_{imy}$ is the number of incorporations of offshore entities. Time period is 2007–2012. Countries classified as tax havens by Hines (2010) or Johannesen and Zucman (2014) are excluded (see Table A.3 in the Appendix for country lists). $Confiscation_{imy}$ is a binary variable indicating the beginning of a spell of months with news reports on expropriations and property confiscations in country i. $HighGDP_i$ is a binary variable indicating that country i's GDP is above the median in 2006, based on GDP per capita (in current US-Dollars) from the World Development Indicators. $LowCorruption_i$ is a binary variable indicating that country i's level of corruption (control of corruption) is below (above) the median in 2006, based on the Worldwide Governance Indicator (WGI) Control of Corruption in columns (2) and (8), and the Corruption Perceptions Index by Transparency International (TI) in column (3). $HighGovEff_i$ is a binary variable indicating that country i's government effectiveness is above the median in 2006, based on the WGI Government Effectiveness in columns (4) and (8), and the Quality of Government indicator by the International Country Risk Guide (ICRG) in column (5). $StrongRuleLaw_i$ is a binary variable indicating that country i's rule of law is above the median in 2006, based on the WGI Rule of Law in columns (6) and (8), and the Rule of Law indicator by Freedom House (FH) in colum (7). Standard errors are clustered at the country level. ***, **, * indicate significance at the 1, 5 and 10%-level, respectively.