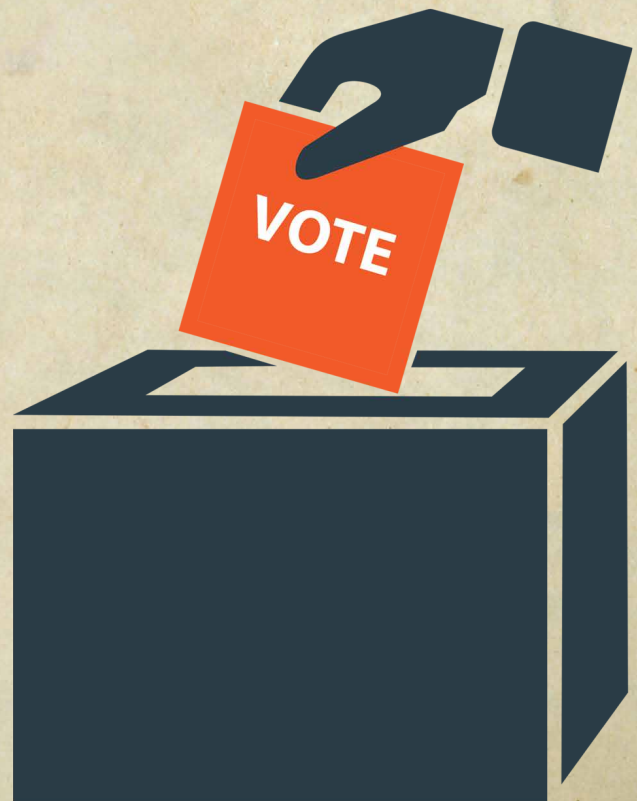


# CMI WORKING PAPER

WP 2015: 8

## Elite behaviour and citizen mobilization

Ivar Kolstad and Arne Wiig



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## Abstract

This paper studies the relation between self-serving elite behaviour and citizen political participation. We use a fixed effects approach to analyze the association between portfolio investment in tax havens and voter turnout, using data from 213 parliamentary elections in 65 countries for the period 1998-2014. For well-functioning democracies, we find a positive relation between the use of tax havens and voter turnout, suggesting that self-serving elite behaviour is associated with citizen political mobilization rather than voter apathy. The estimated relationship is stronger in the period after the 2008 economic crisis, when elite behaviour was a particularly salient issue.

**Keywords:**

Elites, citizens, portfolio investment, tax havens, voter turnout, political economy

**JEL codes:**

C23, D72, F32, H11, H26

# 1. Introduction

Prominent political economy theories are inherently conflictual in their view of how political institutions come about. In the model of Acemoglu and Robinson (2006), non-democratic institutions produce outcomes favourable to the elite, democratic institutions generate outcomes preferable to the citizens, and the power of citizens relative to the elite determines how democratic the resulting political institutions are. A fundamental assumption in these types of models is that elite concessions or full democracy come about because citizens are willing to use their political power to force the elite to introduce or accept democratic institutions. While there is substantial anecdotal evidence to support this assumption, the willingness of citizens to use their power in this way has to our knowledge not been rigorously tested. Empirical analysis of this assumption is complicated by the fact that citizen power does not actually have to be used for democratization to happen, the mere existence or threat of using that power is sufficient. An implication of the assumption is, however, that if elites start behaving more to the contrary of citizen interests, citizens will exercise their power, *ceteris paribus*. In other words, a more self-serving (or less benevolent) elite will result in greater citizen political mobilization, if the assumption holds.

In this paper, we empirically estimate the relationship between self-serving elite behaviour and citizen political mobilization. As a proxy for self-serving elite behaviour, we use a country's total portfolio investment in tax havens. This is based on the idea that an elite that acts with impunity in economic matters, in avoiding or evading taxes, is also more self-serving in other areas. To be clear, we do not presume that citizens observe tax haven investment and act in response to this, we assume that elite investment in tax havens is correlated with other self-serving behaviour of the elite which citizens can observe and act on. The advantage of this proxy is that it is a fairly objective measure of a phenomenon that is otherwise hard to capture. Using data from 213 parliamentary elections in 65 countries for the period 1998-2014, we perform a fixed effects estimation of the relation between our proxy for elite behaviour and voter turnout. We find a strong and robust positive association between tax haven investment and voter turnout in highly democratic countries. Short-term increases in self-serving elite behaviour is hence associated with increases in political mobilization among citizens in these countries, consistent with the assumption made in political economy models of democratization. We show that this is not due to economic fluctuations that could affect investment and political participation, changes in the political system, or an inverse relationship between turnout and investment. The estimated relationship between elite behaviour and political mobilization is particularly strong in the post-2008 period, in other words after the 2008 financial crisis, a time when the issue of elite behaviour was particularly salient. For less democratic countries, the data are too patchy to conclude, which makes our analysis more relevant for processes of democratic consolidation than democratic transition.

These results are of more than theoretical interest. A large literature on political accountability stresses the importance of citizen electoral participation in aligning the incentives of public officials with the interests of the population, in making public policy promote the public good. In particular, electoral accountability has been argued to be important in addressing problems of corruption and elite capture (Myerson, 1993; Ades and Tella 1999; Persson et al., 2003; Kolstad and Wiig (forthcoming)). A pre-requisite for electoral accountability to play this important role, however, is that citizens actually respond to elite misbehaviour by punishing this behaviour through the polls. On a theoretical level, elite misbehaviour could lead to voter mobilization, or to voter abstention or apathy as citizens lose confidence in the democratic system (Kostadinova, 2009), and some empirical studies suggest that the net effect of corruption on voter turnout is negative (Stockemer et al., 2013). However, the indices of corruption used in these types of studies are typically imprecise measures of elite behaviour, capturing petty corruption rather than grand corruption (Knack, 2006). Our analysis

contributes to this literature by proposing tax haven investment as a more accurate proxy for self-serving elite behaviour, and the results cast doubt on earlier findings that elite behaviour leads to voter apathy, at least in democratic countries.

Our paper also contributes to an emerging literature on tax havens. This literature has focused on the definition and characterization of tax havens (Hines and Rice, 1994; Diamond and Diamond, 2002; Dharmapala and Hines, 2009), their negative or positive economic consequences for other countries (Desai et al., 2006; Rose and Spiegel, 2007; Slemrod and Wilson, 2009; Hines, 2010; Andersen et al., 2013; Blanco and Rogers, 2014), and the effectiveness of international initiatives in reducing their negative consequences (Johannesen and Zucman, 2014). By contrast, we treat tax haven investment as a reflection of an underlying political economy feature of countries, as a measure of self-serving elite behaviour, and study the political effects of changes in this feature. To do so, we introduce a different way of capturing investment flows to tax havens compared to previous studies. For our purposes, a problem with previous classifications of tax havens is that they include countries like Switzerland, Ireland (in the case of Hines (2010)) and Austria (in the case of Johannesen and Zucman (2014)), countries whose inward investment flows include both attempts at evading taxation, but also investment made for other, more economically productive reasons. Since the latter flows are not really a good reflection of self-serving elite behaviour, basing our measure of investment in tax havens on previous definitions of havens is likely to be misleading. We therefore use portfolio investment to small states, defined as states with less than 250,000 inhabitants, as our main measure of tax haven investments. This is based on the idea that large flows to such small states is hard to understand as anything other than tax motivated. We show, however, that our results are robust to using other definitions of tax havens from previous studies.

The paper is structured as follows. Section 2 presents a conceptual framework, and Section 3 our data and empirical approach. Our main results are presented in Section 4, with a discussion of their interpretation. In Section 5, we show that our main results are robust to specification changes, and to using alternative measures of tax haven investments. Section 6 concludes.

## 2. Conceptual issues

We define self-serving elite behaviour as the elite acting in self-interest at the expense of the common good. Such activities can be classified as non-benevolent, in other words not merely a-benevolent in the sense of acting in self-interested ways which leave at least enough and as good for others. Self-serving elite behaviour can entail undue access to benefits or insufficient shouldering of burdens, examples include grand corruption, elite capture, high level rent-seeking, evasion or avoidance of taxes and more. In social dilemma situations, our definition is related to Frank's (2004) concept of irresponsible behaviour, as defection in a prisoners' dilemma game. One can also view self-serving elite behaviour as activities which violate an implicit social contract. Our measure of self-serving elite behaviour, portfolio investment in tax havens, clearly reflects one specific form of this behaviour, since transaction costs make tax haven investment mainly available to elites, and since these forms of investments permit reduction, avoidance or evasion of taxes on investment returns, in addition to possibilities of hiding or whitewashing gains from illicit activities.<sup>1</sup> However, we see this measure as

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<sup>1</sup> Portfolio investment is typically defined as investment that does not give a controlling interest in a corporation, in contrast to direct investment, which does, with the threshold set at 10 per cent of voting shares. Direct investment could be used as an alternative measure of self-serving elite behaviour, reflecting additional practices of tax avoidance through transfer pricing. However, bilateral data on direct investment available from the IMF and UNCTAD are too patchy to form the basis of an empirical analysis of the kind performed here.

reflective of broader practices of self-serving elite behaviour, based on the assumption that an elite that behaves with impunity in this area will also do so in others.

We are interested in the relationship between self-serving elite behaviour and political participation, which we specify as voter turnout in parliamentary elections. While there are other measures of participation, voter turnout represents a fairly objective measure of participation requiring some level of active political participation, at least in fairly democratic countries which constitute our main focus, as compared to more survey based measures of political or social interest and affiliation. We use data on turnout in parliamentary rather than presidential elections, since this gives us more observations, and while we can expect different levels of turnout in parliamentary elections in countries with parliamentary or presidential systems, these are long-term features of political systems which will be captured by the country fixed effects. One can of course question how reliable and meaningful voter turnout data are in non-democracies, and this is one reason why our analysis mainly focuses on democratic countries; we return to this issue towards the end of the section.

As a theory of political mobilization, the framework of Acemoglu and Robinson (2006) is essentially group based, focusing on the strategic choices of two groups, the elite and the citizens. While collective action problems in mobilization are discussed, these are largely assumed to be resolved. If powerful enough, there is not any question that the group of citizens would use this power to force the elite to credibly commit to concessions through the introduction of democracy, and knowing this the elite concedes. An elite that acts in a self-serving manner in this framework, essentially does the opposite of offering concessions, and will hence trigger citizen political mobilization. While this mobilizing effect of self-interested elite behaviour is an implication of the basic assumptions of the model, it is not obvious that this is the only effect, which becomes clear if we look at this issue using other theories of voter behaviour.

A lot of the theoretical discussion of voting behaviour and in particular voter turnout has revolved around the rational voter model, which can more precisely be termed the rational, self-interested voter model, sometimes called the instrumental voter model.<sup>2</sup> According to this perspective, individual voters consider the net benefit they will incur from having their policy or candidate elected over the alternative, weight this benefit with the probability that their vote will be decisive, and vote if the resulting expected benefit is greater than the cost of voting, abstaining otherwise (Downs, 1957). The model has been criticized for predicting too low turnout rates, as the probability that your vote will be decisive for most voters will be negligible, but that is not the focus here. We instead consider how the rational or instrumental calculus is affected by increased self-serving elite behaviour, before turning to extended theories of voting behaviour. The effect is arguably ambiguous. If citizens see increased behaviour of this kind as a sign of increased elite capture of the democratic system, they may believe that even if their vote proved pivotal, it would not be counted as pivotal in a rigged democratic system, which essentially should reduce their perceived probability of being decisive. As for the net benefits, less taxable investment and more elite rent-seeking can on the one hand make the electoral contest less interesting as there is little in terms of state resource left to fight for (we control for government expenditure in our empirical analysis, so this is not really a factor there), on the other hand citizens may see it as more crucial that the right party or policy wins to prevent further undermining of state resources in future. Depending on which effect is greater, self-serving elite behaviour will lead to greater citizen mobilization or abstention.

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<sup>2</sup> For reviews of the theoretical literature on voter behaviour, see Dhillon and Peralta (2002) and Geys (2006).



There are two ways in which the rational or instrumental voter model can be changed or extended to better accommodate data on voter turnout. One is to relax the assumption of rationality. From behavioural economics, a well-known observation is that people tend to over-estimate small probabilities (Kahneman and Tversky, 1979). Theories of boundedly rational voting behaviour has also introduced learning processes where people adapt voting behaviour according to their own or others' past successes (Sieg and Schultz, 1995; Demichelis and Dhillon, 2001). It is hard to see that relaxing rationality adds much to the above discussion of effects of self-serving behaviour. The alternative to relaxing rationality is to bring in other motives in the voter objective function in addition to the narrowly self-interested ones.

In a review of theories of expressive voter behaviour, defined as behaviour driven by the "meaning or symbolic significance of actions or choices themselves", Hamlin and Jennings (2011) distinguish between three types of motives. Identity based motives capture the idea that voting expresses a citizen's identity, or an identity they wish to project. This can include voting from a sense of civic duty (Riker and Ordeshook, 1968), or voting to have one's identity affirmed through association with other voters or with particular parties or causes (Schuessler, 2000). It seems reasonable to argue that self-serving elite behaviour will tend to increase mobilization of citizens driven by motives of this kind, as it would highlight identity considerations, and trigger a need of citizens to confirm their non-elite identity. Moral motives include altruism and other ways voters may include a consideration of the effect of the election outcome on other people, not only themselves. The relevance of these types of motives is affirmed by experiments showing that third parties punish unfair offers in dictator games and defection in prisoner's dilemma games (Fehr and Fischbacher, 2004). Viewed in terms of these types of motives, self-serving elite behaviour is likely to lead to mobilization of voters, to punish elite deviation from norms of fairness or cooperation. Finally, Hamlin and Jennings include group based motives, where within-group social pressures may intensify as elites become more self-serving, which brings us back to the framework of Acemoglu and Robinson (2006).

In sum, there are thus two opposing effects of increased self-serving elite behaviour. One is to undermine the confidence in the democratic system, leading citizens to abstain from voting. The other is that this type of elite behaviour may increase the perceived importance of voting, be it from self-interested, identity, moral or group based motives. Which of the two effects dominates will differ across individuals, depending on the relative strength of their various motives for voting. So the results in our empirical analysis will reflect a net effect on voter turnout. Moreover, as stressed by Hamlin and Jennings (2011), the institutional setting will influence the extent to which the various motives are present and activated, and by implication how elite behaviour affects citizen voting. This means that self-serving elites may have different effects in countries with different institutional characteristics. Important in this respect is the level of democracy in a country, the extent to which elections are free and fair, and political rights and civil liberties respected. In less democratic countries, the lack of credible elections may make the negative effect of self-serving elite behaviour dominate, as confidence in the democratic system in place may be undermined further, and as identity motives may be hard to sustain in a system where voting in a rigged election seems wasted and foolish, and association with elite driven parties and causes would seem undesirable. This does not mean that the implied mobilization effect of Acemoglu and Robinson (2006) is wrong in undemocratic countries, one possibility is that mobilization in these polities takes other forms than voting. In the following analysis, we distinguish between democracies and non-democracies. While our results are suggestive of a weaker and perhaps negative correlation between self-serving elite behaviour and voter turnout in non-democracies, data for such regimes are much too patchy to conclude on this matter. We therefore focus on results for democratic countries, making our analysis more relevant for questions of democratic consolidation than for democratic transition.

Previous empirical studies of voter turnout have tested the association of a number of country and individual level variables with voting. For country level analyses, Blais (2006) provides a summary of results for three central sets of variables; socioeconomic variables, institutional variables, and party systems and election outcomes. To our knowledge, analyses of elite behaviour are novel in this literature. Our empirical analysis shows that our results are robust to the addition of standard variables used to explain voter turnout in the relevant empirical literature.

### 3. Empirical approach and data

We use a fixed effects estimation method, with country and year fixed effects. This essentially entails regressing changes in turnout between elections on changes in portfolio investment to tax havens. Equation (1) captures our specification, where voter turnout in parliamentary election held in country  $i$  in year  $t$  is regressed on portfolio investment and its square in the preceding year.

$$\begin{aligned} \text{Voter turnout}_{i,t} = & \alpha_i + \beta_1 \text{Portfolio investment}_{i,t-1} + \beta_2 \text{Portfolio investment}_{i,t-1}^2 \\ & + \gamma \mathbf{X}_{i,t} + \delta_t + \varepsilon_{i,t} \end{aligned} \quad (1)$$

All time-invariant characteristics of countries, such as fundamental aspects of the political system or the economic structure of a country, and historical determinants thereof, are captured by the country fixed effects  $\alpha_i$ . In addition, we include year dummies  $\delta_t$  and a vector of time-variant covariates  $\mathbf{X}_{i,t}$ . In all specifications these include level of development (GDP per capita) and whether elections are compulsory, a number of other economic and political factors are added in robustness tests (see Table 1 for details). Economic covariates are typically lagged one year, and political ones are current. Standard errors are clustered at the country level.

The fixed effects approach entails that our results are not driven by differences between countries that remain constant over time, such as the fundamental nature of the political system. The covariates also take out a number of other possible explanations for our findings. Lagging the portfolio investment variable is done to minimize the problem of reverse causality, that portfolio investment may respond to voter turnout, but may allow us to completely get around the problem that investors may anticipate changes in turnout and invest accordingly, we therefore perform some additional estimations to rule out this interpretation. For the relatively short period for which we have data, there typically are not that many elections held in each country, which means that internal instruments using lagged values are not really feasible. Given the limitations of the data, our fixed effects approach is as close as we get to identifying a causal effect of elite behaviour, but we will exercise some caution in this respect. Our approach also means that we are looking at the association between short-term changes in tax haven investment and voter turnout, while we cannot say anything about longer-term determinants of electoral participation.

The main variables used in our empirical analysis are explained in Table 1. Voter turnout data are from the International Institute for Democracy and Electoral Assistance (IDEA). We limit our analysis to parliamentary elections and use the number of votes divided by calculated voting age population as our dependent variable. Elections with a voter turnout of more than 100 per cent have been dropped from the sample. To calculate our main independent variable, portfolio investment to tax havens, we use data from the IMF Coordinated Portfolio Investment Survey (CPIS), which provides information on the portfolio investment assets of 81 countries and territories broken down by

242 host economies. While data are available bi-annually from 2013, we use end of the year values, which leaves us with data for the years 1997, and 2001 through 2013. Since the portfolio investment variables are lagged one year in our main analysis, this means our sample consists of elections in 1998 and 2002 through 2014. From the IMF CPIS data, we calculate three variables reflecting self-serving elite behaviour. The main variable is the total portfolio investment in small states, i.e. investment in countries and territories that had less than 250.000 inhabitants as of 2013. A list of these small states is provided in the first column of Table A1 in the Appendix, it includes 55 countries and territories in total. For robustness tests, we also calculate two additional tax haven investment variables. The first is total portfolio investment to the countries classified as tax havens by Hines (2010), the second total investment to countries denoted tax havens by Johannesen and Zucman (2014). Countries and territories classified as tax havens according to these two sources are presented in the second and third column of Table A1, both include 52 states, though not the same ones.

**Table 1. Main variables**

| Variable                     | Explanation  | Source  |
|------------------------------|--|---|
| <i>Dependent variable</i>    |  |   |
| Voter turnout                | Votes divided by voting age population   | International Institute for Democracy and Electoral Assistance  |
| <i>Independent variables</i> |  |   |
| Portfolio investment (small) | Total portfolio investment in small states, i.e. states with less than 250.000 inhabitants as of 2013, in 100 billion dollars      | Calculated from IMF CPIS data   |
| Portfolio investment (Hines) | Total portfolio investment in states defined as tax havens in Hines (2010), in 100 billion dollars                                 | Calculated from IMF CPIS data   |
| Portfolio investment (J&Z)   | Total portfolio investment in states defined as tax havens in Johannesen and Zucman (2014), in 100 billion dollars                 | Calculated from IMF CPIS data   |
| GDP per capita (ln)          | GDP per capita, PPP, constant 2011 \$, logged  | World Development Indicators  |
| Compulsory voting            | Dummy variable for whether voting is mandatory   | International Institute for Democracy and Electoral Assistance  |
| Freedom House average        | Average of Freedom House political rights and civil liberties index, higher scores indicate less democracy                         | International Institute for Democracy and Electoral Assistance  |
| Polity Democracy             | Democracy score from Polity IV, higher scores indicate greater democracy   | Polity IV   |
| Portfolio investment world   | Total portfolio investment to all states, in 100 billion dollars   | Calculated from IMF CPIS data   |
| Inflation                    | Inflation, average consumer prices   | IMF data from Quality of Government Institute Standard Dataset  |
| Unemployment                 | Unemployment rate  | IMF data from Quality of Government Institute Standard Dataset  |
| Oil Exports                  | Net oil exports value, constant billion 2000 dollar  | Quality of Government Institute Standard Dataset  |
| Schooling years (15+)        | Average years of schooling, population at and above age 15   | Adapted from Quality of Government Institute Standard Dataset   |
| Schooling years (25+)        | Average years of schooling, population at and above age 25   | Adapted from Quality of Government Institute Standard Dataset   |
| Urbanization                 | Urban population as percentage of total population   | World Development Indicators  |
| Government consumption       | General government final consumption expenditure (% of GDP)  | World Development Indicators  |
| Age structure                | Population aged 15-64 (% of total population)  | World Development Indicators  |
| Population                   | Population size, millions  | World Development Indicators  |
| Closeness of election        | Absolute value of difference between seats in (lower house of) parliament of largest government party and largest opposition party | Adapted from Database of Political Institutions from Quality of Government Institute Standard Dataset |

The economies which report detailed portfolio investment data to the IMF CPIS tend to be high and middle income countries, and democratic countries, with a few exceptions. This means that our sample of elections is a selected one, and not at all representative for lower income or undemocratic countries, as can be seen in Table A2 in the Appendix which presents our main sample of 213

elections in 65 countries. For this reason, the results presented in subsequent sections focus on the sub-sample of highly democratic countries. We classify countries as democratic or undemocratic using the average of the Freedom House political rights and civil liberties indices, which in principle runs from 1 to 7, where higher values indicate less democracy. The Freedom House indices have better country coverage than alternatives such as the Polity IV democracy index, but we show in robustness tests that results are robust to alternative classifications.

All estimations include GDP per capita and compulsory voting as covariates. The former variable addresses the possibility that economic slumps could affect both voting and levels of investment abroad. Compulsory voting has been shown to affect turnout in a number of studies, and could also influence election outcomes, and hence associated tax and regulation policies which could affect investor decisions. In our data, compulsory voting is time-variant for one country, Chile. This is in contrast to other basic aspects of the political system in our sample, such as whether a country has a parliamentary or presidential system, which does not vary over time for the sample for which we find robust results, i.e. democratic states. In robustness tests, we show that our results for portfolio investment to tax havens are not affected by the general openness or globalization of countries, measured by the total portfolio investment to all countries. We also include other measures of economic instability or slumps, specifically inflation and unemployment. We control for oil income and government expenditure, both of which reflect the potential for rent seeking in a society. While the level of education of voters could affect participation in elections, it is perhaps unlikely that this changes much in the short period between elections, we nevertheless control for two measures of average schooling years, taken from the Barro-Lee dataset, and since this data is only available every five years, we use the most recent value in estimations. Other variables that could affect voting, but that are also unlikely to change considerably from one election to the next are the degree of urbanization, the age structure of the population and its size, we nevertheless add these as covariates in robustness tests. Finally, as more closely contested elections typically have higher turnout, and closeness could also potentially affect investment, we control for closeness of elections using data from the Database of Political Institutions, to which we have added outcomes from the most recent elections not covered by the latest version of the database.

Table 2 presents summary statistics for the variables. The sample includes 213 elections with mean turnout just shy of 62 per cent, but considerable variation. The average country-year in our sample saw 43 billion dollars of portfolio investment in small states, and a little over 100 billion dollars in the tax havens defined by Hines (2010) and Johannesen and Zucman (2014). While not shown in the table, there is also sufficient within-country variation in these two variables. Total portfolio investment for the average country-year was more than 500 billion dollars. The average country-year has a GDP per capita (PPP adjusted) of about 25,000 dollars, the lowest is 3,900 and the highest 95,000 dollars. Elections in the sample have occurred mostly in relatively democratic countries, the mean election took place in a country-year with a Freedom House score of less than 2, and a Polity IV Democracy score of 8.37. As reflected in these descriptive statistics and the list of elections included in the main sample presented in Table A2 in the Appendix, our sample is dominated by relatively wealthy and democratic countries, with some exceptions.

**Table 2. Summary statistics**

| <b>Variable</b>              | <b>Obs</b> | <b>Mean</b> | <b>Std. dev.</b> | <b>Min</b> | <b>Max</b> |
|------------------------------|------------|-------------|------------------|------------|------------|
| Voter turnout                | 213        | 62.85       | 17.04            | 12.17      | 98.29      |
| Portfolio investment (small) | 213        | 0.43        | 1.59             | 0.00       | 13.92      |
| Portfolio investment (Hines) | 221        | 1.03        | 2.86             | 0.00       | 24.37      |
| Portfolio investment (J&Z)   | 221        | 1.02        | 2.83             | 0.00       | 23.91      |
| GDP per capita (ln)          | 213        | 10.11       | 0.66             | 8.27       | 11.46      |
| Compulsory voting            | 213        | 0.24        | 0.43             | 0.00       | 1.00       |
| Freedom House average        | 210        | 1.94        | 1.42             | 1.00       | 6.00       |
| Polity Democracy             | 197        | 8.37        | 2.84             | 0.00       | 10.00      |
| Portfolio investment world   | 213        | 5.25        | 12.20            | 0.00       | 91.09      |
| Inflation                    | 199        | 114.51      | 36.17            | 13.28      | 246.29     |
| Unemployment                 | 193        | 7.70        | 4.32             | 0.73       | 28.00      |
| Oil Exports                  | 157        | -9.30       | 32.01            | -219.52    | 47.05      |
| Schooling years (15+)        | 202        | 9.61        | 1.95             | 4.69       | 13.09      |
| Schooling years (25+)        | 202        | 9.49        | 2.21             | 3.99       | 13.27      |
| Urbanization                 | 213        | 73.81       | 16.25            | 30.25      | 100.00     |
| Government consumption       | 206        | 17.33       | 4.42             | 8.13       | 27.55      |
| Age structure                | 210        | 67.08       | 2.95             | 58.77      | 77.49      |
| Population                   | 213        | 55.67       | 132.85           | 0.06       | 1252.14    |
| Closeness of election        | 196        | 51.59       | 66.66            | 0.00       | 305.00     |

*Note: For definitions of the variables, please see Table 1.*

## 4. Results

Our main results are presented in Table 3. The first column presents results from our fixed effects estimation for all parliamentary elections where we also have data on portfolio investment for the year prior to the election, a total of 213 elections in 65 countries. The results suggest that increases in portfolio investment to small states, our main proxy for self-serving elite behaviour, is associated with an increase in election turnout, but at a decreasing rate as changes in portfolio investment grow larger. Included in our full sample is Bermuda, which is also included in our small state proxy for investment in tax havens, but leaving out Bermuda changes results only marginally. As later results will show, however, these results for the full sample of elections is not sufficiently robust.

What proves to be robust, however, are the results in column two of Table 3, where we present estimates based on elections only in countries that were perfectly democratic at the time of the election, i.e. that had a Freedom House average score of 1. This sample includes a total of 113 elections in 36 countries, and as can be seen in Table A2 in the appendix, this entails leaving out countries that have never had a Freedom House score of 1 in any election year, but also leaving out elections from years where a country did not have a score of 1 while keeping in elections from the same countries in years where the Freedom House average score was 1. Costa Rica is an example of the latter, of the four elections included in our full sample, only the last three elections meet the requirement of a Freedom House score of 1, and are included in estimations using the perfect democracy sample.

For the countries or elections with perfect democracy scores, the results suggest a positive relation between increases in portfolio investment to small states (but at a decreasing rate as changes grow bigger) and voter turnout in elections. An increase in portfolio investment of about 100 billion dollars corresponds to about a four percentage point increase in turnout. In principle, the negative coefficient for the squared term suggests that the relation turns negative as changes in portfolio investment exceed 800 billion dollars, but this is far greater than any change in portfolio investment seen between elections in the countries in our sample, so for realistic changes in portfolio investment to small states,

the relationship is a positive one. In sum, in perfectly democratic states, our results indicate that increased self-serving elite behaviour is associated with greater turnout at elections.

**Table 3. Main results**

| <i>Sample</i>                        | <i>All elections</i>    | <i>Freedom House<br/>average = 1</i> | <i>Freedom House<br/>average ≤ 1.5</i> | <i>Freedom House<br/>average &gt; 1.5</i> |
|--------------------------------------|-------------------------|--------------------------------------|--|---|
| <i>Dependent variable</i>            | <i>Voter turnout</i>    | <i>Voter turnout</i>                 | <i>Voter turnout</i>                   | <i>Voter turnout</i>                      |
| Portfolio investment (small)         | 3.376***<br>(1.27)      | 4.361***<br>(0.62)                   | 3.340**<br>(1.42)                      | -75.886<br>(137.74)                       |
| Portfolio investment (small) squared | -0.179**<br>(0.07)      | -0.262***<br>(0.05)                  | -0.192**<br>(0.09)                     | 960.876<br>(591.73)                       |
| GDP per capita (ln)                  | 38.363***<br>(12.16)    | 26.370***<br>(8.69)                  | 15.486<br>(10.77)                      | 73.060**<br>(28.33)                       |
| Compulsory voting                    | 13.014***<br>(2.66)     | 10.921***<br>(2.07)                  | 7.712***<br>(2.23)                     |   |
| Constant                             | -324.051***<br>(121.48) | -207.383**<br>(89.05)                | -94.518<br>(109.68)                    | -652.345**<br>(274.48)                    |
| R-sq                                 | 0.205                   | 0.345                                | 0.268                                  | 0.423                                     |
| N                                    | 213                     | 113                                  | 141                                    | 69  |
| No of countries                      | 65                      | 36                                   | 44                                     | 26  |
| p-value joint sign of inv. vars      | 0.033                   | 0.000                                | 0.071                                  | 0.017                                     |

*Note: All regressions include country and year fixed effects, standard errors are clustered at the country level. \*\*\* indicates significance at the 1% level, \*\* at 5%, \* at 10%. Voter turnout is votes divided by voting age population. Freedom House average is the average of Freedom House political rights and civil liberties index, higher scores indicate less democracy. Portfolio investment (small) is total portfolio investment in small states, i.e. states with less than 250.000 inhabitants as of 2013, in 100 billion dollars. GDP per capita (ln) is GDP per capita, PPP, constant 2011 \$, logged. Compulsory voting is a dummy variable for whether voting is mandatory. The p-value in the bottom row is from the test of the joint significance of Portfolio investment (small) and its square.*

The last two columns presents results where the full sample of elections is split into elections in perfect and near perfect democracies (Freedom House average values of 1 or 1.5), and election in countries with less well-functioning democracies (Freedom House average strictly above 1.5).<sup>3</sup> Column three shows the results for the perfect and near perfect democracies, estimates are similar, but somewhat lower and less robust than for the perfect democracies. Looking only at countries with less well-functioning democracies in column four, we end up with a small sample of 26 countries, and a negative association between small increases in portfolio investment to small states and turnout, an association that turns positive for larger increases in investment. However, as the sample of countries with less well-functioning democracies is highly selected, and results for this group are shown not to be robust in later estimations, this result should not be given much emphasis.

In the following, we mostly focus on the group of countries for which results are robust, the fully democratic ones. The positive association between our proxy for tax haven use and electoral turnout need not reflect a causal relationship. It is possible that increased use of tax havens is correlated with some form of underlying change in the countries in question that have also affected turnout. While our analysis controls for all differences between countries that are constant over time, and we control for a

<sup>3</sup> The three observations lost from the full sample are elections in Bermuda, for which we do not have Freedom House average score data.

number of time-variant factors in the robustness analysis in the next section, it is hard to rule out this possibility completely. Even if our results did reflect a causal relationship between elite behaviour and political mobilization, it is not obvious what the direction of causality would be, even if we lag the portfolio investment variable. It could be that increasingly self-serving elite behaviour mobilizes people to vote. But it could also be that in anticipation of increasing voter turnout in a coming election, the elite shifts investments to tax havens to avoid heavier taxation resulting from more people at the lower part of the income distribution voting for more redistributive policies.

While these questions are difficult to resolve, we present some additional estimations which shed light on possible causal connections. In Table 4, we present results for the perfectly democratic countries, where elections are split roughly down the middle by year, the dividing year being 2008. As the two columns in the table show, the estimated relation between portfolio investment to small states and voter turnout is positive, but much larger and significant only in the period after 2008. It is interesting that the strong positive association coincides with the period after the 2008 financial crisis, which led to much heavier public attention to issues of inequality and irresponsible financial elite behaviour. If there is an effect of elite behaviour on citizen mobilization, this may then suggest that it is contingent on how salient issues of self-serving elite behaviour are in the public sphere.

**Table 4. Results by year**

| <i>Sample</i>                        | <i>FH average = 1,<br/>1998-2007</i> | <i>FH average = 1,<br/>2008-2014</i> |
|--------------------------------------|--------------------------------------|--------------------------------------|
| <i>Dependent variable</i>            | <i>Voter turnout</i>                 | <i>Voter turnout</i>                 |
| Portfolio investment (small)         | 4.328<br>(3.47)                      | 24.947***<br>(2.72)                  |
| Portfolio investment (small) squared | -0.883<br>(0.65)                     | -1.274***<br>(0.14)                  |
| GDP per capita (ln)                  | 9.276<br>(14.45)                     | 36.503**<br>(15.95)                  |
| Compulsory voting                    | .                                    | 9.069***<br>(2.47)                   |
| Constant                             | -31.374<br>(148.96)                  | -329.386*<br>(165.91)                |
| R-sq                                 | 0.526                                | 0.834                                |
| N                                    | 54                                   | 59                                   |
| No of countries                      | 32                                   | 36                                   |
| p-value joint sign of inv. vars      | 0.364                                | 0.000                                |

*Note: All regressions include country and year fixed effects, standard errors are clustered at the country level. \*\*\* indicates significance at the 1% level, \*\* at 5%, \* at 10%. Voter turnout is votes divided by voting age population. FH average is the average of Freedom House political rights and civil liberties index, higher scores indicate less democracy. Portfolio investment (small) is total portfolio investment in small states, i.e. states with less than 250.000 inhabitants as of 2013, in 100 billion dollars. GDP per capita (ln) is GDP per capita, PPP, constant 2011 \$, logged. Compulsory voting is a dummy variable for whether voting is mandatory. The p-value in the bottom row is from the test of the joint significance of Portfolio investment (small) and its square.*

As for the possibility of a reverse causal relationship, we can shed some light on this by looking at how current investment is associated with current or past voter turnout. While our main results may reflect investments being shifted to tax havens in anticipation of greater future turnout, there will be uncertainty about the turnout ahead of the election. If turnout indeed goes up, this should then lead to further shifting of investments after the election has been held and the uncertainty has disappeared. In Table 5, we estimate portfolio investment to small states as a function of voter turnout lagged by one year (first column), and current voter turnout (second column). There is little evidence of a significant

relationship in either case, providing some tentative support for any causal relationship going from elite behaviour to citizen mobilization, rather than the other way around.

**Table 5. Results, reverse specification**

| <i>Sample</i>             | <i>Freedom House</i>        |                             |
|---------------------------|-----------------------------|-----------------------------|
|                           | <i>average = 1</i>          |                             |
| <i>Dependent variable</i> | <i>Portfolio investment</i> | <i>Portfolio investment</i> |
|                           | <i>(small)</i>              | <i>(small)</i>              |
| Voter turnout (lagged)    | 0.028<br>(0.03)             |                             |
| Voter turnout             |                             | 0.040<br>(0.03)             |
| GDP per capita (ln)       | -1.988<br>(3.19)            | -0.357<br>(1.68)            |
| Constant                  | 16.569<br>(31.43)           | 1.045<br>(16.87)            |
| R-sq                      | 0.344                       | 0.287                       |
| N                         | 105                         | 109                         |
| No of countries           | 36                          | 36                          |

*Note: All regressions include country and year fixed effects, standard errors are clustered at the country level. \*\*\* indicates significance at the 1% level, \*\* at 5%, \* at 10%. Portfolio investment (small) is total portfolio investment in small states, i.e. states with less than 250.000 inhabitants as of 2013, in 100 billion dollars. Freedom House average is the average of Freedom House political rights and civil liberties index, higher scores indicate less democracy. Voter turnout is votes divided by voting age population. GDP per capita (ln) is GDP per capita, PPP, constant 2011 \$, logged.*

## 5. Robustness

The fundamental, long-term political and economic determinants of voter turnout are captured by our country fixed effects. These include the fundamental nature of the political system a country, such as whether it has a parliamentary or presidential system, whether there is proportional representation or a plurality system in place, and so on, and also the historical determinants of these differences between countries. While it does happen that countries change their political system, for instance from a parliamentary to a presidential system, our sample of highly democratic countries have not undergone this form of fundamental change in the period examined, and we therefore do not add these types of variables as covariates in further specifications. As can be seen from the preceding tables, one aspect of the political system that has changed in some countries in the years covered is whether voting is compulsory. Chile changed from compulsory to voluntary voting before the election in 2013, providing some variation in this variable. The estimated effect of compulsory voting in our main sample of 65 countries is around 13 per cent, not too different from previous results of other studies.

Table 6 provides results for our sample of perfectly democratic countries, when a range of time-variant possible determinants of voter turnout are added. As the results in the top rows of both Panel A and B reveal, our results are robust to adding these variables to the specification. The first column in Panel A adds total global outward portfolio investment from each country. The results suggest that turnout is not associated with increasing globalization per se of a country, but with investment to tax havens, calling into question some previous claims about negative effects of globalization on participation. Moreover, through this variable we also indirectly control for other changes over time that may be important, such as in exchange rates, rates of return on capital and so on. The second and



third columns add inflation and unemployment to the specification, essentially adding further controls for the economic situation of the economy, which does not affect results. Net oil exports are added in column four, which appear to have a positive relation to voter turnout, suggesting that where there is more natural resource income to distribute more voting occurs, but otherwise does not change results. The last two columns of Panel A add educational levels of the population as covariates, the first column of Panel B adds urbanization rates, the second column government expenditures, and the third and fourth column age structure and population size. Only the last of these is significant, suggesting less voting in more populous countries, but results for our main variables are unchanged. Importantly, the last column of Panel B adds the closeness of elections as a covariate. The coefficient suggests that closer elections are associated with greater turnout, as expected, but it is not statistically significant, and does not affect our main result.

Table 6. Robustness to added covariates

| Panel A                              |                              |                              |                              |                              |                              |                              |
|--------------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Sample                               | Freedom House<br>average = 1 | Freedom House<br>average = 1 | Freedom House<br>average = 1 | Freedom House<br>average = 1 | Freedom House<br>average = 1 | Freedom House<br>average = 1 |
| Dependent variable                   | Voter turnout                | Voter turnout                | Voter turnout                | Voter turnout                | Voter turnout                | Voter turnout                |
| Portfolio investment (small)         | 5.858***<br>(1.12)           | 4.160***<br>(0.86)           | 3.903***<br>(1.18)           | 3.671***<br>(1.24)           | 4.254***<br>(0.74)           | 4.191***<br>(0.75)           |
| Portfolio investment (small) squared | -0.298***<br>(0.05)          | -0.253***<br>(0.06)          | -0.207*<br>(0.10)            | 0.305***<br>(0.08)           | -0.259***<br>(0.05)          | -0.256***<br>(0.05)          |
| GDP per capita (ln)                  | 25.382***<br>(8.61)          | 24.920***<br>(8.30)          | 9.268<br>(15.46)             | 30.011**<br>(12.81)          | 27.067***<br>(9.62)          | 26.436***<br>(9.57)          |
| Compulsory voting                    | 11.472***<br>(2.18)          | 10.586***<br>(1.99)          | 9.013***<br>(2.55)           | .                            | 10.013***<br>(2.01)          | 10.163***<br>(2.07)          |
| Portfolio investment world           | -0.193<br>(0.16)             |                              |                              |                              |                              |                              |
| Inflation                            |                              | 0.029<br>(0.08)              |                              |                              |                              |                              |
| Unemployment                         |                              |                              | -0.339<br>(0.38)             |                              |                              |                              |
| Oil Exports                          |                              |                              |                              | 0.242***<br>(0.06)           |                              |                              |
| Schooling years (15+)                |                              |                              |                              |                              | -4.043<br>(3.10)             |                              |
| Schooling years (25+)                |                              |                              |                              |                              |                              | -3.672<br>(2.96)             |
| Constant                             | -197.012**<br>(88.18)        | -195.197**<br>(84.07)        | -28.962<br>(161.66)          | -242.381*<br>(131.97)        | -173.641<br>(110.95)         | -171.172<br>(109.99)         |
| R-sq                                 | 0.351                        | 0.347                        | 0.374                        | 0.446                        | 0.374                        | 0.373                        |
| N                                    | 113                          | 113                          | 110                          | 89                           | 110                          | 110                          |
| No of countries                      | 36                           | 36                           | 36                           | 34                           | 35                           | 35                           |
| p-value joint sign of inv. vars      | 0.000                        | 0.000                        | 0.000                        | 0.000                        | 0.000                        | 0.000                        |

| Panel B                              |                              |                              |                              |                              |                              |
|--------------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Sample                               | Freedom House<br>average = 1 | Freedom House<br>average = 1 | Freedom House<br>average = 1 | Freedom House<br>average = 1 | Freedom House<br>average = 1 |
| Dependent variable                   | Voter turnout                | Voter turnout                | Voter turnout                | Voter turnout                | Voter turnout                |
| Portfolio investment (small)         | 4.356***<br>(0.61)           | 4.079***<br>(0.72)           | 4.173***<br>(0.61)           | 7.533***<br>(1.53)           | 3.815***<br>(0.74)           |
| Portfolio investment (small) squared | -0.261***<br>(0.05)          | -0.235***<br>(0.06)          | -0.249***<br>(0.05)          | -0.370***<br>(0.07)          | -0.241***<br>(0.05)          |
| GDP per capita (ln)                  | 26.354***<br>(8.64)          | 28.623***<br>(9.82)          | 24.328***<br>(8.34)          | 24.799***<br>(8.34)          | 28.467***<br>(10.37)         |
| Compulsory voting                    | 10.959***<br>(2.15)          | 11.439***<br>(2.42)          | 11.883***<br>(2.16)          | 10.011***<br>(2.05)          | 11.525***<br>(2.35)          |
| Urbanization                         | 0.094<br>(0.48)              |                              |                              |                              |                              |
| Government consumption               |                              | 0.758<br>(0.89)              |                              |                              |                              |
| Age structure                        |                              |                              | 0.776<br>(0.84)              |                              |                              |
| Population                           |                              |                              |                              | -0.592***<br>(0.20)          |                              |
| Closeness of election                |                              |                              |                              |                              | -0.014<br>(0.02)             |
| Constant                             | -214.218*<br>(108.53)        | -244.588**<br>(112.01)       | -238.800**<br>(97.56)        | -171.467*<br>(85.64)         | -228.910**<br>(106.70)       |
| R-sq                                 | 0.346                        | 0.359                        | 0.355                        | 0.368                        | 0.388                        |
| N                                    | 113                          | 112                          | 113                          | 113                          | 108                          |
| No of countries                      | 36                           | 36                           | 36                           | 36                           | 36                           |
| p-value joint sign of inv. vars      | 0.000                        | 0.000                        | 0.000                        | 0.000                        | 0.000                        |

Note: All regressions include country and year fixed effects, standard errors are clustered at the country level. \*\*\* indicates significance at the 1% level, \*\* at 5%, \* at 10%. Voter turnout is votes divided by voting age population. Freedom House average is the average of Freedom House political rights and civil liberties index, higher scores indicate less democracy. Portfolio investment (small) is total portfolio investment in small states, i.e. states with less than 250,000 inhabitants as of 2013, in 100 billion dollars. GDP per capita (ln) is GDP per capita, PPP, constant 2011 \$, logged. Compulsory voting is a dummy variable for whether voting is mandatory. Portfolio investment world is the total portfolio investment to all states, in 100 billion dollars. Inflation is inflation in average consumer prices. Unemployment is the unemployment rate. Oil Exports is the net oil exports value in constant billion 2000 dollar. Schooling years (15+) and Schooling years (25+) are average years of schooling, for the population at and above ages 15 and 25, respectively. Urbanization is urban population as a percentage of total population. Government consumption is general government final consumption expenditure

(% of GDP). Age structure is Population aged 15-64 (% of total population). Population is population size in millions. Closeness of elections is the absolute value of difference between seats in (lower house of) parliament of largest government party and largest opposition party. The p-value in the bottom row is from the test of the joint significance of Portfolio investment (small) and its square.

The estimations so far have used the one year lagged value of portfolio investment as the main explanatory variable. One could argue that there is excessive variation in year-to-year investment data of this kind, and that it would be an advantage to use data averaged over a longer period. In light of our dependent variable, it is not obvious that this is a correct observation, since if voters were directly moved by financial data, the data most immediately released may be the data they are moved by. Nevertheless, in Table 7 we present results where portfolio investment to small states has been averaged over the three years preceding an election. In format, the table corresponds to that of Table 3, with results for the full sample of elections presented in column one, results for the perfectly democratic countries in column two, and results splitting the sample at score 1.5 on the Freedom House average in the last two columns. As the table shows, results are not very different using 3-year averages for the financial data. Significance of the portfolio investment terms is lost in the full and least democratic samples. Results for the perfectly democratic countries are essentially unchanged.

**Table 7. Results using 3-year averages for portfolio investment variables**

| Sample  | All elections          | Freedom House<br>average = 1 | Freedom House<br>average ≤ 1.5 | Freedom House<br>average > 1.5 |
|---|------------------------|------------------------------|--------------------------------|--------------------------------|
| Dependent variable                                  | Voter turnout          | Voter turnout                | Voter turnout                  | Voter turnout                  |
| Portfolio investment (small) 3-year average         | -0.076<br>(2.84)       | 4.741***<br>(1.26)           | 1.742<br>(3.05)                | -261.308<br>(168.72)           |
| Portfolio investment (small) 3-year average squared | -0.050<br>(0.16)       | -0.383***<br>(0.07)          | -0.187<br>(0.18)               | 1304.504*<br>(663.82)          |
| GDP per capita (ln)                                 | 32.740***<br>(10.21)   | 25.407***<br>(8.74)          | 20.587*<br>(10.34)             | 15.611<br>(32.75)              |
| Compulsory voting                                   | 12.683***<br>(2.95)    | 11.353***<br>(2.40)          | 9.209***<br>(2.24)             | .<br>.                         |
| Constant  | -266.198**<br>(100.68) | -194.054**<br>(88.37)        | -140.439<br>(105.45)           | -99.514<br>(305.84)            |
| R-sq  | 0.165                  | 0.354                        | 0.313                          | 0.354                          |
| N   | 168                    | 87                           | 108                            | 58                             |
| No of countries                                     | 61                     | 34                           | 42                             | 23                             |
| p-value joint sign of inv. vars                     | 0.154                  | 0.000                        | 0.013                          | 0.164                          |

*Note: All regressions include country and year fixed effects, standard errors are clustered at the country level. \*\*\* indicates significance at the 1% level, \*\* at 5%, \* at 10%. Voter turnout is votes divided by voting age population. Freedom House average is the average of Freedom House political rights and civil liberties index, higher scores indicate less democracy. Portfolio investment (small) 3-year average is the average in the past three years of total portfolio investment in small states, i.e. states with less than 250.000 inhabitants as of 2013, in 100 billion dollars. GDP per capita (ln) is GDP per capita, PPP, constant 2011 \$, logged. Compulsory voting is a dummy variable for whether voting is mandatory. The p-value in the bottom row is from the test of the joint significance of Portfolio investment (small) and its square.*

While there is a high correlation between democracy indices, we test in Table 8 whether our results are sensitive to the index used to classify our full sample into sub-samples. The first column shows results for the full sample of countries for which the Polity IV democracy index provides a score. The subsequent columns then present results for perfect democracies according to the Polity scale (i.e. with a value of 10), for perfect and near perfect democracies (Polity value of at least 9), and for countries with less well-functioning democracies (Polity score strictly less than 9). The sample is in

all cases smaller than when using the Freedom House variable to classify countries, since Polity covers fewer countries. The results, however, remain much the same.

**Table 8. Results using samples based on Polity IV democracy variable**

| <i>Sample</i>                        | <i>All elections (countries with Polity Democracy scores)</i> | <i>Polity Democracy = 10</i> | <i>Polity Democracy ≥ 9</i> | <i>Polity Democracy &lt; 9</i> |
|--------------------------------------|---|------------------------------|-----------------------------|--------------------------------|
| <i>Dependent variable</i>            | <i>Voter turnout</i>  | <i>Voter turnout</i>         | <i>Voter turnout</i>        | <i>Voter turnout</i>           |
| Portfolio investment (small)         | 3.792***<br>(1.27)  | 3.556***<br>(0.99)           | 3.660***<br>(1.22)          | -128.088<br>(189.04)           |
| Portfolio investment (small) squared | -0.198***<br>(0.07)   | -0.186***<br>(0.07)          | -0.208***<br>(0.07)         | 549.186<br>(1102.43)           |
| GDP per capita (ln)                  | 39.362***<br>(12.81)  | 36.078***<br>(8.20)          | 26.033***<br>(9.35)         | 47.310<br>(44.12)              |
| Compulsory voting                    | 12.482***<br>(2.71)   | 8.210***<br>(2.17)           | 8.586***<br>(2.05)          | .                              |
| Constant                             | -334.061**<br>(127.72)  | -306.436***<br>(83.70)       | -200.491**<br>(94.25)       | -416.063<br>(433.15)           |
| R-sq                                 | 0.208   | 0.382                        | 0.296                       | 0.424                          |
| N                                    | 197   | 110                          | 136                         | 61                             |
| No of countries                      | 60  | 34                           | 43                          | 21                             |
| p-value joint sign of inv. vars      | 0.012   | 0.001                        | 0.013                       | 0.794                          |

*Note: All regressions include country and year fixed effects, standard errors are clustered at the country level. \*\*\* indicates significance at the 1% level, \*\* at 5%, \* at 10%. Voter turnout is votes divided by voting age population. Polity Democracy is the Democracy score from Polity IV, higher scores indicate greater democracy. Portfolio investment (small) is total portfolio investment in small states, i.e. states with less than 250,000 inhabitants as of 2013, in 100 billion dollars. GDP per capita (ln) is GDP per capita, PPP, constant 2011 \$, logged. Compulsory voting is a dummy variable for whether voting is mandatory. The p-value in the bottom row is from the test of the joint significance of Portfolio investment (small) and its square.*

For reasons discussed earlier, portfolio investment in small states is our preferred proxy for self-serving elite behaviour. However, in Table 9, we present results using portfolio investments to states included in two alternate lists of tax havens, as classified by Hines (2010) and Johannesen and Zucman (2014). Results for portfolio investment to states listed by Hines are presented in Panel A, and results for the Johannesen and Zucman list in Panel B. Results for the perfect democracies in column two are qualitatively the same as before, with somewhat smaller coefficients for the portfolio investment variables. One possible reason for the smaller coefficients could be that investments to countries in these lists reflect other things than self-serving elite behaviour, but other explanations are of course possible. Our main result still appears robust with these alternative measures. For less democratic countries, however, results are not robust to this re-specification.

**Table 9. Robustness to alternative portfolio investment variables**

| Panel A                              |                         |                              |                                |                                |
|--------------------------------------|-------------------------|------------------------------|--------------------------------|--------------------------------|
| Sample                               | All elections           | Freedom House<br>average = 1 | Freedom House<br>average ≤ 1.5 | Freedom House<br>average > 1.5 |
| Dependent variable                   | Voter turnout           | Voter turnout                | Voter turnout                  | Voter turnout                  |
| Portfolio investment (Hines)         | 1.598<br>(1.06)         | 1.814**<br>(0.76)            | 1.397<br>(0.97)                | -52.018<br>(65.43)             |
| Portfolio investment (Hines) squared | -0.043<br>(0.03)        | -0.059**<br>(0.03)           | -0.042<br>(0.03)               | 118.670<br>(100.04)            |
| GDP per capita (ln)                  | 38.502***<br>(12.12)    | 28.407***<br>(8.39)          | 15.551<br>(10.57)              | 68.812**<br>(30.65)            |
| Compulsory voting                    | 13.249***<br>(2.65)     | 11.080***<br>(2.12)          | 7.847***<br>(2.29)             | .                              |
| Constant                             | -324.303***<br>(120.83) | -228.486**<br>(86.41)        | -95.034<br>(107.87)            | -606.075**<br>(294.70)         |
| R-sq                                 | 0.195                   | 0.309                        | 0.239                          | 0.401                          |
| N                                    | 221                     | 117                          | 145                            | 73                             |
| No of countries                      | 67                      | 36                           | 44                             | 28                             |
| p-value joint sign of inv. vars      | 0.079                   | 0.048                        | 0.193                          | 0.171                          |

| Panel B                            |                         |                              |                                |                                |
|------------------------------------|-------------------------|------------------------------|--------------------------------|--------------------------------|
| Sample                             | All elections           | Freedom House<br>average = 1 | Freedom House<br>average ≤ 1.5 | Freedom House<br>average > 1.5 |
| Dependent variable                 | Voter turnout           | Voter turnout                | Voter turnout                  | Voter turnout                  |
| Portfolio investment (J&Z)         | 1.740<br>(1.06)         | 2.010***<br>(0.72)           | 1.537<br>(0.98)                | -49.550<br>(59.85)             |
| Portfolio investment (J&Z) squared | -0.048<br>(0.03)        | -0.066**<br>(0.03)           | -0.046<br>(0.03)               | 178.347<br>(106.49)            |
| GDP per capita (ln)                | 38.397***<br>(11.97)    | 27.827***<br>(8.34)          | 15.513<br>(10.42)              | 68.191**<br>(30.11)            |
| Compulsory voting                  | 13.168***<br>(2.63)     | 10.885***<br>(2.14)          | 7.774***<br>(2.26)             | .                              |
| Constant                           | -323.238***<br>(119.30) | -222.555**<br>(85.79)        | -94.642<br>(106.33)            | -601.041**<br>(289.94)         |
| R-sq                               | 0.197                   | 0.314                        | 0.243                          | 0.406                          |
| N                                  | 221                     | 117                          | 145                            | 73                             |
| No of countries                    | 67                      | 36                           | 44                             | 28                             |
| p-value joint sign of inv. vars    | 0.062                   | 0.015                        | 0.135                          | 0.018                          |

*Note: All regressions include country and year fixed effects, standard errors are clustered at the country level. \*\*\* indicates significance at the 1% level, \*\* at 5%, \* at 10%. Voter turnout is votes divided by voting age population. Freedom House average is the average of Freedom House political rights and civil liberties index, higher scores indicate less democracy. Portfolio investment (Hines) is total portfolio investment in states defined as tax havens by Hines (2010), in 100 billion dollars. Portfolio investment (J&Z) is total portfolio investment in states defined as tax havens by Johannesen and Zucman (2014), in 100 billion dollars. GDP per capita (ln) is GDP per capita, PPP, constant 2011 \$, logged. Compulsory voting is a dummy variable for whether voting is mandatory. The p-value in the bottom row is from the test of the joint significance of Portfolio investment (small) and its square.*

## 6. Concluding remarks

This paper has documented a positive association between self-serving elite behaviour and citizen political mobilization in democracies. Using a fixed effects estimation approach, we find that voter turnout increases with portfolio investment in tax havens, albeit at a decreasing rate. The association is particularly pronounced after the 2008 financial crisis, suggesting that the salience of elite behaviour may be important. The question of salience can and should be examined in further studies using individual level data. Our results affirm the assumption made by Acemoglu and Robinson (2006) that citizens are willing to use their power to influence choices of the elite, at least in democratic states. For countries with less well-functioning democracies, our sample is highly selected due to patchy reporting of investment data, and further analyses are needed of the relationship between elite behaviour and non-elite political activity. Given the fact that elections in less democratic countries are not very meaningful, studies of political activity in these countries should include other forms of political activity.

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# Appendix

Table A 1. Lists of countries included in constructing proxies for tax haven investment

| Small states                    | Hines (2010)                   | Johannesson and Zucman (2014) |
|---------------------------------|--------------------------------|-------------------------------|
| American Samoa                  | Andorra                        | Andorra                       |
| Andorra                         | Anguilla                       | Anguilla                      |
| Anguilla                        | Antigua and Barbuda            | Antigua and Barbuda           |
| Antigua and Barbuda             | Aruba                          | Aruba                         |
| Aruba                           | Bahamas The                    | Austria                       |
| Bermuda                         | Bahrain Kingdom of             | Bahamas The                   |
| Bonaire Sint Eustatius and Saba | Barbados                       | Bahrain Kingdom of            |
| British Indian Ocean Territory  | Belize                         | Barbados                      |
| Cayman Islands                  | Bermuda                        | Belgium                       |
| Christmas Island                | Cayman Islands                 | Belize                        |
| Cocos Keeling Islands           | Cook Islands                   | Bermuda                       |
| Cook Islands                    | Costa Rica                     | Cayman Islands                |
| Curacao                         | Cyprus                         | Chile                         |
| Dominica                        | Djibouti                       | Cook Islands                  |
| Falkland Islands                | Dominica                       | Costa Rica                    |
| Faroe Islands                   | Gibraltar                      | Curacao                       |
| French Southern Territories     | Grenada                        | Cyprus                        |
| Gibraltar                       | Guernsey                       | Dominica                      |
| Greenland                       | China PR Hong Kong             | Gibraltar                     |
| Grenada                         | Ireland                        | Grenada                       |
| Guam                            | Isle of Man                    | Guernsey                      |
| Guernsey                        | Jersey                         | China PR Hong Kong            |
| Guiana French                   | Jordan                         | Isle of Man                   |
| Isle of Man                     | Lebanon                        | Jersey                        |
| Jersey                          | Liberia                        | Liberia                       |
| Kiribati                        | Liechtenstein                  | Liechtenstein                 |
| Liechtenstein                   | Luxembourg                     | Luxembourg                    |
| Marshall Islands Republic of    | China PR Macao                 | China PR Macao                |
| Micronesia Federated States of  | Maldives                       | Malaysia                      |
| Monaco                          | Malta                          | Malta                         |
| Montserrat                      | Marshall Islands Republic of   | Marshall Islands Republic of  |
| Nauru                           | Mauritius                      | Monaco                        |
| Niue                            | Micronesia Federated States of | Montserrat                    |
| Norfolk Island                  | Monaco                         | Nauru                         |
| Palau                           | Montserrat                     | Netherlands Antilles          |
| Pitcairn Islands                | Nauru                          | Niue                          |
| Saint Helena                    | Netherlands Antilles           | Panama                        |
| Saint Pierre and Miquelon       | Niue                           | St Kitts and Nevis            |
| Samoa                           | Panama                         | St Lucia                      |
| San Marino                      | Samoa                          | St Vincent and the Grenadines |
| Sao Tome and Principe           | San Marino                     | Samoa                         |
| Seychelles                      | Seychelles                     | San Marino                    |
| Sint Maarten                    | Singapore                      | Seychelles                    |
| St Kitts and Nevis              | St Kitts and Nevis             | Singapore                     |
| St Lucia                        | St Lucia                       | Sint Maarten                  |
| St Vincent and the Grenadines   | Sint Maarten                   | Switzerland                   |
| Tokelau Islands                 | St Vincent and the Grenadines  | Trinidad and Tobago           |
| Tonga                           | Switzerland                    | Turks and Caicos Islands      |
| Turks and Caicos Islands        | Tonga                          | Uruguay                       |
| Tuvalu                          | Turks and Caicos Islands       | US Virgin Islands             |
| US Pacific Islands              | Vanuatu                        | Vanuatu                       |
| US Virgin Islands               | Virgin Islands British         | Virgin Islands British        |
| Vatican                         |                                |                               |
| Virgin Islands British          |                                |                               |
| Wallis and Futuna               |                                |                               |

Table A 2. Countries and election years in main sample, and corresponding value of Freedom House average

| Country   | Year | FH av. | Country        | Year | FH av. | Country      | Year | FH av. | Country     | Year | FH av. | Country        | Year | FH av. |
|-----------|------|--------|----------------|------|--------|--------------|------|--------|-------------|------|--------|----------------|------|--------|
| Australia | 1998 | 1      | Costa Rica     | 2002 | 1.5    | Indonesia    | 2004 | 3.5    | Mauritius   | 2005 | 1.5    | South Africa   | 2004 | 1.5    |
| Australia | 2007 | 1      | Costa Rica     | 2006 | 1      | Indonesia    | 2009 | 2.5    | Mauritius   | 2010 | 1.5    | South Africa   | 2009 | 2      |
| Australia | 2010 | 1      | Costa Rica     | 2010 | 1      | Indonesia    | 2014 | 3      | Mauritius   | 2014 | 1.5    | South Africa   | 2014 | 2      |
| Australia | 2013 | 1      | Costa Rica     | 2014 | 1      | Ireland      | 2002 | 1      | Mexico      | 2006 | 2      | Spain          | 2004 | 1      |
| Austria   | 2002 | 1      | Cyprus         | 2006 | 1      | Ireland      | 2007 | 1      | Mexico      | 2009 | 2.5    | Spain          | 2008 | 1      |
| Austria   | 2006 | 1      | Cyprus         | 2011 | 1      | Ireland      | 2011 | 1      | Mexico      | 2012 | 3      | Spain          | 2011 | 1      |
| Austria   | 2008 | 1      | Czech Republic | 2002 | 1.5    | Israel       | 2003 | 2      | Mongolia    | 2012 | 2      | Sweden         | 1998 | 1      |
| Austria   | 2013 | 1      | Czech Republic | 2006 | 1      | Israel       | 2006 | 1.5    | Netherlands | 1998 | 1      | Sweden         | 2002 | 1      |
| Bahamas   | 2002 | 1      | Czech Republic | 2010 | 1      | Israel       | 2009 | 1.5    | Netherlands | 2002 | 1      | Sweden         | 2006 | 1      |
| Bahamas   | 2007 | 1      | Czech Republic | 2013 | 1      | Israel       | 2012 | 1.5    | Netherlands | 2003 | 1      | Sweden         | 2010 | 1      |
| Bahamas   | 2012 | 1      | Denmark        | 1998 | 1      | Italy        | 2006 | 1      | Netherlands | 2006 | 1      | Sweden         | 2014 | 1      |
| Bahrain   | 2002 | 5      | Denmark        | 2005 | 1      | Italy        | 2008 | 1      | Netherlands | 2010 | 1      | Switzerland    | 2014 | 1      |
| Bahrain   | 2006 | 5      | Denmark        | 2007 | 1      | Italy        | 2013 | 1      | Netherlands | 2012 | 1      | Switzerland    | 2003 | 1      |
| Bahrain   | 2010 | 5.5    | Denmark        | 2011 | 1      | Italy        | 2013 | 1      | Netherlands | 2012 | 1      | Switzerland    | 2007 | 1      |
| Bahrain   | 2014 | 6      | Egypt          | 2011 | 1      | Japan        | 2003 | 1.5    | New Zealand | 2002 | 1      | Switzerland    | 2011 | 1      |
| Barbados  | 2008 | 1      | Egypt          | 2005 | 5.5    | Japan        | 2003 | 1.5    | New Zealand | 2002 | 1      | Switzerland    | 2011 | 1      |
| Barbados  | 2013 | 1      | Egypt          | 2010 | 5.5    | Japan        | 2005 | 1.5    | New Zealand | 2011 | 1      | Thailand       | 2005 | 3      |
| Belgium   | 2003 | 1      | Estonia        | 2012 | 5.5    | Japan        | 2009 | 1.5    | Norway      | 2005 | 1      | Thailand       | 2006 | 5.5    |
| Belgium   | 2007 | 1      | Estonia        | 2012 | 5.5    | Japan        | 2012 | 1.5    | Norway      | 2009 | 1      | Thailand       | 2007 | 5.5    |
| Belgium   | 2010 | 1      | Estonia        | 2013 | 1.5    | Japan        | 2014 | 1      | Norway      | 2013 | 1      | Thailand       | 2011 | 4.5    |
| Belgium   | 2014 | 1      | Estonia        | 2007 | 1      | Kazakhstan   | 2004 | 5.5    | Pakistan    | 2008 | 5.5    | Thailand       | 2014 | 4      |
| Bermuda   | 2003 | 1      | Finland        | 2011 | 1      | Kazakhstan   | 2007 | 5.5    | Pakistan    | 2013 | 4.5    | Turkey         | 2002 | 3.5    |
| Bermuda   | 2007 | 1      | Finland        | 2003 | 1      | Kazakhstan   | 2012 | 5.5    | Pakistan    | 2014 | 3      | Turkey         | 2007 | 3      |
| Bermuda   | 2012 | 2.5    | France         | 2007 | 1      | Korea, South | 2004 | 1.5    | Panama      | 2009 | 1.5    | Turkey         | 2011 | 3      |
| Brazil    | 2002 | 2      | France         | 2011 | 1      | Korea, South | 2008 | 1.5    | Panama      | 2014 | 2      | Ukraine        | 2006 | 2.5    |
| Brazil    | 2006 | 2      | France         | 2012 | 1      | Korea, South | 2012 | 1.5    | Philippines | 2004 | 2.5    | United Kingdom | 2005 | 1      |
| Brazil    | 2010 | 2      | Germany        | 2002 | 1.5    | Kuwait       | 2006 | 4      | Philippines | 2007 | 3      | United Kingdom | 2010 | 1      |
| Brazil    | 2014 | 2      | Germany        | 2007 | 1      | Kuwait       | 2012 | 4      | Philippines | 2010 | 3.5    | United States  | 1998 | 1      |
| Bulgaria  | 2005 | 1.5    | Germany        | 2002 | 1.5    | Kuwait       | 2012 | 4.5    | Philippines | 2013 | 3      | United States  | 2002 | 1      |
| Bulgaria  | 2009 | 2      | Germany        | 2005 | 1      | Latvia       | 2010 | 1.5    | Poland      | 2005 | 1      | United States  | 2004 | 1      |
| Bulgaria  | 2013 | 2      | Germany        | 2009 | 1      | Latvia       | 2011 | 2      | Poland      | 2007 | 1      | United States  | 2006 | 1      |
| Bulgaria  | 2014 | 2      | Greece         | 2013 | 1      | Latvia       | 2011 | 2      | Poland      | 2011 | 1      | United States  | 2008 | 1      |
| Canada    | 2004 | 1      | Greece         | 2004 | 1.5    | Lebanon      | 2014 | 2      | Portugal    | 2002 | 1      | United States  | 2010 | 1      |
| Canada    | 2006 | 1      | Greece         | 2007 | 1.5    | Lebanon      | 2014 | 2      | Portugal    | 2005 | 1      | United States  | 2012 | 1      |
| Canada    | 2008 | 1      | Hungary        | 2009 | 1.5    | Lebanon      | 2005 | 4.5    | Portugal    | 2005 | 1      | United States  | 2012 | 1      |
| Canada    | 2011 | 1      | Hungary        | 2012 | 2      | Lithuania    | 2009 | 4.5    | Portugal    | 2009 | 1      | Uruguay        | 2014 | 1      |
| Chile     | 2005 | 1      | Hungary        | 2012 | 1.5    | Lithuania    | 2012 | 1      | Portugal    | 2011 | 1      | Uruguay        | 2004 | 1      |
| Chile     | 2009 | 1      | Hungary        | 2006 | 1      | Luxembourg   | 2004 | 1      | Russia      | 2003 | 5      | Uruguay        | 2009 | 1      |
| Chile     | 2013 | 1      | Hungary        | 2010 | 1      | Luxembourg   | 2009 | 1      | Russia      | 2007 | 5.5    | Uruguay        | 2014 | 1      |
| Colombia  | 2002 | 4      | Iceland        | 2014 | 1.5    | Luxembourg   | 2013 | 1      | Russia      | 2011 | 5.5    | Venezuela      | 1998 | 2.5    |
| Colombia  | 2006 | 3      | Iceland        | 2014 | 1.5    | Malaysia     | 2004 | 4      | Singapore   | 2006 | 4.5    | Venezuela      | 2005 | 4      |
| Colombia  | 2010 | 3.5    | Iceland        | 2014 | 1.5    | Malaysia     | 2008 | 4      | Singapore   | 2011 | 4.5    | Venezuela      | 2010 | 4.5    |
| Colombia  | 2014 | 3.5    | India          | 2009 | 2.5    | Malta        | 2013 | 4      | Slovakia    | 2002 | 1.5    |                |      |        |
|           |      |        | India          | 2014 | 2.5    | Malta        | 2003 | 1      | Slovakia    | 2006 | 1      |                |      |        |
|           |      |        | India          | 2014 | 2.5    | Malta        | 2008 | 1      | Slovakia    | 2012 | 1      |                |      |        |
|           |      |        | India          | 2014 | 2.5    | Malta        | 2013 | 1      | Slovenia    | 2011 | 1      |                |      |        |
|           |      |        | India          | 2014 | 2.5    | Malta        | 2013 | 1      | Slovenia    | 2014 | 1      |                |      |        |
|           |      |        | India          | 2014 | 2.5    | Malta        | 2014 | 1      | Slovenia    | 2014 | 1      |                |      |        |

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**INDEXING TERMS**

Elites, citizens, portfolio investment,

tax havens, voter turnout, political economy

This paper studies the relation between self-serving elite behaviour and citizen political participation. We use a fixed effects approach to analyze the association between portfolio investment in tax havens and voter turnout, using data from 213 parliamentary elections in 65 countries for the period 1998-2014. For well-functioning democracies, we find a positive relation between the use of tax havens and voter turnout, suggesting that self-serving elite behaviour is associated with citizen political mobilization rather than voter apathy. The estimated relationship is stronger in the period after the 2008 economic crisis, when elite behaviour was a particularly salient issue.