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# MEET THE OLIGARCHS: BUSINESS LEGITIMACY, STATE CAPACITY AND TAXATION

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# **ABSTRACT**

We study the impact of two dimensions of trust, namely trust in business elites and trust in government, on policy preferences. Using a randomized online survey, we find that our two treatments are effective in changing trust in Major Companies and in Courts/Government. In contrast to previous work, we find that more trust causes a decline in desired taxes. This is particularly strong for our treatment decreasing trust in business elites, which causes an increase in desired taxes on the top 1% of 1.2 percentage points. The effect closes 14% of the gap in tax preferences between Democrats and Republicans, and is double that amount when trust in government is low. Similarly, more distrust leads to more desired regulation and less private-public sector meetings, a variable we argue is connected to State capacity. A model where people tax to punish corrupt business leaders (rather than to redistribute income) helps interpret these findings.

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#### 1. Introduction

Businesspeople are sometimes perceived to be self-serving, unpleasant, and even corrupt. In the US, where they have often been lionized, the public has become increasingly uneasy about the power of business and of the so-called "top 1%". This increased dissatisfaction has been accompanied by a change in the media coverage they receive: during the initial dot-com bubble tech entrepreneurs were ubiquitous in the media, whereas after the 2008 financial meltdown it was more standard for bankers to capture the public imagination. In this paper, we study the consequences that changes in the beliefs concerning businesspeople have on policy preferences. Specifically, we study if distrust in business elites causes an increase in the demand for taxing the rich, regulating business and a reduction in the tolerance for business people's input into policy design, a variable we argue is important for State capacity. Our reasoning is that negative views of businesspeople –i.e., that they are "oligarchs," makes the public want to reduce the power and privilege of business. Naturally, this hypothesis has to be tested controlling for people's trust in government, as this other dimension of trust may have an independent influence on preferences.

Our main independent variable is "trust in business elites." In particular, we are interested in the possibility that the public might come to believe that business leaders made their money in corrupt ways, i.e., that they are seen as "oligarchs" instead of "clever innovators". Indeed, a key feature of US capitalism is that some very rich people made their money in business enterprises that are well known and well regarded by the public. This is less common in poor countries, where businesspeople might have power, but often enjoy less social status. Borrowing the ideas used in political science to describe State legitimacy, we can also label our independent variable "business legitimacy", defined as the acceptance of the authority and privileges that emerge from the economic system.<sup>2</sup> Our main hypothesis is that trust has a direct impact on policy preferences because people directly care about non-monetary dimensions, such as fairness or legitimacy (as in Alesina and Angeletos, 2005b). This is in contrast to models where voters only care about income (as in Meltzer and Richard, 1981, or Benabou and Ok, 2001), so that any impact of trust on policy preferences is through its effect on income (for example, because a more trustworthy government spends more efficiently).

We study the impact of changes in business legitimacy on preferences over three outcomes that affect businesses and their owners: taxation at the top, regulation of business and private-public sector contact.<sup>3</sup> Starting with taxation, our hypothesis is that voters that see businesspeople as legitimate will support low taxes at the top. Previous work by Kuziemko, et al., (2015) studied taxes at the top but found that respondents have an unwillingness to "connect their concern about inequality with government action". They argue that the reason is that their treatment emphasizes the severity of inequality, a social problem that the government has

<sup>&</sup>lt;sup>1</sup> In 2001, a Gallup poll found that US respondents were evenly split in terms satisfaction with the size and influence of major corporations. Since 2003, a majority of Americans have been dissatisfied. Dissatisfaction peaked at 67% in 2011. See "Majority of Americans Dissatisfied With Corporate Influence", Gallup Economy, January 20, 2016.

<sup>&</sup>lt;sup>2</sup> We note, however, that legitimacy is a broad concept that might involve other dimensions (for example, one might expect whites who own businesses in South Africa to have low legitimacy immediately after apartheid, even if they acquired these interests legally, run them efficiently and operate in areas with high social value). Specifically, in the theory section below, trust in business elites is captured by the degree to which the public believes the businessperson is of high type (efficient and honest). In the empirics, it is captured by people's self-reported level of trust in "Major Companies".

<sup>&</sup>lt;sup>3</sup> Since beliefs about the poor (whether they are lazy or just unlucky) appear to be correlated with features of economic systems, we think that a natural extension is to study the possible consequences of believing the rich are undeserving. We focus on a subset of the rich: business people. Research on comparative economic systems has emphasized the role of beliefs, at least since de Tocqueville. See, for example, Piketty (1995) and Hall and Soskice (2001). On beliefs about the poor, see Alesina and Glaeser (2004).

been unable to solve. If they distrust the government, they are unlikely to think that they will be able to redistribute efficiently. In a supplementary survey, they studied directly the role of trust and showed that subjects primed to distrust the government decreased their support for redistribution. In contrast, we emphasize a different mechanism behind people's unwillingness to redistribute: they have a high opinion of the rich. In other words, low trust in government, particularly when paired with low trust in business, should make corruption more likely and hence should lead to *more* taxes at the top to punish undeserving businesspeople. Accordingly, we extend their approach by introducing two treatments that separate the two dimensions (trust in government vs trust in business elites), and including both positive and negative priming for each dimension, in a 2x2 design that allows for a close comparison to their results.

The second area where we study the effects of trust in business elites is the demand for regulation. Our basic hypothesis is that a low level of trust, particularly in business elites, leads voters to attempt to control business through regulation. Indeed, studying this hypothesis and exploiting the 2x2 design to study the impact of trust in government at different levels of trust in business elites can help us answer what Aghion, et al., (2010) call "what is perhaps one of the central puzzles in research on political beliefs: why do people in countries with bad governments want more government intervention?" In order to make our results comparable to prior work by Aghion, et al. (2010) we use similar proxies for regulation, but we note that there is a large amount of previous work that documented a negative correlation between different measures of regulation and broad measures of trust, including perceptions of corruption (see, for example Djankov et al. 2002; Di Tella and MacCulloch 2009; Pinotti 2012).<sup>5</sup>

Finally, we study the effect of trust in business elites on respondent's support for close contact between the public and the private sector, which we see as connected to the State's capacity to implement policies. While there are many dimensions of State capacity, we are particularly interested in the information available to policymakers. Accordingly, we propose a new metric: the amount of contact between government officials and businesspeople. This measure builds on one of the basic tensions of democracy: everyone is expected to have similar influence on government, even if some people (those in business for example) can be expected to have lots of information that is helpful to government when setting policy. A standard way of soliciting, and of conveying, specialized information involves direct contact (e.g., during a meeting) between the businessperson and the public official. But naturally, such close contact arises suspicions of privileged access, undue influence and even bribes, so the public is understandably nervous about the existence of these meetings.<sup>6</sup> Our main

<sup>&</sup>lt;sup>4</sup> Kuziemko, et al., (2015) also find similar evidence (see their Column 7 in Table 5), concluding "Providing information about the growth of inequality and the ability of the government to raise taxes and redistribute have complicated effects on views of government. It appears to make respondents see more areas of society where government intervention may be needed but simultaneously make them trust government less".

<sup>&</sup>lt;sup>5</sup> These papers are potentially useful because they help explain differences in economic systems across rich and poor countries. Economists, starting with Piketty (1995), have developed models where beliefs about the income-generating process play a central role in the demand for policies (see also Benabou and Tirole 2013). Some of these models have emphasized the link to corruption (Alesina and Angeletos 2005a focus on corruption arising from redistribution; Di Tella and MacCulloch 2009, focus on grand corruption; while Aghion et al. 2010 focus on bureaucratic extortion). Our paper involves studying beliefs about the rich (which may be involved in grand corruption/capture).

<sup>&</sup>lt;sup>6</sup> The title of a recent article summarizes this well: "Regulators Lean on Financial Firms to Explain Industry to Them, Study Shows". See *The Wall Street Journal*, September 16, 2016. The report on which it is based (CFA Institute 2016) concludes "We find the idea of constructive interaction between regulators and industry personnel to be compelling as a factor in effective regulation. We also acknowledge that many such interactions create either the appearance of a conflict of interest or actual divergent interests that can compromise regulatory effectiveness and public confidence in the integrity of the system." Their proposals include "Regulators and

hypothesis is that lack of trust in business elites causes people to demand fewer meetings and this causes low State capacity. This complements previous work on the causes of State capacity emphasizing the role of historical factors (which we review below).

In order to study the "trust in business elites causes policy preferences" hypothesis, we conduct a randomized survey experiment on a sample of approximately 9,000 American subjects. Using Amazon Mechanical Turk (MTurk), we treat subjects with positive/negative information about American business leaders and public officials and gather their policy preferences. A very similar, supplementary survey of 3,500 subjects run at a later date complements our study. Our design involves priming and builds on the assumption that the public's perception of the legitimacy of business and the level of trust in government is formed over time through experiences and the accumulation of messages, including those from the media. Specifically, our empirical strategy involves presenting subjects with a photograph and a brief description of business leaders and asking them a simple, multiple choice question focusing on the positives (or negatives). This is expected to induce subjects to reflect on positive (or negative) aspects of business leaders. More importantly, it is expected to provide an indirect stimulus for related memories (conceptual priming). Similarly, we treat subjects with negative/positive views about government officials. Previous work has also used priming in studies of social preferences (Fong and Luttmer 2007; Chen and Li 2009; Klor and Shayo 2010; Day and Fiske 2016; Ordabayeva and Fernandes 2017) and ideology (Berdejó and Chen 2012). The latter is particularly relevant as it does so in the field.

Section 2 presents the background for our study: it discusses some of the prior work in this topic, provides some additional information on public-private sector meetings and presents a simple model where beliefs about the business elites and government determine taxes and rules over private-public sector meetings. Section 3 describes the empirical strategy and survey implementation. Section 4 presents the main results, while Section 5 discusses additional topics using the supplementary survey. Section 6 concludes.

## 2. Background

While there has been a lot of prior work on redistribution and regulation (see Kuziemko, et al. (2015) and Aghion, et al., (2010) for references), work on business legitimacy and on the informational side of State capacity is more limited. Accordingly, we provide a selective review of the previous literature on these topics and some background information on private-public sector meetings. Finally, we present a simple model where beliefs about the honesty of the elites are important in determining policy preferences.

#### 2.1. Previous work (selective)

firms should endeavor to provide more transparency in their interactions for public consumption. Audio or video recordings of interactions should be maintained as part of the public record."

<sup>&</sup>lt;sup>7</sup> See Berdejó and Chen (2012), for a review on priming. For the purposes of this paper, we are following their definition: "Priming is a cognitive process, in which media information increases temporarily (i.e., primes) the accessibility of knowledge units in the memory of an individual, thus making it more likely that these knowledge units are used in the reception, interpretation and judgment of subsequent external information."

The study of State legitimacy has a long tradition in political science and sociology. The related concept of business (or commercial) legitimacy, is a question less often studied, certainly in Economics.<sup>8</sup> There is, of course, a tradition that goes back to de Tocqueville, and especially to Max Weber, that emphasizes the peculiarities of the American economic system where the preeminence given to business in the US occupies a central role.<sup>9</sup> Our conjecture is that business legitimacy stems from the efficiency, and also the honesty of a few, visible, business leaders.<sup>10</sup> It is possible that there are differences over time in the type of businesspeople that are seen to prevail in a country, depending on general economic performance and their salience in the media. Similarly, one might expect businesspeople in developing countries to be more active in "crony" sectors than those in rich countries.<sup>11</sup>

Previous work has emphasized the importance of State capacity. For example, Wade (1990) focused on the role of government intervention during the East Asian industrialization, in particular on the "synergies between markets and public administration". In a study of the computer industry in Brazil, Korea and India, Evans (1995) argued that the most effective bureaucracies were those that were both autonomous from interest groups and enjoyed deep links with the private sector (i.e., they were "embedded"); see also Rothstein (2011) for a discussion on quality of government. In the same tradition, we view private-public sector meetings as a key input into the production of informed bureaucrats. De-legitimized businesspeople, however, may be less useful as a source of information.<sup>12</sup> Accordingly, we expect the public to be less inclined to use meetings, both because they are not a source of useful information and because they may suspect that, even if they happen to have information, inefficient businesspeople may have more to gain from offering bribes than by surrendering it. Economists have emphasized other dimensions of State capacity. One tradition, for example, is focused on the ability to enforce contracts and collect taxes (e.g., Besley and Persson 2009), while another focuses on physical presence (e.g., Acemoglu, García-Jimeno, and Robinson, 2014; for an example where technology increases capacity, see Muralidharan, Niehaus, and Sukhtankar 2014). Some of the work has emphasized the connection between State capacity and military needs (e.g., Tilly 1992; Besley and Persson 2009; Gennaioli and Voth 2015) or the size of firms (Kleven, Kreiner, and Saez 2016). There is also work emphasizing the complementarity between State building and good institutions (e.g., Acemoglu 2005; Dinecco 2009).

Documenting how low trust in business elites lowers the demand for private-public sector meetings is important because it suggests a possible explanation for the existence of inefficient regulations in developing countries with weak private sectors. Indeed, some of the regulations present in poor countries are so obviously

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<sup>&</sup>lt;sup>8</sup> A large literature in sociology studies different forms of legitimacy, as well as strategies for maintaining it (see, for example, Suchman 1995; for an example in the institutional tradition, see Powell and Di Maggio 1991). See also work in political psychology on "false consciousness" and system justification (for a review, see Jost, Banaji, and Nosek 2004).

<sup>&</sup>lt;sup>9</sup> For an illuminating discussion of how the "capitalist ethos" developed, and the role played by Benjamin Franklin as "the prophet of the American Dream", see Reinert (2015). There is limited evidence behind the idea of higher business legitimacy in the US than in Europe (but see Malach-Pines, et al. 2005)

<sup>&</sup>lt;sup>10</sup> Perhaps because people think using coarse categories (as in Mullainathan, et al., 2008) or in terms of metaphors (as argued by Johnson and Lakoff 1980).

<sup>&</sup>lt;sup>11</sup> Akerlof and Romer (1993), La Porta, Lopez-De-Silanes, and Zamarripa (2003), Morck, Wolfenzon, and Yeung (2005) and Khanna and Yafeh (2007) discuss the role of regulations and of corporate governance in the success of businesses that are inefficient and/or corrupt. Based on these ideas, *The Economist* magazine published a "crony-capitalism" index using data on billionaire wealth in sectors where there is a lot of interaction with State (see "Comparing crony capitalism around the world", May 5<sup>th</sup>, 2016).

<sup>&</sup>lt;sup>12</sup> The CFA Institute (2016) reports "Many of those we spoke with believe that in the years since the global financial crisis, the tendency has been toward less collaborative relationships between firms and those who regulate them, at least in part because of suspicions that the crisis was evidence of corruption of the public interest."

counterproductive that a reasonable explanation is simply ignorance on the part of the bureaucrats putting them in place. A standard explanation in Economics is that they are put into place by interest groups (see for example, Tullock 1967, Stigler 1971, Shleifer and Vishny 1994). But why would interest groups (businesses or bureaucrats) with specific knowledge choose forms of regulation that are ostensibly inefficient?<sup>13</sup> A more reasonable answer is that bureaucrats put in place bad regulations because they don't know better, and they can't talk to those that do know because voters would suspect they are taking bribes.<sup>14</sup>

There is a large literature on political influence through lobbies that act as intermediaries between firms and elected politicians. This line of work emphasizes the role of information, noting that spending on lobbying was 5 times larger than on campaign contributions. This multiple is reported in de Figueiredo and Cameron (2006) and corresponds to the US in the late 1990's. They stress, "Perhaps surprisingly, lobbying, not campaign contributions, absorbs the bulk of 'influence dollars' spent by special interest groups". They find evidence consistent with large increases in lobbying expenditures when the legislature is controlled by politicians with opposite views, which they interpret as evidence that, "biased groups must work harder to convince the legislature about policy relevant conditions". Recent work by Bertrand, Bombardini, and Trebbi (2014) reports evidence in support of the view that lobbyists provide firms access to politicians and politicians with access to expert information. We study another layer of this process, which consists on what people's beliefs are regarding the lobbying process, and how these beliefs may put a constraint on informed policy making and State capacity.

Finally, our paper contributes to a large literature on trust, (see for example, Knack and Keefer 1995; La Porta, et al. 1997; Guiso, et al., (2004, 2007); Aghion, et al., 2010; Algan and Cahuc 2010). Part of this work has focused on the different dimensions of trust (one example is work connecting trust to expectations of trust by Butler, et al., 2015, 2016). Our approach is to separate the role of generalized trust, trust in government officials and trust in business elites.

### 2.2. Public-private sector meetings

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<sup>&</sup>lt;sup>13</sup> That this is the case is clear from the abundant evidence gathered from work on the "tollbooth" variant of capture emphasizing the role of bureaucrats (see Djankov, et al. 2002). Coate and Morris (1995) is a classic demonstration that inefficient redistribution may be employed as long as it is "sneaky" (i.e., not apparent to the public).

<sup>&</sup>lt;sup>14</sup> For example, the owner of a factory might know the times at which delivery of key inputs is both convenient for suppliers, convenient for the factory and does not cause traffic congestion in the neighborhood. This information would be helpful to the public official in charge of regulating the times that trucks are allowed in the urban areas.

<sup>&</sup>lt;sup>15</sup> The theoretical literature goes back to work on information transmission by a biased party –"cheap talk"- by Crawford and Sobel (1982). For models where the biased party must pay, see Grossman and Helpman (2001) and Battaglini and Bénabou (2003). Blanes I Vidal, Draca, and Fons-Rosen (2012) estimate the value of connections to Senators and de Figueiredo and Silverman (2006) estimate the return to lobbying by universities.

<sup>&</sup>lt;sup>16</sup> The importance of trust is emphasized in Banfield (1958), Putnam (1993) and Fukuyama (1995). Arrow (1972) famously asserted "Virtually every commercial transaction has within itself an element of trust .... [and] much of the economic backwardness in the world can be explained by the lack of mutual confidence". See also Durlaf and Fafchamps (2004) for a review on social capital and the ways in which it has been measured. For a review of work emphasizing two-way causal effects between beliefs and institutions, see Alesina and Giuliano (2016).

As mentioned above, there is not a lot of work in economics describing public-private sector meetings.<sup>17</sup> For our purposes, two issues are important: a) the public sector sometimes seeks the input of private actors when it sets policy and b) the public has some concerns regarding these meetings and often tries to regulate them.

One simple distinction is between official and non-official meetings (the former are those in which government agents act in an official capacity). Our informal review of the rules governing both types of meetings suggests that official meetings tend to be more regulated. Some appear to take place within pre-established public-private working groups. One example in the US is the Federal Advisory Committee Boards (FACA), which basically consists of taskforces established to solicit advice for the US President, or other agencies or officers of the federal government (Public Law 92-463). These taskforces have covered a wide variety of issues, from policies on organ donation to the design of the Department of Homeland Security (Ginsberg, 2009). As of 2008, there were 917 active FACA that gave advice to 50 federal agencies. Two noticeable FACA within the Department of the Interior that directly involve members of the industry are the United States Extractive Industries Transparency Initiative (USEITI) and the Royalty Policy Committee (RPC). USEITI is a group of representatives from the government, industry and civil society that implement and supervise a transparency program that deals with the revenues received and paid for oil, gas and mineral resources. The RPC is a committee that provides advice on royalty management and other mineral-related policies to the Secretary of the Interior. Its members include academic groups, representatives of the petroleum industry (such as The Independent Petroleum Association of America), and other stakeholders.

The idea of establishing committees that allow the government, in a structured way, to gather information from stakeholders to design better policy is not unique to the US. For example, in 2003 Brazil created a Council for Economic and Social Development, designed to allow consultation with members of the industry and civic society that could enhance the policymaking process (see Doctor, 2007). This took place *after* President Fernando Henrique Cardoso, in an effort to fight corruption, regulated meetings between private and public agents (from the federal government). Prior to the 2002 elections, decree (4.334/2002) established, among other things, that "The public agent must be accompanied of at least one more public agent or a member of the military during meetings with private-sector representatives."

Of course, there are official meetings that take place outside a pre-established public-private working group, particularly in the financial and defense industries, and these are regularly subject to public scrutiny.<sup>20</sup> The regulations vary across countries, but one theme in both industries is the existence of "blackout periods", where

<sup>&</sup>lt;sup>17</sup> We define a meeting as a gathering of two or more people that has been convened for the purpose of achieving a common goal through verbal interaction, such as sharing information or reaching agreement. Meetings may occur face-to-face or virtually (Elkhouly, 2013).

<sup>&</sup>lt;sup>18</sup> Many of these involve more ambitious structures that are often labeled "neo-corporatist". These are defined as "a form of governance in which organizations representing major economic interests, usually unions and employer's organizations, are given major, privileged opportunities to participate in policymaking in return for accepting responsibilities to assist the state in the governance of society" (Wilson, 2003).

<sup>&</sup>lt;sup>19</sup> The enactment of this decree was followed by ordinances (internal rules) in other entities of the Brazilian federal government. For example, the Health Surveillance Agency in its Ordinance 107/2014 stipulates that meetings between public and private sector agents have to occur in a special room and are recorded in video or audio files. Additional specific regulations regarding meetings are: 1.234/2012 (Ministry of Defense), 1.171/2004 (Ministry of Health), 579/2002 (Ministry of Integration).

<sup>&</sup>lt;sup>20</sup> For example, when some of the European Central Bank's top decision makers were criticized for meeting with asset managers and bankers in the days prior to making important decisions, an ECB spokesman explained "it was important for policy makers to understand financial markets, since this is how monetary policy is transmitted into the real economy." From "ECB officials met bankers before key decisions", *Financial Times*, November 3, 2015.

these meetings should not take place in the vicinity of a (visible) decision. The CFA Institute (2016) acknowledges the risk, but emphasizes the benefits from these interactions: "Despite the potential appearance of conflict of interest, the practitioners and regulators we spoke with are in general agreement that more interaction leads to better regulatory outcomes, perhaps in recognition of the inherent asymmetry of information between financial services firms and their clients and regulators".

## 2.3. A model of the demand for public-private sector meetings and taxation

In this game there are 3 stages and 4 players (nature, a businessperson, the public, and a delegate).

First Stage: In the first stage, the businessperson and the public play a simultaneous move game. The businessperson can decide to invest in becoming a "High quality" businessperson (to study and get training, which requires high effort  $e_h$ ), or a "Low quality" businessperson (exert low effort  $e_l < e_h$ ). Simultaneously "the public" decides whether to permit "many" meetings of his delegate with the businessperson or to limit them, allowing just few of them; the public must also set the income tax rate (for businesspeople; not the overall tax rate), which can take two values  $\tau_h$  or  $\tau_l < \tau_h$ .<sup>21</sup> The decision of the public about meetings is whether the probability of a meeting will be high or low: some meetings will always take place; the question is whether to allow some "extra" meetings.<sup>22</sup>

After the simultaneous decisions by the public and the businessperson, nature chooses a type  $\pi_h$  or  $\pi_l$  for the delegate, determining the quality of her information; in particular  $\pi$  will be the precision of the delegate's information. The probability of type  $\pi_h$  is q. At the same time, nature chooses whether a meeting will take place: if meetings have been permitted, a meeting happens with probability 1; if the public has decided that they will be few, a meeting happens with probability f < 1. If a meeting takes place, the businessperson learns the quality of the delegate (it is immaterial whether the public also learns it).

Second Stage: If no meeting takes place, nothing happens in stage 2. If a meeting takes place, the businessperson can offer a bribe; the delegate then has to accept or reject it. The bribe consists of a payment of B to the delegate, and she commits to increasing her optimal action (in the last stage) by 1 unit.

Prior to stage 3, nature draws a signal about the state of the world, which is observed by the delegate. The delegate receives a signal  $s = \omega + \epsilon$  about the true state of the world  $\omega \sim N(0,1)$ . The precision of the delegate's signal is larger if no bribe was offered: a delegate of type j = h, l receives information with  $\epsilon \sim N\left(0, \frac{1}{\pi_j}\right)$  if a bribe was offered, and  $\epsilon \sim N\left(0, \frac{1}{2\pi_j}\right)$  for z > 1 if the businessperson and the delegate collaborate. The signal is also known to the businessperson, but not to the public. The justification for this assumption is that the delegate receives information, which the businessperson and she can interpret, but that is harder for the public to understand.<sup>23</sup>

<sup>&</sup>lt;sup>21</sup> This simultaneity may reflect a more complex coordination game. In a sequential game, the businessperson could get training and "force" the public to allow meetings. We argue this can't happen because, for example, there are many businesspeople and a single businessperson has no incentive to deviate; a simultaneous game captures this.

<sup>&</sup>lt;sup>22</sup> This ensures that there will be at least some meetings involving low quality businesspeople. Otherwise any inference about what would happen in a meeting between a low quality businessperson and a delegate would be based on "off equilibrium" beliefs.

<sup>&</sup>lt;sup>23</sup> The assumption that the businessperson can observe the signal is to avoid an inference problem: when the delegate chooses (in the next stage) a policy action a, the businessperson must know what it would have been in the absence of a

The assumption that the signal has a lower precision (larger variance) when the bribe is offered is in line with the idea that if a businessperson meets with a regulator, either exchange of useful information takes place, or negotiations leading to the bribe take place, but not both. The meeting is used for one thing, or the other, but not both. This assumption will also play an important role in driving the results. To understand why, notice that since more information will make the policy better, the businessperson would in general like to collaborate with the delegate, but in that case the incentives of the "High quality" businessperson and the "Low quality" one would be the same in terms of offering the bribe or not, and multiplicity would not arise.

Third Stage: In the final stage (either after nature chose no meeting, or after the meeting took place) the delegate chooses a policy action  $a \in \mathbb{R}$ . As explained above, the exchange for the bribe is simple: the businessperson offers an amount of money B to increase the action a by 1 unit (we will specify payoffs later, but for now it suffices to say that the business person likes large a; say, a more favorable regulation). Figure 1 shows a timeline of the model.

Payoffs are as follows. Let k be a constant, x a technological parameter, and  $\tau$  the tax rate. A businessperson with education  $e_i$  and cost  $c_i$ , for i = h, l, who pays a bribe b (the bribe will be either b > 0 or 0), has utility:

$$u_{R} = (1 - \tau)(e_{i}(k - (\omega - a)^{2}) + xa) - b - c_{i}$$

The businessperson has a policy bias: whereas everybody wants the policy action a to match the state, so as to minimize  $(\omega - a)^2$ , the businessperson likes higher a. In particular, in the absence of the xa term, the a desired by the businessperson would be  $a = \overline{\omega}$  (for  $\overline{\omega}$  the expectation of  $\omega$ , given any information available). The education term  $e_i$  increases "honest income" which is defined as  $e_i(k - (\omega - a)^2)$ : if the action matched the state, income would be  $e_ik$ , but "bad policy" moves a away from  $\omega$ . The parameter x indexes the businessperson's preference for a biased policy. In particular, the optimal a for the businessperson would be  $a = \overline{\omega} + \frac{x}{2e_i}$ . We assume that taxes are spent in other areas of the economy; we could add a lump sum transfer to the utility of the businessperson, and all results would go through unchanged. The only relevant part of this assumption is that a higher tax hurts the businessperson (if a lump sum transfer is added, this would take place only through the cost of the increased distortion). Notice that the bribe is paid from "after tax" money (it's an expense that is not tax-deductible), and that the education cost is either nonmonetary (it is in "utility" terms), or a monetary cost paid from after tax money.

A relevant feature of the businessperson's preferences is that there is a complementarity between education and policy: more educated businesspeople like better policy more; put differently, a better policy (smaller  $(\omega - a)^2$ ) increases the incentives to acquire education.<sup>25</sup>

bribe, so as to "check" that the delegate indeed complied with her end of the deal (of increasing her otherwise optimal action by 1 unit). Alternatively, we can assume that by accepting the bribe the delegate commits to the action required by the businessperson (and there would be no inference problem); the results are unchanged in this case.

<sup>&</sup>lt;sup>24</sup> In this setting a is interpreted as any variable that businesspeople prefer to be set at a higher level than the rest of the population. It could be that higher a means lower regulation and  $\omega$  would be the "optimal amount" of regulation; or in an export oriented economy, a could be the exchange rate.

<sup>&</sup>lt;sup>25</sup> As an example, see Chang, Kaltani, and Loayza (2009), who find evidence of a complementarity between trade openness (policy) and education (i.e. the effect of trade openness on economic growth depends on the level of human capital investment).

The public cares about how "efficient" the businessperson is, and about the existence of bribes. For  $I_B(.)$  an indicator function of whether a bribe occurred (a function of all shocks and actions, that takes the value of 1 if a bribe happened), the utility function is (for a constant  $C > \tau_h$ ):

$$u_P = (1 - \tau)e_i(k - (\omega - \alpha)^2) - c_i + \alpha(\tau - C)I_B$$

Bribes distort the policy action and therefore reduce the "honest income"  $e_i(k-(\omega-a)^2)$  about which the public cares; in that sense, the public cares indirectly about bribes. But we assume that the public also cares directly about the bribes. One justification is that the public dislikes the existence of "unearned" income, or dishonest income, which arises with bribes (this would be similar to Alesina and Angeletos (2005b), where society dislikes differences in income arising due to luck), and therefore would like to punish those responsible for corruption. An alternative justification is that the public dislikes bribes because of reciprocal altruism (see Levine 1998 and Rotemberg 2008): the public dislikes income in the hands of those that have behaved unaltruistically towards them and bribes are one indicator of such low degree of altruism. By reducing the income of those deemed unaltruistic through taxes, the public's utility increases.

The parameters  $\alpha$  and C indicate how much the public dislikes bribes relative to "efficiency". The term  $C > \tau_h$  is a cost which is paid whenever a bribe happens; the term  $\alpha\tau$  increases the utility of the public, and increases the marginal utility of taxes when bribes happen. When we take the expected utility of the public, the indicator function becomes the probability that b = B (that there is a bribe), and the last term becomes  $\alpha P(b = B)(\tau - C)$ , so the public prefers a higher tax rate, the higher the probability of a bribe. Note that it is simple to interpret these preferences as "betrayal aversion" if we introduce a higher  $\alpha$  when meetings are allowed: the public dislikes scenarios where they trust businesspeople and allow meetings, only to have bribes exchanged. If that is the case, the public is better off not allowing meetings.<sup>27</sup>

The delegate is paid a fixed proportion p of the honest income  $e_i(k-(\omega-a)^2)$ , where p represents the power of the contract. This may reflect an actual contract where performance is rewarded, or some form of reputation whereby bureaucrats who do well don't earn more immediately but face better career paths in the future. In addition, she may also obtain bribes, so her payoff is:

$$u_D = pe_i(k - (\omega - a)^2) + b$$

We present now the main theorem that states the two equilibria of this model. Proofs of this result can be found in Appendix 1.

**Theorem 1.** There is an open set of parameters for which there are only two subgame perfect equilibria. In one of them the businessperson is "High quality" (high effort, and productive) and the public permits meetings. In the other, the businessperson is "Low quality" and the frequency of meetings is low (all unnecessary meetings are forbidden).

In the good equilibrium, since firms are productive, they reap the benefits of better policy and therefore do not offer bribes. In the bad equilibrium firms offer bribes to the low quality delegate, and not to the high quality delegate.

<sup>&</sup>lt;sup>26</sup> For a discussion of this mechanism see Di Tella and Dubra (2013) and Alesina and Angeletos (2013).

<sup>&</sup>lt;sup>27</sup> See Giannetti and Wang (2016) and Bohnet et al. (2008) for evidence of betrayal aversion in the US and other contexts. This formulation with different  $\alpha$  can also be obtained in a psychological games setting (à la Geanakopolos, Pearce, and Stacchetti 1989), in which a punch (the bribe) hurts more when the public expected honest behavior.

Because of the higher incidence of corruption in the bad equilibrium, the corporate tax (the tax to businesspeople, to the oligarchs) is higher than in the good equilibrium.

Additionally, with this theorem in hand we derive three straightforward features of the equilibria depicted that will guide most of the results in section 4. These refer to what occurs when we parameterize the model with the open set of parameters for which the two equilibria depicted in theorem 1 hold. Even though we assumed a particular functional form for the public's utility,  $(1 - \tau)e(k - (\omega - a)^2) - c$  can be interpreted as income (or consumption), and the results in the corollaries are relevant as long as the utility of the public is quasilinear in this argument. Proofs of this result can be found in Appendix 1.

**Corollary 1.a.** Given the quality of the delegate, the public gains more from limiting the amount of meetings when the businessperson's quality is low (relative to when it is high).

**Corollary 1.b.** Given the quality of the businessperson, the public gains more from limiting the amount of meetings when the delegate's quality is low (relative to when it is high).

**Corollary 2.** The public gains from setting high taxes only when both the delegate and the businessperson are low quality (otherwise the public gains from low taxes).

# 3. Empirical strategy and Data

# 3.1. Empirical Strategy

In our main survey we study the effects of four treatments: each subject taking the survey is treated twice (good or bad business and good or bad government). The objective of these treatments is to prime respondents to trust/distrust the business elites and trust/distrust the government, without affecting their views on other factors that might affect policy preferences.

Our two business treatments involve priming subjects during the administration of a standard survey with a short statement about the efficiency-honesty of US business leaders, together with a photograph of a wellknown business leader (Bill Gates) and some "questions" about the reason for this efficiency and honesty. For reference, the treatment had three parts. The first part introduced the question by explaining, "American business people are amongst the most successful in the world. Some of the most famous include Bill Gates (founder and CEO of Microsoft) and Steve Jobs, (founder of Apple, NeXT and Pixar), who have revolutionized the technology industry. In several other areas, such as biotechnology, entertainment, medical devices, and high-end machinery, US business people have also been at the forefront of innovation." This was followed by the second part: a picture of Bill Gates with the caption "Bill Gates, CEO and founder of Microsoft, a company that revolutionized the personal computer industry". The third part simply asked: "Why do you think American business people have been so successful?, a. It is due to the system: business people in the US are encouraged to work hard and can gain money and prestige by creating truly good products. b. It is a combination of the system interacting with exceptional individuals, amplified by the availability of capital that allows the successful to expand their business. Or c. It is due to the individuals: there are remarkable business people in the US, who are exceptionally creative and naturally hard working. Similarly, in the negative version of this treatment, subjects read a statement about the involvement of some well-known business leaders in sophisticated economic crimes (more precisely, instances of business leaders capturing the government) accompanied with a picture of Ken Lay and a set of questions (for a full description of the survey see the Appendix). We call these business treatments the High Business and the Low Business treatment.

Our government treatments involve another layer of priming during the administration of the survey, this time with a statement, photograph and questions about honest-efficient government officials or corrupt government officials (more precisely, instances of government officials extorting payments from businesses).<sup>28</sup> We call these the *High Government* and the *Low Government* treatment. To rule out order effects, in some cases we first showed individuals the business treatment and then the government treatment, and in some cases the other way around.<sup>29</sup> There is also a control group, which consists of individuals that were presented with no treatment at all (i.e., their survey did not include reports and questions about businesspeople or government officials).

There are two obvious limitations of these treatments. First, we highlight both the honesty and the efficiency of business leaders (government officials) in the *High Business* (*High Government*) treatment. In section 5.1 we observe how this increases trust in the business elites (in the government), but can't assess whether this increase in trust is due to the honesty or the efficiency channel (these are indistinguishable in our model). Second, there could be many ways to prime individuals to distrust the business elites and the government. Our approach involves a combination of a statement that emphasizes only one side (positive or negative), a picture of someone that can be seen in this same light, and questions about the reasons for this.<sup>30</sup> Note that bribes could occur due to business leaders capturing the government (as emphasized in the *Low Business* treatment), or government officials extorting payments from businesses (as in the *Low Government* treatment).<sup>31</sup>

Figure 2 shows the flow of the survey. We first include basic questions (age, gender, beliefs about the poor and rich, trust, etc.). Second, we treat our subjects with the first set of reports and questions. Third, we ask them a brief set of questions regarding their policy preference in order to separate the first treatment from the second. Fourth, we show them a second treatment (if the first treatment was a business treatment, the second treatment is a government treatment and vice versa). Fifth, we ask them a different and more comprehensive set of questions regarding their policy preferences over meetings, taxes, and regulation.<sup>32</sup>

The main regression specification is the following:

```
Policy preference<sub>i</sub> = \beta_1(High\ Bus\ \&\ High\ Gov)_i + \beta_2(High\ Bus\ \&\ Low\ Gov)_i + \beta_3(Low\ Bus\ \&\ High\ Gov)_i \\ + \beta_4(Low\ Bus\ \&\ Low\ Gov)_i + \gamma X_i + \epsilon_i
```

<sup>&</sup>lt;sup>28</sup> We performed two additional treatments, showing businesspeople or government officials that have been caught for corruption (we call them treatments with punishment).

<sup>&</sup>lt;sup>29</sup> Because there are no significant "order" effects (results available upon request), in this version of the paper we present the treatments "pooled". This means that an individual treated first with *High Government* and then with *Low Business* is considered to be in the same category as an individual treated with *Low Business* first and with *High Government* later.

<sup>&</sup>lt;sup>30</sup> The treatment to prime distrust followed by Kuziemko, et al., (2015) involves two steps. First, it asks subjects 5 questions connected (broadly) to corruption: about the Wall Street bailout, the supreme Court's decision to remove the limits to corporate contributions to politicians in Washington, the effectiveness of the federal government in limiting fraud, the government's administration of economic and military aid to foreign countries, and the extent to which politicians work to enrich themselves and their largest campaign contributors instead of benefiting the majority of citizens. It then asks subjects about the US' rank in terms of corruption amongst countries with similar level of development, followed by information on its true rank (at the bottom).

<sup>&</sup>lt;sup>31</sup> We introduce a question to gauge what people think goes on at meetings that take place between business leaders and government officials. We check that these treatments lead people to believe more strongly that what goes on at these meetings is mainly exchange of bribes and favors, relative to when treated with *High Business* or *High Government*. Results are available upon request.

<sup>&</sup>lt;sup>32</sup> The basic structure of the survey, and its main questions with all treatments can be found in Appendix 3.

(High Bus & High Gov)<sub>i</sub> is a dummy variable equal to 1 if individual i was treated with High Business and High Government (0 otherwise), and analogous definitions apply for the other treatments. The omitted group is the control group.<sup>33</sup> For the case of trust in business elites (analogous for the case of trust in government), we are interested in the following linear combination of regression coefficients:

- a)  $\beta_1 \beta_3$ : effect of trust in business elites conditional on *High Government*.
- b)  $\beta_2 \beta_4$ : effect of trust in business elites conditional on *Low Government*.
- c)  $\frac{(\beta_1 \beta_3) + (\beta_2 \beta_4)}{2}$ : effect of trust in business elites.

The reason for focusing on these linear combinations of coefficients (rather than the regressions coefficients capturing the effect of the treatments relative to the control group) is fourfold. First, if we show individuals a negative report about business elites in the US (analogous for government), we can't be sure that we are actually priming individuals to distrust the business elites as this would depend on their prior. If their prior is that businesspeople are even more corrupt than what was stated in the report, then our treatment may actually prime people to trust the business elites more. What we can be sure is that those primed with High Business received a more favorable priming on business elite's efficiency-honesty than those primed with Low Business, and so we focus on this comparison. Extreme negative priming could overcome this problem, but as previous work has emphasized (e.g. Day and Fiske 2017), this is not feasible as overly biased report may lead individuals to distrust the survey, feel they are being manipulated, etc. Second, if we compare our treatments directly with the control group we need more power to reach definitive conclusions, than if we compare 'opposite' treatments (i.e. High Business vs Low Business). This is particularly relevant as we are avoiding overly biased reports that may appear manipulative; or very long reports, with many windows, that could potentially give more power (see Srull and Wyer 1979 that finds a larger effect when the total number of primes is increased) but can create an imbalance in the amount of time and effort that respondents in the treatment and control groups devote to the survey. Third, we are interested in looking at effects of trust in business elites, conditional on trust in government. For example, as our models predicts (see corollary 2), the effect of trust in business elites on preferences for taxing the rich may be different depending on how much people trust the government. To test this hypothesis, we look at tests (a) and (b) indicated above. Fourth, those in the control group were exposed to a somewhat shorter survey than the other respondents, so the comparison is not as straightforward. An alternative that we considered was to use a 'placebo' treatment (showing a report about something totally unrelated) but this introduced other concerns. Our approach, studying linear combinations, avoids these problems.

### 3.2. Survey implementation

The survey was implemented through Amazon's Mechanical Turk, an internet-based market for tasks. There are some advantages in online experimentation as there is no need to physically connect to subjects and compensate them for their travel (this and other aspects of online labor markets are reviewed in Horton, Rand, and Zeckhauser, 2011). They have been used to study several questions in economics, including the effect of peers' wages on job satisfaction (Card, et al. 2012), the effect of inequality on preferences for redistribution (Kuziemko, et al. 2015) or views about social preferences (Weinzierl, 2014 and Saez and Stantcheva, 2016).

<sup>&</sup>lt;sup>33</sup> We estimate reduced form equations (as in Kuziemko, et al., 2015). This is the most conservative approach. While we provide evidence that the treatments only affect the most relevant dimensions of trust, it is impossible to rule out other channels through which the treatment might affect the outcomes of interest (e.g. opinions about inequality, etc).

In our case, MTurk was used to attract subjects by offering a small reward (1 dollar) for taking a brief survey (less than 10 minutes, approximately) to "help us learn more about the relationship between politics and government in America". We explained participation was anonymous.<sup>34</sup> We followed many steps to ensure high quality responses. Besides restricting the sample in ways that will be explained below, we recruited only individuals with a Human Intelligence Task approval rate equal to or higher than 80% and we set visibility to "Private" so that only workers that meet this qualification can preview our survey. To check perceptions of bias in our survey, we coded the comments that respondents made at the end of the survey and found that only a small fraction (0.5%) stated that the survey was biased. To discourage respondents from skipping some questions, a pop up window appeared whenever an individual intended to go to the next window before answering all the questions in the current window. The pop up indicated the number of questions that were not answered and whether the respondent wanted to continue without answering all the questions. We also conducted our survey on a single wave on late November 2015.

The survey was taken by 9,217 individuals (the attrition of subjects who started the survey but did not finish it was 2%) and Table 1 presents a complete list of variable definitions. We collected data on the time spent by subjects on each of the windows that were presented during the survey. We note that several subjects took far less time than the minimum amount of time required to read the questions. To get potentially meaningful answers we restrict the sample in two ways. First, we consider only individuals that took at least 3 minutes to complete the survey (not considering the time spent in the treatment window). Second, among these individuals we consider only those who spent at least 3 seconds looking at each of the treatment windows (this last condition doesn't apply to individuals assigned to the control group). The total number of observations after applying these two filters is 7,674. We included two treatments where punishment was made salient (of bad businesspeople or officials), and without these observations our resulting sample includes 5,974 subjects. The mean number of minutes spent answering the survey is 7.3 minutes.

Table 2 presents summary statistics. The first column focuses on the general sample. Column 2 and 3 show summary statistics splitting our sample in Democrats and Republicans. This split is particularly useful, as we express some of our results in terms of the degree to which the treatments close the gap between Democrats and Republicans. We broadly see that Democrats tend to favor (relative to Republicans) less contact between businesspeople and government officials and more regulation. Focusing on the outcome questions before the second treatment, we see that Democrats have more negative views about meetings taking place between government officials and businesspeople, they want more general regulation on US businesses, and more wages and prices regulation in the economy. Regarding the outcome questions after the second treatment, we see that Democrats have more negative views about competition in the economy, want more government responsibility to ensure that everyone is provided for, are slightly less likely to believe that 'In democracy, the economic system runs badly', prefer a more progressive tax scheme (more taxes to the rich and less to the poor), and are more likely to believe that fraud was one of the central reasons of the 2008 financial crisis.

<sup>&</sup>lt;sup>34</sup> We allowed individuals up to 50 minutes to complete the survey and were paid automatically after 8 hours of completing the survey.

<sup>&</sup>lt;sup>35</sup> 29 individuals had corrupted data, so they were not considered in our sample.

<sup>&</sup>lt;sup>36</sup> There is also a very short unrelated experiment that was presented after all our survey was completed, which we call the candy experiment. It was not considered when restricting the sample. The survey can be followed interactively following this link: https://hbs.qualtrics.com/SE/?SID=SV\_ahE7rZtC1sCrlnT.

<sup>&</sup>lt;sup>37</sup> Results for these treatments are available upon request.

Columns 4-6 show that our sample is fairly representative of the US population in terms of demographics (although our sample is younger and more educated) and in terms of policy preferences.<sup>38</sup> In column 4 we compare our sample with that of Kuziemko, et al., (2015) who also conduct their study through Amazon's MTurk. The main conclusion comparing column 1 and 4 is that the populations are strikingly similar. Kuziemko, et al. (2015) collected their sample between January 2011 and August 2012, and at least with respect to observables, it is quite similar to the sample we collected in November 2015. In column 5 we compare our sample with the US sample of the World Value Survey (6th Wave, 2010-14), which has been widely used in politics and economics. With respect to similarity in demographics, the two exceptions are age and education (our sample being younger and more educated). In particular, the mean age in our sample is 34.9 while in the WVS is 46.5. The fraction of people with a postgraduate degree is pretty similar in the two samples (13.3% in our study and 11.5% in the WVS) but there is a large difference in the fraction of people with no college degree (39.3% in our sample and 63.7% in the WVS). With respect to policy preferences, the two dimensions considered show very similar patterns.<sup>39</sup> When individuals are asked about competition on a 0-10 scale (with 0 on absolute agreement with "Competition is good. It stimulates people to work hard and develop new ideas" and 10 on complete agreement with "Competition is harmful. It brings out the worst in people"), the mean response in our survey was 2.6 while in the WVS is 2.7. When asked whether they agree more with "People should take more responsibility to provide for themselves" or "The government should take more responsibility to ensure that everyone is provided for", we obtain a mean response of 3.9 while in the WVS is 4.2. Finally, in column 6 we show results from the 2015 American Community Service which comprises a well-known big and representative sample of US population. By comparing it to our sample, we again see that our sample seems comparable, with the exception of age and education.

In Table 3 we look at the distribution of respondents across US states to assess the sample representativeness in this dimension. The distribution closely follows that of the American Consumer Survey 2015. We note, however, that our survey is conducted hiring voluntary participants. Thus, those who choose to participate may be different from those that do not (even if they are identical in terms of observables).

Table 4 presents the data summarized across treatments. It suggests that, at least with respect to observables, the data are balanced across treatments suggesting a successful randomization.

#### 4. Results

#### 4.1. Taxes

In Table 5, we study the effect of trust in business elites on preferences for redistribution. Following Kuziemko, et al. (2015), we focus on taxes on the top 1% (results for household that are in other parts of the income distribution can be found in Appendix 2, Table A1). As reference, note that Kuziemko, et al. (2015) explicitly implement a "distrust treatment" in a supplementary survey by asking questions "designed to elicit negative reactions regarding the government" (see footnote 30 above). They showed that subjects primed to distrust the government decreased their support for transfer programs to the poor and that their "support for top tax rates

<sup>&</sup>lt;sup>38</sup> Note that we are discussing the representativeness of the MTurk sample in the context of the US. Professional companies may be necessary to conduct surveys in other countries such as in Alesina, Stantcheva, and Teso (2016).

<sup>&</sup>lt;sup>39</sup> The variables *Trust* and *Market\_Bad2* were constructed using two identical questions that are asked in the WVS. However, we used a different scale than that of the WVS which prevents the comparison of responses in these two dimensions. The reason why we used a different scale is that in all the questions that an individual had to indicate his relative agreement/disagreement with a statement we used an homogeneous 0-10 scale.

generally falls as well (though only some of these effects are significant)."40 The mechanism behind this result is that subjects may be "skeptical about the government's ability to redistribute effectively." Our model emphasizes a different mechanism behind people's unwillingness to redistribute: they respect the rich. In other words, the demand for taxes on the top 1% is driven by trust in business elites and it has the opposite sign (more distrust *more* taxes).

We regress the preferred tax rate on the top 1% on the treatments (and a constant term) in column 1, include a set of demographic controls in column 2, and political preferences and pre-treatments beliefs in column 3.41 We first note some interesting correlations. First, beliefs about the rich and about the poor are strongly correlated with preferred taxes: a more favorable view about the rich, and a less favorable view about the poor, correlate with a lower preferred tax rate on the top 1%. Believing that poverty is a result of lack of effort is associated with a preferred tax rate on the top 1% that is 3.9 percentage points lower (which amounts to 44% of the gap between self-identified democrats and republicans on this question). The belief that the rich amassed their wealth because they made an effort is associated with a preferred tax rate on the top 1% that is 7.2 percentage points lower (which amounts to 81% of the gap between self-identified democrats and republicans on this question). Even controlling for these beliefs, support for Obama in the 2012 election correlates with higher desired tax rates at the top.

In Table 5, we find that the effect of trust in government on taxes (defined as  $\frac{(\beta_1-\beta_2)+(\beta_3-\beta_4)}{2}$ ) is negative but not statistically significant. In contrast, the effect of trust in business elites  $(\frac{(\beta_1-\beta_3)+(\beta_2-\beta_4)}{2})$  is negative and significant. The causal impact implies an increase of 1.2 percentage points (see column 3). Since the average desired tax rate at the top for Democrats in our sample is 37.6%, while for Republicans it is 29%, the treatment closes almost 14% of the gap between the two parties.

We can also exploit the 2x2 design and study how these two dimensions of trust interact in the determination of policy preferences. Conditional on high levels of trust in government, there is no effect of trust in business elites on taxes at the top. In contrast, lowering trust in business elites when trust in government is low leads to a significant increase of almost 2.4 percentage points in the desired tax on the top 1%, which is double the size of the unconditional effect. The mean of the control group is 34.7 so the effect is non-negligible: it amounts to 27% of the gap between the average Democrat and Republican in our sample.

Lowering trust in government has no discernible effect on desired taxes. Interestingly, the estimate is similar, both in terms of sign and significance, to what was uncovered by Kuziemko, et al. (2015). This result is driven by the non-significant result we find when we condition on *High Business*. In contrast, lowering trust in government when trust in business elites is low leads to a 1.8 percentage points *higher* desired tax rate on the top 1%. Our interpretation of these results involves the public's direct distaste of bribes. The public wants to punish businesspeople by raising taxes when there are bribes, which in equilibrium only happen when there is low quality of both the delegate and the businessperson (corollary 2). Put differently, our model suggests that people react to the possibility of bribes being exchanged, which is most likely to happen when they observe

<sup>&</sup>lt;sup>40</sup> They study four questions. Lower trust in government causes an increase in the desired tax on the top 1% of 0.49 percentage points (with a standard error of 1.326). The coefficients on other three outcome variables are negative. They are support for a tax on millionaires, whether respondents support an increase in the estate tax and whether respondents want to petition their senators to increase the estate tax. This last result is statistically significant (they are 6% less likely to say they are willing to do it).

<sup>&</sup>lt;sup>41</sup> Results are robust to dropping the post treatment variable *Obama*, which measures relative support for Obama in 2012.

both Low Business and Low Government: relative to the control group, this combined treatment leads subjects to increase their preferences over taxes on the top 1% by 1.4 percentage points.

In Appendix 2 we focus on preferences for taxes on other groups in the income distribution. We find broadly similar results for desired taxes on the next top 9% in Table A1 (which completes the top 10% of the income distribution). When one looks at preferences for taxes over the next top 40%, and the bottom 50% (poorest), the treatments have basically no significant effect. We see this evidence as consistent with our model, where taxes are a way of punishing businesspeople, and not of redistributing income.<sup>42</sup> It's also consistent with the historical evidence gathered in Scheve and Stasavage (2016). These authors argue that "societies do not tax the rich just because they are democracies where the poor outnumber the rich or because inequality is high. Nor are beliefs about how taxes influence economic performance ultimately decisive. Societies tax the rich when people believe that the state has privileged the wealthy, and so fair compensation demands that the rich be taxed more heavily than the rest".

# 4.2. Regulation

While there is only a small amount of prior work (although rapidly growing) on taxation at the very top, there is a lot of previous work on regulation. A good example is Aghion et al. (2010), which uses data from the World Values Survey (WVS) to present a negative correlation between measures of trust and variables that are proxies for the demand for regulation in a cross section of OECD countries and transition economies. We can repeat their results using WVS data, but restricting attention to only within the US (given that this is where we recruit our MTurk sample). In the first column of Table 6 we present the correlation between Trust in Government with the different measures used by Aghion et al. (2010) to capture the demand for regulation. Consistent with that paper, the first three rows reveal negative coefficients (although the first two are insignificant). Since data related to trust in business elites is also available in the WVS, we can repeat the exercise using this dimension of trust. We note that all these measures of regulation are strongly negatively correlated with Trust in Business Elites. In the next two columns of Table 6 we include both variables (Trust in Government and Trust in Businesses Elites) in a horserace. There is a negative correlation between Trust in Business Elites and the three measures used to capture demand for regulation, even after controlling for Trust in Government, suggesting that they capture different dimensions of trust. The connection between these measures of regulation and Trust in Government is weaker. We see these results as consistent with our hypothesis that opinions about business elites (and more broadly, about the rich) play a role in the demand for policies.

In order to link our results to prior work, we included these three questions from the WVS in our survey and studied if these correlations involve a causal relationship. We also included a question on whether subjects want to give discretion to government officials (which is not in the WVS, but is helpful for the distinction we want to draw as it is expected to be directly caused by trust in government).

The results, which are presented in Panel B of Table 7, are consistent with the correlations in Table 6. Column 1 shows that trust in business elites has a negative effect on a subject's beliefs about whether competition is bad, while trust in government has no effect (consistent with row 1 of Table 6).<sup>43</sup> Second, column 2 shows that

<sup>&</sup>lt;sup>42</sup> The fact that treatments had no effect on taxes on the next 40% and bottom 50% appear not to be caused by a lack of attention in this question: the correlations of preferred taxes on the bottom 50% and *Poor didn't make an effort*, *Rich made an effort*, and *Obama* are highly significant and with the expected sign (see Table A1).

<sup>&</sup>lt;sup>43</sup> Regarding the magnitude of the effects, we note that the effect of trust in business elites is equal to -0.159 which in terms of the control group mean is -6%. Using the answers to this question in the WVS (where the 1st position

trust in business elites causes individuals to say the government should take less responsibility to ensure that everyone is provided for, conditional on the *Low Government* treatment. Unconditional trust in government appears to play no role. Third, column 3 shows that both trust in business elites and in government lead individuals to have more positive views about the economic system in democracies. This is also consistent with the WVS results (row 3 of Table 6). In the last column, we study the new variable *Discretion2* and note that, as expected, more trust in government causes subjects to want to give more discretion to policymakers. The effect of trust in business elites is much weaker statistically (as expected given the more indirect connection). The effects of trust in government (positive and significant) and trust in business elites (negative) on the demand for discretion is different at the 1% level of significance.

We note the patterns displayed by the answers given by subjects primed with trust about government (and business), are broadly similar to those displayed by those answering the questions included in the WVS which were designed to capture trust in government (and business). This provides some support for our interpretation of the treatments as affecting trust (see also section 5.1. below, which has more direct evidence). Finally, we note that our results reinforce the view that trust in business elites and in government are different concepts, as they affect demand for regulation differently (e.g. panel B, column 4).

## 4.3. Meetings

In Table 8 we focus on *Meetings\_Good2*.<sup>44</sup> We regress it on only the treatments (and a constant term) in column 1, include a set of demographic controls in column 2, and political preferences and pre-treatments beliefs in column 3.<sup>45</sup> Before discussing the coefficients on the treatments, we note some interesting correlations between the outcome variable and the controls. First, in column 3 general trust (we used the same question that is used in the World Value Survey to define this variable) is positively correlated with a more favorable view of meetings, as one would have expected. Second, both beliefs about the rich and about the poor are correlated with *Meetings\_Good2* with the expected sign. A more favorable view about the rich (belief that rich people in the US are rich mainly because they made an effort), and a more negative view about the poor (belief that poor people in the US are poor mainly because they did not make an effort), correlate with a more favorable view of meetings. It is interesting to note that beliefs about the rich are correlated with policy preferences even after controlling for beliefs about the poor. Third, being closer to the Democrats has a negative correlation with preferences for meetings.

The main result of this sub-section is that trust in business elites and trust in government cause subjects to support politicians that favor a closer private-public sector connection. To assess these causal effects, we look at the linear combination of the coefficients described in section 3.1:  $\frac{(\beta_1-\beta_2)+(\beta_2-\beta_4)}{2}$  for trust in business elites and  $\frac{(\beta_1-\beta_2)+(\beta_3-\beta_4)}{2}$  for trust in government. We find that the effect of trust in business elites is equal to 0.429 (column 3). Since Republicans in our sample want more public-private sector proximity than Democrats (4.2)

corresponds to the country with the highest value of *Competition\_Bad2*), US is in the position 41 (out of 61 countries). If we decrease its value by 6%, we reach the 47<sup>th</sup> position (Armenia).

<sup>&</sup>lt;sup>44</sup> Similar results obtained using *Meetings\_Good1*. We elicit respondent's preferences for private-public sector proximity after each of the two treatments. After the first treatment, respondents are asked whether they think that meetings between government officials and businesspeople consist mainly in exchange of bribes or information (*Meetings\_Good1*). After the second treatment, respondents are asked whether they support a politician that is against or in favor of these meetings (*Meetings\_Good2*). As explained in the survey design section, throughout the paper we focus on measures elicited after the two treatments.

<sup>&</sup>lt;sup>45</sup> In column 3 we add the variable *Obama*. Results in column 3 are robust to dropping this control.

vs 3.6), we find that the effect of trust in business elites amounts to 82.5% of the gap in *Meetings\_Good2* observed between the average Democrat and Republican in our sample. The effect of trust in government is equal to 0.559 (column 3), which amounts to 107.3% of the Democrat-Republican gap. The interpretation given in our model to this result is that both trust in business elites and in government affect State capacity (through the ability to hold meetings).

To check if trust in business elites has a positive effect on preferences for meetings ceteris paribus the level of trust in government (corollary 1a), we perform two hypothesis tests over the estimated coefficients, as described in section 3.1. First, we compare the treatment coefficients for individuals treated with *High Business* relative to individuals treated with *Low Business*, when both groups were treated with *High Government*. The difference in coefficients is positive and statistically significant (0.534 in column 3). It suggests that, conditional on a *High Government* treatment, individuals have stronger preferences for allowing meetings when treated with *High Business* than with *Low Business*. The effect of trust in business elites (conditional on *High Government*) is equivalent to an increase in support of meetings of 14% (in terms of the control mean). The second test involves conditioning on *Low Government*. Qualitatively, similar results obtain.

To check whether the honesty of public officials has a positive effect on preferences for meetings ceteris paribus trust in business elites (corollary 1b), we perform similar tests. First, we compare the treatment coefficients of individuals treated with *High Government* relative to individuals treated with *Low Government*, when both groups were treated with *High Business*. The difference in coefficients is positive and statistically significant (0.663 in column 3). To put these numbers in perspective, the effect of trust in government measured this way (conditional on *High Business*) amounts to an increase in support of meetings of 17% (in terms of the control mean). Qualitatively the same results obtain when one conditions on *Low Business*.

There is some suggestive evidence that the effect of trust in business elites on meetings is stronger when trust in government is high, although the result is not robust.<sup>46</sup> This hypothesis test compares the effect of trust in business elites, conditional on being treated with *High Government*, relative to the effect of trust in business elites conditional on being treated with *Low Government*. The differential effect is positive (0.209 in column 3), so trust in business elites seems to have a greater effect in scenarios where trust in government is high (relative to those where it's low), although this difference is not statistically significant. In as much as that effect is present, it suggests that trust in business elites and government are complements in this setting.

# 5. Supplementary survey

We ran a shorter, supplementary survey on a smaller sample during November 2016 with the objective of measuring the "first stage" of our two treatments and complement our approach by using a different question on taxes. The title and description of this survey are identical to those of our main survey, with two differences: we now paid \$0.6 to each participant and described the survey as taking 6 minutes approximately (instead of 1 dollar and 10 minutes). The survey is also identical up to the treatment windows.<sup>47</sup> We then showed an

<sup>&</sup>lt;sup>46</sup> More generally, results indicate that the first derivative with respect to both arguments (trust in business and in government) is positive, and so is the cross-partial (although non-significant). Formally, we are testing *High Business* | *High Government - Low Business* | *Low Government - Low Business* | *Low Government.* The inequality holds when the test is performed in each of the three specifications in columns 1-3, and the p-values are: 0.12 (column 1), 0.13 (column 2), 0.12 (column 3).

<sup>&</sup>lt;sup>47</sup> The survey instrument can be found in Appendix 4. To look at the survey interactively:

"attention check" question to enhance the accuracy of the responses (we use the same design as Alesina, Stantcheva, and Teso, 2016, who explain that Meade and Craig, 2012 show how these types of questions are helpful both in identifying careless respondents as well as enhance respondent's attention). Only 0.82% of the respondents reported inattention during our survey. The survey then asks the new outcome questions: a multipart opinion question and a donation.

# 5.1. First stage: The Effect of the Treatments on the Dimensions of Trust

The new (multipart) outcome question first asked subjects their level of trust in nine organizations: local government, major companies, the police, national government, banks, the press, armed forces, the courts, and their neighbors. This is helpful in assessing the "first stage" and corroborate that our treatments mainly impact the relevant dimensions of trust. We did not include this question in our main survey because individuals might feel manipulated if we showed them a positive/negative text about business and then ask them directly what level of trust they have in business. This evidence is helpful because in our priming exercises it is hard to pin down treatments that narrowly affect a given dimension, without affecting other related dimensions that involve other causal mechanisms. We had only some suggestive evidence that our treatments corresponded to priming individuals to distrust business elites and government (as discussed in section 4.2.). It is also helpful to learn about the size of the effects in the first stage and to separate the two dimensions of trust.

Figure 3 summarizes the results (see Table A2 for details). They support our claim that changes in our measure of trust in business elites captures dimensions of trust related to major companies, and not something else (it is the only level of trust that is statistically significantly affected at the 5% level). Also, its impact equals a 7.9% change in the level of trust in major companies, measured in terms of deviations from the control group mean (40% of the gap in this question between Clinton and Trump supporters in the control group). Another take on the size of this effect is that it amounts, approximately, to the mean difference in trust in major companies between the US and Spain.<sup>48</sup>

With respect to the effect of trust in government we see that this is associated with changes in the levels of trust regarding the national government and the courts. To get an idea of the magnitude of these results, they correspond to a 9.5% change in the level of trust in the national government and 7.8% in trust in courts, both measured in terms of deviations from the control group mean (151% and 268% of the gap in this question between Clinton and Trump supporters in the control group). It also amounts, approximately, to the mean difference in trust in Government between the US and Libya.

We conclude that our business treatment significantly changed trust in major companies *without* changing other dimensions of trust. It is therefore reasonable to assume that other, more distant, beliefs are also unaffected,

https://hbs.qualtrics.com/SE/?SID=SV 3NPCYdpcbln07Ix. Besides the control group we included the following treatments (always showing the government treatment first): 1) High Business and High Government; 2) High Business and Low Government; 3) Low Business and High Government; 4) Low Business and Low Government; 5) High Business; 6) Low Business.

<sup>&</sup>lt;sup>48</sup> This exercise could be carried out in different ways. Here we look at the impact of Trust in business elites on the level of trust in Major Companies measured in standard deviation units. Then we apply this difference to the mean level of trust in Major Companies for the US in the last wave of the WVS (with the standard deviation of the US in that dataset) and find the closest country next to this new level. Note that in the WVS there are only four possible responses, so we coded "A great deal of confidence"=4, "Quite a lot"=3, "Not very much"=2, and "None at all"=1).

so that the treatment isolates the causal effect of changing trust in business on policy preferences. The same is true with respect to our government treatment.

Comparing the effects of the two treatments, we note that they impact differently. Moreover, the impact of our two "trust" treatments on trust in government is different at 1% level of significance (in the expected directions). The same is true with respect to trust in courts. The impact of the two treatments on trust in major companies is different at 12% level of significance (in the opposite direction, as expected).

### 5.2. Actions vs Behavior, Mechanism

The new donation question asked individuals to vote whether they wanted a donation to be made either to Citizens for Tax Justice, or The American Red Cross, or none. We told them that we would donate \$200 to the organization with the highest number of votes (which we did). We explained that Citizens for Tax Justice is "an NGO that seeks to require the wealthy to pay their fair share; it is primarily concerned with federal tax policy in the US and its mission is to give ordinary people a greater voice in the development of tax laws" and that The American Red Cross is "an NGO that seeks to provide humanitarian help; it is primarily focused on disaster relief and emergency assistance within the US". Additionally, we included the option of not participating in the voting at all ("I don't want to vote"). Although this vote is somewhat indirect (for example, it requires some trust in these intermediate organizations) we thought it would provide some useful data regarding subjects' preferred policies.

In Table 9 we present the results of a multinomial logit. We are particularly interested in the impact of trust in business elites and trust in government in the log odds ratio of voting for Citizens for Tax Justice relative to voting for The American Red Cross. The results qualitatively replicate what we found in section 4.1. Our main hypothesis, which is driven by corollary 2, is that individuals demand less taxes when trust in government is high only if trust in business elites is low and vice versa. Table 9 shows that the results are similar to those in the Main Survey, but are weaker statistically (possibly due to a smaller sample size, or due to attenuation given the particular way we elicit action or the involvement of an NGO). Those regarding trust in government are somewhat stronger (and consistent with corollary 2): trust in government has no effect on voting to tax the wealthy when trust in business elites is high, but it has an effect when trust in business elites is low. Also, the effect is in the direction expected: the more a subject trusts the government, the less taxes on the wealthy he wants.

The new survey is also designed to help understand the mechanism behind our results. A key assumption of the model is that the public dislikes bribes, and that taxing the rich reduces this (negative) effect. This is an application of models of reciprocal altruism, to political economy (Levine, 1998; Di Tella and MacCulloch, 2009). But in this context, when there are bribes, wouldn't increasing taxes to the rich benefit corrupt government officials that might appropriate this revenue? If this were the case, it would generate a trade-off in people's preferences for taxation: punishing corrupt businesspeople through high taxes would bring about a cost in terms of benefiting another corrupt party (the government official). To test whether this trade-off is present in people's minds, we asked "Imagine that taxes to the top 1% (richest) of the population increase; what do you think will happen?" We gave them three options: "The money will be used to fund an increase in useful government spending" (selected by 45% of respondents), "The money will be wasted without clear benefits for the population" (selected by 40%), and "The money will be appropriated by corrupt government

officials" (selected by only 15% of respondents).<sup>49</sup> These data suggest that the above-mentioned trade-off is not the first answer that comes to mind for a large proportion (85%) of the sample. This in turn reinforces our interpretation that, in some circumstances, higher taxes on the rich are a way to punish corrupt business elite.

#### 6. Conclusions

We study the causal impact of two dimensions of trust, namely trust in business elites and trust in government, on policy preferences. We focus on two standard outcomes (demand for taxation on the top 1%, and business regulation) and also consider people's tolerance for close public-private sector contact (which we take to be an important determinant of State capacity). We collect data from an online survey with a 2x2 design: subjects are "primed" to trust/distrust business elites and to trust/distrust government officials with a treatment that combines photographs of business leaders with one-sided descriptions and questions. A supplementary survey confirms these treatments have a large impact on trust: the impact on trust in major companies of the business treatment is equal to almost 8% of the control group mean (which is equivalent to 40% of the gap between the answers given by Democrats and Republicans to this question in the control group), while the impact on trust in the national government of the government treatment is equal to almost 9.5% of the control group mean (which is equivalent to the difference between the US and Libya). We find three main results.

First, distrust in business elites causes an increase in desired taxes on the top 1% of 1.2 percentage points, or 3.4% of the control group mean (put differently, the effect closes almost 14% of the gap in tax preferences between Democrats and Republicans). Exploiting the 2x2 design, we find that the effect doubles when trust in government is low. Conditional on low trust in business elites, we also find a causal effect of an increase in trust in government on lower desired taxes at the top. At high levels of trust in government (business elites) there is essentially no discernible impact of changes in trust in business elites (government). Our results support models where people demand taxes to punish and control businesspeople (or the "undeserving" rich), and not to redistribute income (we present a model with these characteristics). These results can be compared to prior work by Kuziemko, et al. (2015), who find that lower trust in government sometimes causes a *reduction* in people's support for taxes at the top.

Second, we study the effect of these two dimensions of trust on economic regulation. We find a negative effect of trust in business elites on the beliefs that have been used to proxy for the demand for regulation in prior research (for example, in Aghion et al., 2010). This helps us address what these authors call "...perhaps one of the central puzzles in research on political beliefs: why do people in countries with bad governments want more government intervention?" Our results show that there is causality going from "bad" businesses (captured by distrust in business elites) to higher demand for government intervention. "Bad government," even at low levels of trust in business elites, has a significant effect increasing only one of these beliefs, namely that the economic system runs badly in a democracy. It also decreases our respondent's willingness to give discretion to policymakers (whereas reductions in trust in business elites had no effect on this variable). Thus, our interpretation of the combined set of results is that, at least one part of the "central puzzle" is driven by distrust in business elites, which tends to be correlated with bad government in field data.

Finally, we study the impact of business legitimacy on the amount of contact between the private and public sectors, a variable that we argue is connected to State capacity. We find that both dimensions of trust (in

<sup>&</sup>lt;sup>49</sup> We randomized the order in which these 3 options appeared. These are results considering only the control group (sample size is 502).

business elites and in the government) cause subjects to declare more support for politicians who favor more meetings between government officials and business people to discuss matters of mutual interest. When we compare those primed to trust the business elites and those primed to distrust the business elites, the gap we find in their pro-meetings stance equals 11.3%, measured in terms of deviations from the control group mean (it's 14.7% for those primed to trust/distrust the government). Put differently, the gap we find in their pro-meetings stance equals 82.5% of the gap (for the same question) between the average Democrat and Republican in our sample (it's 107.3% for those primed to trust/distrust the government). The interpretation given in our model is that a positive view of business people leads subjects to expect more information (and less bribes) to be exchanged in these meetings, which affects the State's ability to deliver good policies.

The US economic system, compared internationally, appears to give the rich several privileges –it involves little redistribution, it restricts business with few regulations and confers high status to some of the richest members of society that are widely trusted. The results in this paper suggest that these features American Exceptionalism are causally connected.

# Figures and Tables

Figure 1. Stages of the model

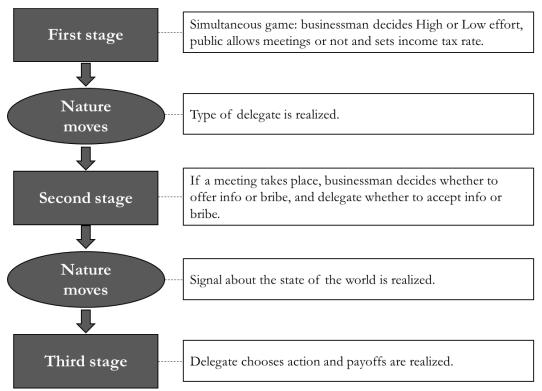


Figure 2. Survey Design

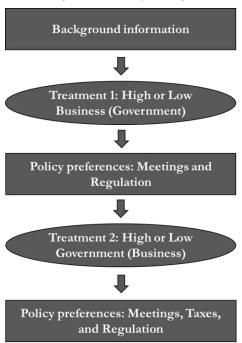
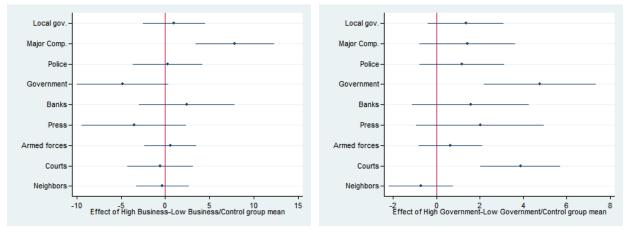


Figure 3. First stage

### Effect of Trust in Business Elites Treatments on Trust

### Effect of Trust in Government Treatments on Trust



Notes: We ran the basic regression specification described in section 3 with trust in Local government, Major Companies, The police, The government (in your nation's capital), Banks, The press, The armed forces, The courts, and Your neighbors as dependent variables. In the left panel we present the following linear combination of coefficients:  $\frac{(\beta_1 - \beta_3) + (\beta_2 - \beta_4)}{2}$  (as well as their 95% confidence intervals), and we divide this by the control group mean of the trust variable used as dependent variable. The same applies for the right panel but with  $\frac{(\beta_1 - \beta_2) + (\beta_3 - \beta_4)}{2}$  instead. We considered the sample of people that spent at least 1.5 minutes in the supplementary survey (not considering the time spent in the treatment windows) and at least three seconds in every treatment.

Table 1. Variables definitions

Variables	$Q^{\underline{a}}$	Description
Demographics		
Male	1	Dummy equal to 1 if individual is male (0 if female and missing value if neither male/female).
Age	2	Age in years.
White	3	Dummy equal to 1 if indicated as one of the races "White".
Black	3	Dummy equal to 1 if indicated as one of the races "Black".
Hispanic	3	Dummy equal to 1 if indicated as one of the races "Hispanic or Latino".
Asian	3	Dummy equal to 1 if indicated as one of the races "Asian".
Other_race	3	Dummy equal to 1 if indicated as one of the races "Other".
Postgraduate degree	5	Dummy equal to 1 if highest level of education is Master's Degree/Doctoral Degree/Professional Degree (JD, MD, MBA).
Only college degree	5	Dummy equal to 1 if highest level of education is 2-Year College Degree/4-Year College Degree.
No college degree	5	Dummy equal to 1 if highest level of education is Eight Grade or less/Some High School/ "High School degree/GED" or Some College.
Full-time employee	6	Dummy equal to 1 if Full-time employee.
Part-time employee	6	Dummy equal to 1 if Part-time employee.
Self-employed	6	Dummy equal to 1 if Self-employed or small business owner.
Unemployed	6	Dummy equal to 1 if unemployed and looking for work.
Student	6	Dummy equal to 1 if student.
Not_in Labor_Force	6	Dummy equal to 1 if not in labor force (for example: retired or full-time parent).
Political preferences and l	oeliefs	V - 11 - 11 - 0.5(0) 1 - 1
Trust	7	Variable taking 0 if "Need to be very careful" and 10 if "Most people can be trusted" (scale:
Door didn't males on effort	0	0-10), when asked whether most people can be trusted.
Poor didn't make an effort Rich made an effort	8 9	Dummy equal to 1 if respondent believes poor are poor because they made no effort.  Dummy equal to 1 if respondent believes rich are rich because they made an effort.
Obama	19	Dummy equal to 1 if respondent believes first are first because they made an enort.  Dummy equal to 1 if supported Obama or leaned towards Obama.
Outcome variables before		V 1 11
outcome variables before	secona ar	Variable taking 0 if "Mainly exchange of bribes for favors" and 10 if "Mainly exchange of
Meetings_Good1	10	useful information" (scale: 0-10), when asked regarding what goes on at meetings between government officials and politicians.
		Variable taking 0 if "Very unlikely" and 10 if "Very likely", when asked regarding support
More_Regulation1	11	for more government regulation on firms (scale: 0-10).
More_Wages_Regulation1	12	Variable taking 0 if "Strongly against" and 10 if "Strongly in favor", when asked regarding regulating wages (scale: 0-10).
More_Prices_Regulation1	12	Variable taking 0 if "Strongly against" and 10 if "Strongly in favor", when asked regarding regulating prices (scale: 0-10).
Outcome variables after so	econd tree	
		Variable taking 0 if individual wants "A politician that is against allowing these meetings"
Meetings_Good2	13	and 10 if "A politician that is in favor of allowing these meetings" (scale: 0-10).
Competiton_Bad2	14	Variable taking 0 if respondent believes "Competition is good" and 10 if he believes "Competition is bad" (scale: 0-10).
More_Gov_Resp2	14	Variable taking 0 if individual believes that "People should take more responsibility" and 10 if "The government should take more responsibility" (scale: 0-10).
Market_Bad2	15	Variable taking 0 if "Disagree strongly" and 10 if "Agree strongly", when asked regarding "In democracy, the economic system runs badly" (scale: 0-10).
Discretion2	16	Dummy equal to 1 if individual wants to give discretion to policymakers.
No_Discretion_Reg2	16	Dummy equal to 1 if individual doesn't want to give discretion to policymakers and he wants more regulation overall.
Tax_1_percent2	17	Preferred tax rate for the top 1%.
Tax_next9_percent2	17	Preferred tax rate for the next top 9% (1% of households earn more than them, but 90% earn less).
Tax_next40_percent2	17	Preferred tax rate for the next top 40% (10% of households earn more than them, but
,		50% earn less).
Tax_bottom50_percent2	17	Preferred tax rate for the bottom 50% of the income distribution (poorest).  Dummy equal to 1 if individual thinks there was a lot of fraud (during 2008 financial crisis)
High_Fraud2	18	and that it was the main cause of the crisis.
a. This achieve agreement the correcti	an numbari	a the main survey that was used to construct the variable

a. This column presents the question number in the main survey that was used to construct the variable.

**Table 2. Summary Statistics** 

	All (our sample)	Democrats (our sample)	Republicans (our sample)	Kuziemko, et al. (2015)	WVS 6 <sup>th</sup> Wave	ACS 2015
Demographics		•	•			
Male	43.8%	43.6%	44.7%	42.8%	48.4%	48.6%
Age	34.9	33.8	37.3	35.4	46.5	47.1
White	80.5%	74.8%	93.0%	77.8%	69.8%	74.8%
Black	9.2%	12.5%	1.8%	7.6%	10.4%	12.2%
Hispanic	6.6%	7.7%	4.3%	4.4%	13.4%	15.5%
Asian	6.8%	8.6%	2.9%	7.6%	-	6.2%
Other race	2.6%	2.9%	2.0%	2.6%	-	2.8%
Postgraduate degree	13.3%	14.2%	11.4%	12.6%	11.5%	10.2%
Only college degree	47.4%	47.7%	47.1%	40.7%	24.8%	25.7%
No college degree	39.3%	38.1%	41.5%	46.7%	63.7%	64.1%
Full-time employee	46.7%	47.1%	45.7%	33.2%	42.7%	43.9%
Part-time employee	12.8%	12.6%	13.3%	13.3%	8.8%	16.7%
Self-employed	12.4%	12.1%	12.7%	10.5%	5.1%	7.2%
Unemployed	8.0%	8.6%	6.7%	12.4%	9.4%	3.9%
Student	8.7%	10.0%	5.7%	15.8%	4.7%	3.8%
Not in Labor Force	11.5%	9.5%	15.9%	14.8%	23.8%	31.7%
Political preferences and beliefs				-		
Trust	4.9	5.0	4.8	-	-	-
Poor didn't make an effort	22.8%	14.7%	40.7%	-	-	-
Rich made an effort	36.9%	27.8%	57.2%	-	-	-
Obama	68.8%	100%	0%	67.5%	-	-
Outcome variables before second	d treatment (	for control gro	ир)			
Meetings Good1	4.0	3.9	4.2	-	-	-
More Regulation1	5.8	6.6	4.3	-	-	-
More_Wages_Regulation1	5.7	6.5	4.2	-	-	-
More_Prices_Regulation1	4.7	5.2	3.7	-	-	-
Outcome variables after second	treatment (fo	r control grou	p)			
Meetings Good2	3.8	3.6	4.2	-	-	-
Competiton_Bad2	2.6	2.9	2.1	-	2.7	-
More_Gov_Resp2	3.9	4.7	2.2	-	4.2	-
Market_Bad2	4.1	4.0	4.2	_	-	-
Discretion2	31.8%	37.5%	19.5%	_	-	-
No_Discretion_Reg2	36.4%	44.1%	21.0%	-	-	-
Tax_1_percent2	34.8	37.6	29.0	30.2	-	-
Tax_next9_percent2	26.5	28.4	22.9	-	-	-
Tax_next40_percent2	17.8	18.2	17.1	-	-	-
Tax_bottom50_percent2	9.3	8.9	10.3	-	-	-
High_Fraud2	31.9%	33.9%	27.7%	-	-	-
Observations	5974	4085	1856	3746	2138	2,490,616

Notes. Column 1-3: We considered the sample of people that spent at least three minutes in the main survey (not considering the candy experiment and time spent in the treatment windows) and at least three seconds in every treatment (when applicable). Individuals primed with punishment treatments are not included. Column 4: We considered the respondents that took any of the omnibus treatment surveys of Kuziemko, et al. (2015); participants could only choose one ethnicity in this study; variable Obama is actually a variable that takes value 1 if individual answered Barack Obama when asked "Who did you support in the presidential election in 2008? If you were not able to vote, just choose the person you wanted to win the election at that time"; for the question on taxes we considered the control group of the omnibus treatment surveys (sample size is 1976). Column 5: data source is the 6th wave of the World Value Survey US sample; individuals whose employment status was "Other" were omitted; variables Competition\_Bad2 and More\_Gov\_Resp2 were constructed with the same questions than used in our study (the only difference is that in the WVS answers range from 1-10 so we rescaled these answers to a 0-10 scale). Column 6: data source is the American Community Survey 2015; we considered individuals with 18 years old or older.

Table 3. US States

State Our sample ACS 2015				
State	(% of the total)	(% of the total)		
Alabama	1.29	1.51		
Alaska	0.05	0.22		
Arizona	2.46	2.10		
Arkansas	0.85	0.92		
California	9.91	12.12		
Colorado	1.69	1.69		
Connecticut	0.97	1.14		
Delaware	0.39	0.30		
District of Columbia	0.28	0.22		
Florida	7.08	6.52		
Georgia	3.41	3.11		
Hawaii	0.30	0.45		
Idaho	0.62	0.49		
Illinois	4.35	4.00		
Indiana	2.09	2.03		
Iowa	0.95	0.97		
Kansas	0.92	0.88		
Kentucky	1.49	1.38		
Louisiana	1.17	1.43		
Maine	0.50	0.43		
Maryland	1.84	1.88		
Massachusetts	2.01	2.18		
Michigan	3.47	3.11		
Minnesota	1.51	1.70		
Mississippi	0.70	0.91		
Missouri	2.13	1.89		
Montana	0.22	0.33		
Nebraska	0.65	0.58		
Nevada	0.89	0.90		
New Hampshire	0.50	0.43		
New Jersey	2.44	2.81		
New Mexico	0.67	0.64		
New York	5.71	6.29		
North Carolina	3.92	3.13		
North Dakota				
Ohio	0.13 4.30	0.24		
Oklahoma		3.63 1.19		
•	0.97			
Oregon	2.03	1.28		
Pennsylvania	4.72	4.08		
Puerto Rico	0.05	-		
Rhode Island	0.25	0.34		
South Carolina	1.39	1.54		
South Dakota	0.28	0.26		
Tennessee	2.08	2.06		
Texas	7.01	8.18		
Utah	0.82	0.84		
Vermont	0.23	0.21		
Virginia	2.93	2.63		
Washington	2.78	2.24		
West Virginia	0.54	0.59		
Wisconsin	1.91	1.81		
Wyoming	0.13	0.18		

Notes. Column 2: data source is the American Community Survey 2015; we considered individuals with 18 years old or older.

Table 4. Randomization

=			Treatment grou		
Variables	Control	High Bus &	High Bus &	Low Bus &	Low Bus &
	Group	High Gov	Low Gov	High Gov	Low Gov
Demographics					
Male	44.4%	47.3%	43.0%	43.5%	42.0%
	-	0.24	0.51	0.66	0.31
Age	34.4	35.0	34.9	35.0	35.0
	-	0.23	0.24	0.21	0.26
White	80.5%	79.4%	81.0%	80.0%	81.6%
	-	0.60	0.75	0.80	0.56
Black	9.0%	8.6%	10.0%	8.6%	9.5%
	-	0.73	0.43	0.69	0.75
Hispanic	6.5%	7.6%	5.7%	7.0%	6.5%
	-	0.37	0.45	0.60	0.99
Asian	6.8%	7.1%	6.6%	6.8%	6.9%
	-	0.81	0.89	0.99	0.91
Other race	2.8%	2.8%	2.8%	2.3%	2.9%
	<u>-</u>	0.95	0.99	0.44	0.93
Postgraduate degree	15.4%	13.6%	11.9%**	13.4%	13.4%
ooigraaaaco aogree	-	0.29	0.02	0.18	0.24
Only college degree	45.8%	47.0%	49.4%*	47.1%	45.8%
omy conege degree	-	0.63	0.09	0.56	1.00
No college degree	38.7%	39.4%	38.6%	39.5%	40.7%
tto conege degree	-	0.79	0.96	0.71	0.40
Full-time employee	46.9%	48.3%	47.5%	45.6%	45.2%
dif-time employee	40.570	0.57	0.79	0.52	0.49
Part-time employee	11.9%		11.9%		13.4%
rait-time employee	11.9%	12.2%		13.9% 0.16	
Calf amount area d	10.60/	0.86	1.00		0.36
Self-employed	10.6%	12.2%	12.7%	13.2%*	12.0%
. 1 1	-	0.30	0.12	0.05	0.37
Jnemployed	9.5%	10.5%	7.2%*	6.4%***	8.9%
a. 1 .	-	0.53	0.06	0.01	0.66
Student	9.4%	6.9%	9.2%	8.9%	8.1%
	-	0.06*	0.84	0.69	0.34
Not in Labor Force	11.6%	9.9%	11.5%	12.0%	12.4%
	-	0.26	0.94	0.77	0.63
Political preferences and	beliefs				
Γrust	4.8	5.0	4.9	4.9	4.9
	-	0.12	0.22	0.18	0.19
Poor didn't make an effort	22.8%	24.6%	22.6%	22.4%	22.2%
	_	0.40	0.91	0.83	0.73
Rich made an effort	38.6%	38.2%	36.6%	36.7%	35.0%
iden made an enort	-	0.86	0.32	0.34	0.12
Obama	67.5%	70.4%	67.4%	69.1%	70.5%
Obailla	- -	0.20	0.94	0.44	0.19
	-	0.20	0.74	0.44	0.17
Observations (regression sample)	829	851	1725	1727	842
Observations					
(unrestricted)	1014	997	2041	2036	1001
Attrition	0.9%	0.7%	0.4%	0.4%	0.7%

Notes. Mean value of the variable is presented in the first row; p-value of the mean differences t-test (with respect to the control group) is presented in the second row. \*, \*\*, \*\*\*, \*\*\* indicate statistical significance at the 10%, 5% and 1% levels, respectively. All these statistics are computed using the regression sample. Regression sample corresponds to the sample of people that spent at least three minutes in the survey (not considering the candy experiment and time spent in the treatment windows) and at least three seconds in every treatment (when applicable). Unrestricted sample corresponds to all the individuals (within treatments) that took the survey. Individuals primed with punishment treatments are not included.

Table 5. Effect of Trust in Business Elites and Government on Preferences for Taxes on the top 1%

	Depende	ent variable: Tax_1_	percent2
Panel A: Regression output	(1)	(2)	(3)
Treatments			
$(\beta_1)$ High Business &	-0.028	-0.068	-0.461
High Government	(1.020)	(1.015)	(0.976)
$(\beta_2)$ High Business &	-0.953	-0.843	-1.037
Low Government	(0.864)	(0.858)	(0.820)
$(\beta_3)$ Low Business &	-0.238	-0.059	-0.462
High Government	(0.865)	(0.860)	(0.824)
$(\beta_4)$ Low Business &	1.743*	1.951*	1.351
Low Government	(1.043)	(1.040)	(0.991)
Other covariates			
Poor didn't make an effort	-	-	-3.858***
			(0.632)
Rich made an effort	-	-	-7.174***
			(0.565)
Obama	-	-	8.248***
			(0.599)
Trust	-	-	-0.051
			(0.113)
Observations	5954	5931	5915
Control group mean	34.755	34.693	34.693
Panel B: Hypothesis testing over th	ne coefficients		
Effect of Trust in Business Elites			
High Bus – Low Bus	-1.243*	-1.401**	-1.194**
Iligii bus – Low bus	[0.0505]	[0.0272]	[0.0477]
High Bus – Low Bus  High Gov	0.211	-0.009	0.001
	[0.8120]	[0.9915]	[0.9992]
Expected result		Not significant	
High Bus – Low Bus  Low Gov	-2.696***	-2.793***	-2.388***
	[0.0031]	[0.0022]	[0.0055]
Expected result	0.216	Negative	0.270
Scaled effect	-0.316	-0.316	-0.270
Effect of Trust in Government			2.112
High Gov – Low Gov	-0.528	-0.617	-0.618
_	[0.4060]	[0.3308]	[0.3056]
High Gov – Low Gov  High Bus	0.925 [0.2955]	0.775 [0.3797]	0.576 [0.4943]
Expected result	[0.4755]	Not significant	[0.4743]
•	-1.982**	-2.009**	-1.813**
High Gov – Low Gov  Low Bus	[0.0299]	[0.0278]	[0.0360]
Expected result	[0.0277]	Negative	[0.0300]
Scaled effect	-0.232	-0.227	-0.205
Jealeu Cheel	-0.232	-0.227	-0.203

Notes. Robust standard errors in parenthesis. \*, \*\*\*, \*\*\* indicate statistical significance at the 10%, 5% and 1% levels, respectively. Tax\_1\_percent2 is the preferred tax rate for the top 1%. A constant term (not shown) is included in every regression. Regarding the treatments, the control group is the omitted group. Column (1) includes no additional controls. Column (2) includes demographic controls (gender, age, race, education, and type of employment). Column (3) includes same demographic controls, plus political variables and pre-treatment beliefs (include relative support for Obama in previous election, attitudes towards the rich and the poor, and general level of trust). Control group mean reports the mean of the dependent variable for the control group in each specification. In Panel B we present linear combinations of certain treatment coefficients and p-values (in brackets) for the test of whether these linear combinations are equal to 0. High Bus – Low Bus |High Gov is the difference between the treatment coefficient High Business & High Government and Low Business & High Government; High Bus – Low Bus is the weighted average of High Bus – Low Bus |High Gov and High Bus – Low Bus |Low Gov (analogous for other treatment groups). "Scaled effect" is the result of dividing certain effect by the difference between the control group mean of the dependent variable for democrats and republicans. Expected results are defined according to the model's predictions (corollary 2). We considered the sample of people that spent at least three minutes in the survey (not considering the candy experiment and time spent in the treatment windows) and at least three seconds in every treatment (when applicable). Respondents assigned to treatments with punishment were not included.

Table 6. Trust in Business Elites and in Government and Regulation in WVS

	With only one of	With only one of these regressors		regressors
Dependent variables (rows)	Trust in	Trust in	Trust in	Trust in
Dependent variables (rows)	Government	Business Elites	Government	Business Elites
(1) Competition is harmful	-0.076	-0.562***	0.070	-0.582***
	(0.070)	(0.070)	(0.071)	(0.072)
N	5,655	5,574	5,532	
(2) Government should take	-0.052	-0.642***	0.107	-0.669***
more responsibility	(0.087)	(0.087)	(0.089)	(0.090)
N	5,668	5,586	5,	544
(3) The economic system runs	-0.073***	-0.043**	-0.063***	-0.033*
badly in democracies	(0.020)	(0.019)	(0.021)	(0.019)
N	2,332	2,266	2,	249

Notes. Robust standard errors in parenthesis; OLS regressions estimates using sampling weights that normalize each wave (marginal effects for a Probit model in the case of variable 3 are presented). Data source is World Value Survey, waves 1995-2014, US sample. \*, \*\*\*, \*\*\* indicate statistical significance at the 10%, 5% and 1% levels, respectively. The dependent variables come from the answers to the following questions: (1) "Competition is good: it stimulates people to work hard and develop new ideas. Or competition is harmful: it brings out the worst in people." The variable takes on values from 1 to 10, a higher score indicating a higher level of distrust of competition. (2) "People should take more responsibility to provide for themselves or the government should take more responsibility." The variable ranges from 1 to 10, with a higher score indicating a stronger support for government intervention. (3) "In democracy, the economic system runs badly. Could you please tell me if you agree strongly, agree, disagree, or disagree strongly?" The variable takes a value equal to 1 if respondent answered strongly agree or agree, and 0 otherwise. Main explanatory variables are two dummies: \*Trust in Business Elites\* is a dummy equal to 1 if individual expressed having "A great deal" or "Quite a lot" of confidence on "Major Companies" (0 if expressed "Not very much" or "None at all"); definition for \*Trust in Government\* is analogous but with respect to "The government (in your nation's capital)". All regressions control for gender, age, education, income level, and wave fixed effects.

Table 7. Regulation: Competition, Government Responsibility, Market performance, and Discretion

	Competition Bad2	More Gov Resp2	Market Bad2	Discretion2
Panel A: Regression output	(1)	(2)	(3)	(4)
Treatments				
$(\beta_1)$ High Business &	-0.026	0.267*	-0.382***	0.044*
High Government	(0.102)	(0.139)	(0.112)	(0.024)
$(\beta_2)$ High Business &	0.013	0.138	-0.048	-0.020
Low Government	(0.087)	(0.119)	(0.097)	(0.020)
$(\beta_3)$ Low Business &	0.127	0.231*	-0.168*	0.064***
High Government	(0.087)	(0.119)	(0.097)	(0.020)
$(\beta_4)$ Low Business &	0.178*	0.387***	0.162	-0.011
Low Government	(0.101)	(0.141)	(0.113)	(0.023)
Observations	5961	5965	5954	5966
Control group mean	2.612	3.927	4.087	0.318

Panel B: Hypothesis testing over	the coefficients			
Effect of Trust in Business Elites				
High Bus – Low Bus	-0.159** [0.0122]	-0.107 [0.2124]	-0.212*** [0.0019]	-0.015 [0.2978]
Expected result	Negative	Negative	Negative	-
Scaled effect	-0.201	-0.042	1.538	-0.081
High Bus – Low Bus  High Gov	-0.15* [0.0889]	0.036 [0.7638]	-0.214** [0.0251]	-0.020 [0.3161]
High Bus – Low Bus Low Gov	-0.165* [0.0654]	-0.250** [0.0410]	-0.210** [0.0306]	-0.010 [0.6324]
Effect of Trust in Government				
High Gov – Low Gov	-0.046 [0.4727]	-0.014 [0.8742]	-0.333*** [0.0000]	0.069*** [0.0000]
Expected result	Not significant	Not significant	Negative	-
Scaled effect	-0.058	-0.005	2.410	0.385
High Gov – Low Gov High Bus	-0.040 [0.6589]	0.129 [0.2834]	-0.335*** [0.0005]	0.064*** [0.0013]
High Gov – Low Gov Low Bus	-0.051 [0.5653]	-0.156 [0.1986]	-0.330*** [0.0006]	0.074*** [0.0002]

Notes. Panel A presents regressions estimates with robust standard errors in parenthesis; OLS estimates except for column (4) where marginal effects for a Probit model are presented; a constant term (not shown) is included in every regression. Regarding the treatments, the control group is the omitted group. \*, \*\*, \*\*\* indicate statistical significance at the 10%, 5% and 1% levels, respectively. Dependent variable definitions are the following: (1) Variable taking 0 if "Competition is good..." and 10 if "Competition is bad..." (scale: 0-10). (2) Variable taking 0 if individual believes that "People should take more responsibility..." and 10 if "The government should take more responsibility..." (scale: 0-10). (3) Variable taking 0 if "Disagree strongly" and 10 if "Agree strongly", when asked regarding "In democracy, the economic system runs badly" (scale: 0-10). (4) Dummy equal to 1 if individual wants to give discretion to policymakers. Control group mean reports the mean of the dependent variable for the control group in each specification. In Panel B we present linear combinations of certain treatment coefficients and p-values (in brackets) for the test of whether these linear combinations are equal to 0. High Bus - Low Bus | High Gov is the difference between the treatment coefficient High Business & High Government and Low Business & High Government; High Bus - Low Bus is the weighted average of High Bus - Low Bus | High Gov and High Bus - Low Bus | Low Gov (analogous for other treatment groups). "Scaled effect" is the result of dividing certain effect by the difference between the control group mean of the dependent variable for democrats and republicans. Expected results are defined according to the correlations observed with WVS data (Table 6). We considered the sample of people that spent at least three minutes in the survey (not considering the candy experiment and time spent in the treatment windows) and at least three seconds in every treatment (when applicable). Respondents assigned to treatments with punishment were not included.

Table 8. Effect of Trust in Business Elites and Government on Support for Meetings

	Dependen	it variable: Meeti	ngs Good2
Panel A: Regression output	(1)	(2)	(3)
Treatments			
$(\beta_1)$ High Business &	0.557***	0.564***	0.550***
High Government	(0.117)	(0.117)	(0.114)
$(\beta_2)$ High Business &	-0.123	-0.108	-0.113
Low Government	(0.098)	(0.098)	(0.095)
$(\beta_3)$ Low Business &	-0.004	0.008	0.017
High Government	(0.099)	(0.099)	(0.096)
$(\beta_4)$ Low Business &	-0.471***	-0.458***	-0.438***
Low Government	(0.113)	(0.113)	(0.110)
Other covariates			
Poor didn't make an effort	-	-	0.247***
			(0.079)
Rich made an effort	-	-	0.797***
			(0.068)
Obama	-	-	-0.236***
			(0.069)
Trust	-	-	0.088***
01			(0.013)
Observations	5962	5939	5908
Control group mean	3.796	3.796	3.796
Panel B: Hypothesis testing over th	ne coefficients		
Effect of Trust in Business Elites			
High Bus – Low Bus	0.455***	0.453***	0.429***
	[0.0000]	[0.0000]	[0.0000]
Scaled effect	-0.867	-0.870	-0.825
High Bus – Low Bus  High Gov	0.561***	0.556***	0.534*** [0.0000]
Expected result	[0.0000]	[0.0000] Positive	[0.0000]
•	0.348***	0.350***	0.325***
High Bus - Low Bus  Low Gov	[0.0002]	[0.0002]	[0.0005]
Expected result		Positive	
Effect of Trust in Government			
High Gov - Low Gov	0.573***	0.569***	0.559***
	[0.0000]	[0.0000]	[0.0000]
Scaled effect	-1.093	-1.094 0.672***	-1.073
High Gov – Low Gov  High Bus	0.680*** [0.0000]	[0.0000]	0.663*** [0.0000]
Expected result	[0.0000]	Positive	[0.0000]
•	0.467***	0.466***	0.454***
High Gov – Low Gov  Low Bus	[0.0000]	[0.0000]	[0.0000]
Expected result		Positive	

Notes. Robust standard errors in parenthesis. \*, \*\*, \*\*\* indicate statistical significance at the 10%, 5% and 1% levels, respectively. Meetings\_Good2 is a variable taking 0 if individual wants "A politician that is against allowing these meetings" and 10 if "A politician that is in favor of allowing these meetings" (scale: 0-10). A constant term (not shown) is included in every regression. Regarding the treatments, the control group is the omitted group. Column (1) includes no additional controls. Column (2) includes demographic controls (gender, age, race, education, and type of employment). Column (3) includes same demographic controls, plus political variables and pre-treatment beliefs (include relative support for Obama in previous election, attitudes towards the rich and the poor, and general level of trust). Control group mean reports the mean of the dependent variable for the control group in each specification. In Panel B we present linear combinations of certain treatment coefficients and p-values (in brackets) for the test of whether these linear combinations are equal to 0. High Bus – Low Bus |High Gov is the difference between the treatment coefficient High Business & High Government and Low Business & High Government; High Bus – Low Bus is the weighted average of High Bus – Low Bus |High Gov and High Bus – Low Bus |Low Gov (analogous for other treatment groups). "Scaled effect" is the result of dividing certain effect by the difference between the control group mean of the dependent variable for democrats and republicans. Expected results are defined according to the model's predictions (corollary 1a and 1b). We considered the sample of people that spent at least three minutes in the survey (not considering the candy experiment and time spent in the treatment windows) and at least three seconds in every treatment (when applicable). Respondents assigned to treatments with punishment were not included.

Table 9. Effect of Trust in Business Elites and Government on Voting for Taxes on the top 1%

	г	\	
	/P(V	Dependent variable ote Citizens for Tax J	
	$ln\left(\frac{r(v)}{P(v)}\right)$	(Vote American Red Ci	ross)
Panel A: Regression output	(1)	(2)	(3)
Treatments		` `	
$(\beta_1)$ High Business &	0.041	0.063	0.119
High Government	(0.138)	(0.139)	(0.144)
$(\beta_2)$ High Business &	0.134	0.125	0.184
Low Government	(0.138)	(0.140)	(0.145)
$(\beta_3)$ Low Business &	-0.133	-0.129	-0.091
High Government	(0.141)	(0.142)	(0.149)
9	. ,	, ,	, ,
$(\beta_4)$ Low Business &	0.139	0.147	0.179
Low Government	(0.138)	(0.140)	(0.145)
Other covariates			
Poor didn't make an effort	-	-	-0.629***
			(0.137)
Rich made an effort	-	-	-0.553***
			(0.112)
Clinton	-	-	0.726***
m .			(0.108)
Trust	-	-	-0.022
Observations	2,462	2,450	(0.019)
Control group mean	-0.687	-0.690	-0.696
control group mean	0.007	0.070	0.070
Panel B: Hypothesis testing over th	ne coefficients		
Effect of Trust in Business Elites	- ,,		
High Bus – Low Bus	0.084	0.085	0.108
Trigii bus – Low bus	[0.3906]	[0.3917]	[0.2933]
High Bus – Low Bus  High Gov	0.174	0.192	0.210
Expected result	[0.2148]	[0.1725] Not significant	[0.1516]
•	-0.005	-0.022	0.005
High Bus – Low Bus  Low Gov	[0.9693]	[0.8718]	[0.9694]
Expected result		Negative	
Effect of Trust in Government			
High Gov – Low Gov	-0.183*	-0.169*	-0.168
	[0.0629]	[0.0870]	[0.1002]
High Gov – Low Gov  High Bus	-0.093 [0.4977]	-0.062 [0.6548]	-0.066 [0.6456]
Expected result	[0.7777]	Not significant	[0.0430]
•	-0.272*	-0.276*	-0.270*
High Gov – Low Gov  Low Bus	[0.0528]	[0.0509]	[0.0650]
Expected result		Negative	

Notes. Robust standard errors in parenthesis (Panel A). Multinomial logit model estimated, where the dependent variable can take three values: Voted for Citizens for Tax Justice, Voted for The American Red Cross, and didn't vote. Regarding the treatments, the control group is the omitted group. Column (1) includes no additional controls. Column (2) includes demographic controls (gender, age, race, education, and type of employment). Column (3) includes same demographic controls, plus political variables and pre-treatment beliefs (includes relative support for Clinton in previous election, attitudes towards the rich and the poor, and general level of trust). Control group mean reports the mean of the dependent variable for the control group in each specification. In Panel B we present linear combinations of certain treatment coefficients and p-values (in brackets) for the test of whether these linear combinations are equal to 0. High Bus – Low Bus |High Gov is the difference between the treatment coefficient High Business & High Government and Low Business & High Government; High Bus – Low Bus is the weighted average of High Bus – Low Bus |High Gov and High Bus – Low Bus |Low Gov (analogous for other treatment groups). Expected results are defined according to the model's predictions (corollary 2).\*, \*\*\*, \*\*\* indicate statistical significance at the 10%, 5% and 1% levels, respectively. We considered the sample of people that spent at least 1.5 minutes in the supplementary survey (not considering the time spent in the treatment windows) and at least three seconds in every treatment (when applicable).

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## Appendix 1: Model

We first prove Theorem 1, and then the corollaries. We find conditions conditions for the existence of the two equilibria in Theorem 1 and then check there is a set of parameters that satisfy these conditions.

## Third stage

In the last stage, conditional on her information, the delegate chooses the policy action a. There are three cases to consider.

1) No meeting, or meeting and bribe rejected. In this case, the delegate's information is just her signal  $s = \omega + \epsilon$ , where  $\epsilon$ 's precision is  $\pi_j$ , for j = h, l. In this case for any fixed e, the delegate chooses a to maximize  $E(pe(k - (\omega - a)^2)|s)$ , which yields (here n stands for no meeting):

 $a_n = E(\omega|s) = \frac{1}{1+\pi_j}0 + \frac{\pi_j}{1+\pi_j}s = \frac{\pi_j}{1+\pi_j}s$ . Then  $E((\omega - a_n)^2|s)$  is the conditional variance of  $\omega$ , which is  $\frac{1}{1+\pi_j}$  and the expected utility of the delegate is:

$$u_{D} = E(pe(k - (\omega - a_{n})^{2})|s) = pe(k - E((\omega - a_{n})^{2}|s)) = pe(k - \frac{1}{1 + \pi_{i}})$$

The utilities of the businessperson (before receiving his information) and the public are:

$$u_B = u_P = (1 - \tau)e\left(k - \frac{1}{1 + \pi_j}\right) - c$$

2) Meeting, no bribe offered (information exchanged). The delegate observes her signal with a higher precision. The delegate chooses a to maximize her utility, which yields (with m standing for meeting)

 $a_m = E(\omega|s) = \frac{z\pi_j}{1+z\pi_j}s$ , and the variance of  $\omega$  conditional on s is  $\frac{1}{1+z\pi_j}$ . Then utilities are:

$$u_D = E(pe(k - (\omega - a_n)^2)|s) = pe\left(k - \frac{1}{1 + z\pi_i}\right)$$
 and  $u_B = u_P = (1 - \tau)e_i\left(k - \frac{1}{1 + z\pi_i}\right) - c_i$ 

3) Meeting, and bribe exchanged. The delegate observes her signal s with precision  $\pi_j$  and chooses  $a_n+1$  (her optimal a in case of no meetings, plus the 1 unit contracted upon in the bribe). Since  $E((\omega - a_n - 1)^2 | s) = E((\omega - a_n)^2 - 2(\omega - a_n) + 1 | s) = \frac{1}{1+\pi_j} + 1$ , utilities are then:

$$u_D = pe(k - E((\omega - a_n - 1)^2 | s)) + B = pe(k - \frac{1}{1 + \pi_i} - 1) + B$$

$$u_B = E[(1-\tau)(e(k-(\omega-a)^2) + xa) - b - c] = (1-\tau)\left(e\left(k - \frac{1}{1+\pi_i} - 1\right) + x\right) - B - c$$

$$u_P = (1 - \tau)e\left(k - \frac{1}{1 + \pi_i} - 1\right) - c + \alpha(\tau - C)$$

### Second (meeting) stage

We now analyze the decisions of businesspeople regarding the bribe, and that of the delegate regarding acceptance. We build an equilibrium in which high quality businesspeople do not offer bribes, and low business types offer bribes to low quality delegates. We start in the subgame where the bribe has been offered, and check what parameter conditions are needed for the configuration of behavior we want.

a) All delegate types take the bribe when offered by a low quality businessperson; for j = h, l:

$$pe_{l}\left(k - \frac{1}{1 + \pi_{i}} - 1\right) + B > pe_{l}\left(k - \frac{1}{1 + \pi_{i}}\right) \Leftrightarrow B > pe_{l}$$
 (1)

The condition says that the bribe must be larger than the efficiency loss due to the distortion of 1 unit in the optimal action; in an extreme (p = 0), if the delegate does not care about the outcome, she takes the bribe (regardless of e).

b) All delegate types reject a bribe offered by a high quality businessperson. This is just to avoid a deviation by the high business (obviously, if the delegate is going to reject the bribe, the businessperson is worse off; but if the high businessperson deviates and offers, it must be in the delegate's best interest to reject). In order for that to be the case, we need for i = h, l:

$$pe_h\left(k - \frac{1}{1 + \pi_j}\right) > pe_h\left(k - \frac{1}{1 + \pi_j} - 1\right) + B \iff B < pe_h \tag{2}$$

Thus our **parameter requirement #1** is that:

$$e_h > \frac{B}{p} > e_l$$

- c) High business types do not want to offer the bribe to any delegate type. Note that for any businessperson, offering a bribe which will be rejected is suboptimal: if offered, no information can be exchanged, and therefore he loses the chance of communicating his information, and doesn't get the benefit of the bribe. So as long as part "a" and "b" holds, we need no further condition for "c" to hold.
- d) The low quality businessperson will not offer the bribe to the high delegate:

$$(1 - \tau)e_{l}\left(k - \frac{1}{1 + z\pi_{h}}\right) - c_{l} > (1 - \tau)\left(e_{l}\left(k - \frac{1}{1 + \pi_{h}} - 1\right) + x\right) - B - c_{l} \Leftrightarrow$$

$$e_{l}\left(1 + \frac{1}{1 + \pi_{h}} - \frac{1}{1 + z\pi_{h}}\right) > x - \frac{B}{1 - \tau} \tag{3}$$

e) The low quality businessperson will offer the bribe to the low quality delegate:

$$(1 - \tau)e_{l}\left(k - \frac{1}{1 + z\pi_{l}}\right) - c_{l} < (1 - \tau)\left(e_{l}\left(k - \frac{1}{1 + \pi_{l}} - 1\right) + x\right) - B - c_{l} \Leftrightarrow$$

$$e_{l}\left(1 + \frac{1}{1 + \pi_{l}} - \frac{1}{1 + z\pi_{l}}\right) < x - \frac{B}{1 - \tau} \tag{4}$$

The combination of (3) and (4) yields parameter requirement #2:

$$e_l\left(1 + \frac{1}{1 + \pi_h} - \frac{1}{1 + z\pi_h}\right) > x - \frac{B}{1 - \tau} > e_l\left(1 + \frac{1}{1 + \pi_l} - \frac{1}{1 + z\pi_l}\right)$$

Parameter requirement #2 is simplified by noting that a necessary condition is  $z\pi_h\pi_l < 1$  which ensures that the bracket in the lhs is greater than the rhs; then one needs to fit  $x - \frac{B}{1-\tau}$  in between.

### First stage

To simplify notation slightly, let  $\frac{1}{1+z\pi_h} + (1-q)\frac{1}{1+z\pi_l} \equiv \frac{1}{1+z\overline{\pi}}$ , and  $q\frac{1}{1+\pi_h} + (1-q)\frac{1}{1+\pi_l} \equiv \frac{1}{1+z\overline{\pi}}$ . Also, recall that we are showing the existence of an equilibrium in which the tax rate is low in the good equilibrium, and high in the bad equilibrium.

1) Meetings and low taxes (good) equilibrium: If meetings will be allowed, it must be that it is a best response to become educated for the businessperson:

$$(1 - \tau_l)e_h\left(k - \frac{1}{1 + z\overline{\pi}}\right) - c_h >$$

$$(1 - \tau_l)\left[qe_l\left(k - \frac{1}{1 + z\pi_h}\right) + (1 - q)\left(e_l\left(k - \frac{1}{1 + \pi_l} - 1\right) + x\right)\right] - (1 - q)B - c_l$$

Rearranging this becomes parameter requirement #3:

$$\frac{\left[ (1 - \tau_l) \left[ q(e_h - e_l) \left( k - \frac{1}{1 + z\pi_h} \right) + (1 - q)e_h \left( k - \frac{1}{1 + z\pi_l} \right) - (1 - q) \left( e_l \left( k - \frac{1}{1 + \pi_l} - 1 \right) + x \right) \right]}{> c_h - c_l - (1 - q)B}$$

And if the businessperson will be educated, it must be optimal for the public to allow meetings and keep taxes low. The public could deviate in three different ways: forbid meetings and keep low taxes, forbid meetings and increase taxes, and allow meetings and increase taxes.<sup>50</sup> We check the first deviation is not profitable:

$$(1 - \tau_l)e_h\left(k - \frac{1}{1 + z\bar{\pi}}\right) - c_h > f(1 - \tau_l)e_h\left(k - \frac{1}{1 + z\bar{\pi}}\right) + (1 - f)(1 - \tau_l)e_h\left(k - \frac{1}{1 + \tilde{\pi}}\right) - c_h \Leftrightarrow k - \frac{1}{1 + z\bar{\pi}} > k - \frac{1}{1 + \tilde{\pi}}$$

$$(5)$$

It is straightforward to check that (5) is always satisfied.

Suppose now that the public considers a deviation in which it forbids meetings, and increases taxes. We know that this will not change high business types behavior (higher types make bribes less attractive, but high business types don't bribe), so the condition for the public not to want to deviate this way is:

<sup>&</sup>lt;sup>50</sup> The third deviation is clearly not profitable. This is because in a scenario with "High quality" business, bribes will not take place and the only reason the public would find it profitable to increase taxes is in a scenario with bribes.

$$(1 - \tau_l)e_h\left(k - \frac{1}{1 + z\bar{\pi}}\right) - c_h >$$

$$f(1 - \tau_h)e_h\left(k - \frac{1}{1 + z\bar{\pi}}\right) + (1 - f)(1 - \tau_h)e_h\left(k - \frac{1}{1 + \tilde{\pi}}\right) - c_h \Leftrightarrow$$

$$\left(1 - \tau_l - f(1 - \tau_h)\right)\left(k - \frac{1}{1 + z\bar{\pi}}\right) > (1 - f)(1 - \tau_h)\left(k - \frac{1}{1 + \tilde{\pi}}\right)$$

This condition is satisfied since (5) holds, and  $(1 - \tau_l - f(1 - \tau_h)) > (1 - f)(1 - \tau_h) \Leftrightarrow \tau_h > \tau_l$ .

**2)** No meetings and high taxes (bad) equilibrium: If meetings will not be allowed it must be a best response for the businessperson not to become educated:

$$\begin{split} f\left[q(1-\tau_h)e_l\left(k-\frac{1}{1+z\pi_h}\right) + (1-q)\left((1-\tau_h)\left(e_l\left(k-\frac{1}{1+\pi_l}-1\right) + x\right) - B\right)\right] \\ &+ (1-f)(1-\tau_h)e_l\left(k-\frac{1}{1+\widetilde{\pi}}\right) - c_l > \\ &(1-\tau_h)e_h\left[f\left(k-\frac{1}{1+z\overline{\pi}}\right) + (1-f)\left(k-\frac{1}{1+\widetilde{\pi}}\right)\right] - c_h \end{split}$$

Which rearranging becomes parameter requirement #4:

$$\left[ (1 - \tau_h) \left[ f \left( q(e_h - e_l) \left( k - \frac{1}{1 + z\pi_h} \right) + (1 - q)e_h \left( k - \frac{1}{1 + z\pi_l} \right) \right) + (e_h - e_l)(1 - f) \left( k - \frac{1}{1 + \tilde{\pi}} \right) \right] \right]$$

$$< c_h - c_l - f(1 - q)B$$

If businessmen will not be educated, it must be optimal for the public not to allow meetings and set high taxes. The public could deviate in three ways: allow meetings and keep taxes high, allow meetings and decrease taxes, and forbid meetings but decrease taxes. To check that the first deviation is not profitable we can alternatively see under what conditions the public would be better off cancelling a meeting (assuming the public keeps the tax rate fixed), which yields **parameter requirement #5**:<sup>51</sup>

$$(1 - \tau_h) \left( k - \frac{1}{1 + \tilde{\pi}} \right) > (1 - \tau_h) e_l \left[ q \left( k - \frac{1}{1 + z \pi_h} \right) + (1 - q) \left( k - \frac{1}{1 + \pi_l} - 1 \right) \right] + \alpha (1 - q) (\tau_h - C)$$

$$\Leftrightarrow$$

$$\alpha (1 - q) (C - \tau_h) > (1 - \tau_h) e_l \left[ q \frac{1}{1 + \pi_h} - q \frac{1}{1 + z \pi_h} - (1 - q) \right]$$

<sup>&</sup>lt;sup>51</sup> Of course, a high cost of a bribe will make meetings not desirable. Another way to obtain the result, even when  $\alpha = 0$ , is if  $\pi_h - q + z\pi_h(1 - 2q) + (1 - q)z\pi_h^2 + 1 > 0$ , which ensures that the bracket in the right hand side is negative. Note that one case in which this works is with  $q \approx 0$ . This is another way of saying that taxes need not play an instrumental role in the development of the equilibrium multiplicity.

If the public decides to deviate, and allow meetings, while also decreasing taxes, the condition is that:

$$f\left((1-\tau_h)e_l\left[q\left(k-\frac{1}{1+z\pi_h}\right)+(1-q)\left(k-\frac{1}{1+\pi_l}-1\right)\right]+\alpha(1-q)(\tau_h-C)\right)+(1-\tau_h)e_l\left(k-\frac{1}{1+\tilde{\pi}}\right)$$

$$(1 - \tau_l)e_l \left[ q \left( k - \frac{1}{1 + z\pi_h} \right) + (1 - q) \left( k - \frac{1}{1 + \pi_l} - 1 \right) \right] + \alpha (1 - q)(\tau_l - C)$$

Rearranging some terms, this yields parameter requirement #6:

$$\alpha(1-q)[f(\tau_h-C)+C-\tau_l] > e_l \left\{ \begin{aligned} &(1-\tau_l)\left[q\left(k-\frac{1}{1+z\pi_h}\right)+(1-q)\left(k-\frac{1}{1+\pi_l}-1\right)\right] \\ &-(1-\tau_h)\left[f\left[q\left(k-\frac{1}{1+z\pi_h}\right)+(1-q)\left(k-\frac{1}{1+\pi_l}-1\right)\right]+\right] \\ &-(1-\tau_h)\left[f\left[q\left(k-\frac{1}{1+z\pi_h}\right)+(1-q)\left(k-\frac{1}{1+\pi_l}-1\right)\right]+\right] \end{aligned} \right\}$$

To make sure the public wouldn't prefer to lower taxes, while still forbidding meetings, we need:

$$\begin{split} f\bigg((1-\tau_h)e_l\bigg[q\bigg(k-\frac{1}{1+z\pi_h}\bigg)+(1-q)\bigg(k-\frac{1}{1+\pi_l}-1\bigg)\bigg]+\alpha(1-q)(\tau_h-C)\bigg) \\ &+(1-f)(1-\tau_h)e_l\bigg(k-\frac{1}{1+\tilde{\pi}}\bigg) \\ &> f\bigg((1-\tau_l)e_l\bigg[q\bigg(k-\frac{1}{1+z\pi_h}\bigg)+(1-q)\bigg(k-\frac{1}{1+\pi_l}-1\bigg)\bigg]+\alpha(1-q)(\tau_l-C)\bigg) \\ &+(1-f)(1-\tau_l)e_l\bigg(k-\frac{1}{1+\tilde{\pi}}\bigg) \end{split}$$

Rearranging some terms, this yields parameter requirement #7:

$$\alpha > e_l \left[ \frac{(1-f)}{f(1-q)} \left( k - \frac{1}{1+\widetilde{\pi}} \right) + \frac{q}{1-q} \left( k - \frac{1}{1+z\pi_h} \right) + \left( k - \frac{1}{1+\pi_l} - 1 \right) \right]$$

Note that it will be sufficient to pick an  $\alpha$  big enough to satisfy parameter requirements #5, #6, and #7.

#### Numerical example

In this section we check that there is an open set of parameters that sustain the two equilibria described in theorem 1, thus proving that result. We need to find values for the following 17 parameters  $(e_h, e_l, c_h, c_l, p, x, B, z, \pi_h, \pi_l, \tau_h, \tau_l, k, \alpha, C, q, f)$  such that these conditions hold:

Parameter requirement #1:  $e_h > \frac{B}{p} > e_l$ 

Parameter requirement #2:

$$\begin{split} e_l\left(1 + \frac{1}{1+\pi_h} - \frac{1}{1+z\pi_h}\right) &> x - \frac{B}{1-\tau_h} > e_l\left(1 + \frac{1}{1+\pi_l} - \frac{1}{1+z\pi_l}\right) \\ e_l\left(1 + \frac{1}{1+\pi_h} - \frac{1}{1+z\pi_h}\right) &> x - \frac{B}{1-\tau_l} > e_l\left(1 + \frac{1}{1+\pi_l} - \frac{1}{1+z\pi_l}\right) \end{split}$$

Parameter requirement #3:

$$(1 - \tau_l) \left[ q(e_h - e_l) \left( k - \frac{1}{1 + z\pi_h} \right) + (1 - q)e_h \left( k - \frac{1}{1 + z\pi_l} \right) - (1 - q) \left( e_l \left( k - \frac{1}{1 + \pi_l} - 1 \right) + x \right) \right]$$

$$> c_h - c_l - (1 - q)B$$

Parameter requirement #4:

$$(1 - \tau_h) \left[ f \begin{pmatrix} q(e_h - e_l) \left( k - \frac{1}{1 + z\pi_h} \right) + (1 - q)e_h \left( k - \frac{1}{1 + z\pi_l} \right) \\ - (1 - q) \left( e_l \left( k - \frac{1}{1 + \pi_l} - 1 \right) + x \right) \end{pmatrix} + (e_h - e_l)(1 - f) \left( k - \frac{1}{1 + \tilde{\pi}} \right) \right]$$

$$< c_h - c_l - f(1 - q)B$$

Parameter requirement #5 (This holds trivially if we set q = 0, as the rhs is less than 0):

$$\alpha(1-q)(C-\tau_h) > (1-\tau_h)e_l \left[ q \frac{1}{1+\pi_h} - q \frac{1}{1+z\pi_h} - (1-q) \right]$$

Parameter requirement #6:

$$\alpha(1-q)[f(\tau_h-C)+C-\tau_l] > e_l \begin{cases} (1-\tau_l) \left[ q\left(k-\frac{1}{1+z\pi_h}\right) + (1-q)\left(k-\frac{1}{1+\pi_l}-1\right) \right] \\ -(1-\tau_h) \left[ f\left[ q\left(k-\frac{1}{1+z\pi_h}\right) + (1-q)\left(k-\frac{1}{1+\pi_l}-1\right) \right] + \right] \\ (1-f)\left(k-\frac{1}{1+\tilde{\pi}}\right) \end{cases}$$

Parameter requirement #7:

$$\alpha > e_l \left[ \frac{(1-f)}{f(1-q)} \left( k - \frac{1}{1+\tilde{\pi}} \right) + \frac{q}{1-q} \left( k - \frac{1}{1+z\pi_h} \right) + \left( k - \frac{1}{1+\pi_l} - 1 \right) \right]$$

The following values for  $(e_h, e_l, c_h, c_l, p, x, B, z, \pi_h, \pi_l, \tau_h, \tau_l, k, \alpha, C, q, f)$  satisfy all these restrictions: 52  $(16,1,\frac{23}{2},0,\frac{2}{3},\frac{451}{120},2,3,\frac{1}{2},\frac{1}{3},\frac{1}{5},\frac{1}{5}-\frac{1}{1000},\frac{3}{2},1000,\frac{1}{2},\frac{1}{1000},\frac{1}{1000})$ .

<sup>&</sup>lt;sup>52</sup> They also satisfy all the other restrictions given in the setup of the model:  $\pi_h > \pi_l > 0$ ,  $1 > \tau_h > \tau_l > 0$ ,  $C > \tau_h$ , p, x, B, k > 0,  $e_h > e_l > 0$ ,  $q, f \in (0,1)$ , z > 1,  $c_h > c_l \ge 0$ .

### Proof of corollary 1.a. and 1.b.:

Public's expected utility for each combo of delegate type and business quality is the following, depending on whether the Public accepts or forbids meetings:

Delegate type:  $\pi_h$ 

"High quality" Businessperson and meetings allowed

"Low quality" Businessperson and meetings allowed

"High quality" Businessperson and meetings forbidden

"Low quality" Businessperson and meetings forbidden

Delegate type. nh	Delegate type. n
$(1-\tau)e_h\left(k-\frac{1}{1+z\pi_h}\right)-c_h$	$(1-\tau)e_h\left(k-\frac{1}{1+z\pi_l}\right)-c_h$
$(1-\tau)e_l\left(k-\frac{1}{1+z\pi_h}\right)-c_l$	$(1-\tau)e_l\left(k-\frac{1}{1+\pi_l}-1\right)-c_l \\ +\alpha(\tau-\mathcal{C})$
$(1-\tau)e_h\left((1-f)\left(k-\frac{1}{1+\pi_h}\right)+f\left(k-\frac{1}{1+z\pi_h}\right)\right)-c_h$	$(1-\tau)e_h\left((1-f)\left(k-\frac{1}{1+\pi_l}\right)+f\left(k-\frac{1}{1+z\pi_l}\right)\right)-c_h$
$(1-\tau)e_l\left((1-f)\left(k-\frac{1}{1+\pi_h}\right)+f\left(k-\frac{1}{1+z\pi_h}\right)\right)-c_l$	$(1-\tau)e_l\left((1-f)\left(k-\frac{1}{1+\pi_l}\right)+f\left(k-\frac{1}{1+\pi_l}-1\right)\right) + f\alpha(\tau-C)-c_l$

Delegate type:  $\pi_i$ 

Notes: Low quality businesspeople offer bribes only to delegates of type  $\pi_I$  (and delegates accept bribes).

To prove corollary 1.a. we need to show that: (4,1)-(2,1)>(3,1)-(1,1) and that (4,2)-(2,2)>(3,2)-(1,2), where (x,y) denotes a position in the matrix above.

The first of these conditions hold if and only if:

$$(1-f)\left((1-\tau)e_l\left(\frac{1}{1+z\pi_h}-\frac{1}{1+\pi_h}\right)\right) > (1-f)\left((1-\tau)e_h\left(\frac{1}{1+z\pi_h}-\frac{1}{1+\pi_h}\right)\right) \Leftrightarrow e_l\left(\frac{1}{1+z\pi_h}-\frac{1}{1+\pi_h}\right) > e_h\left(\frac{1}{1+z\pi_h}-\frac{1}{1+\pi_h}\right) \underset{z>1}{\Longleftrightarrow} e_h > e_l$$

The second condition holds if and only if:

$$(1-f)\left((1-\tau)e_l - \alpha(\tau-C)\right) > -(1-f)\left((1-\tau)e_h\left(\frac{1}{1+\pi_l} - \frac{1}{1+z\pi_l}\right)\right) \Leftrightarrow$$

$$e_l > e_h\left(\frac{1}{1+z\pi_l} - \frac{1}{1+\pi_l}\right) + \frac{\alpha(\tau-C)}{(1-\tau)}$$

$$\frac{\alpha(\tau-C)}{(1-\tau)} < 0$$
 and  $z > 1$  so  $e_h\left(\frac{1}{1+z\pi_l} - \frac{1}{1+\pi_l}\right) < 0 \Longrightarrow_{e_l > 0}$  Inequality holds.

To prove corollary 1.b. we need to show that: (3,2)-(1,2)>(3,1)-(1,1) and that (4,2)-(2,2)>(4,1)-(2,1).

The first of these conditions hold if and only if:

$$-(1-f)\left((1-\tau)e_h\left(\frac{1}{1+\pi_l}-\frac{1}{1+z\pi_l}\right)\right) > (1-f)\left((1-\tau)e_h\left(\frac{1}{1+z\pi_h}-\frac{1}{1+\pi_h}\right)\right) \Leftrightarrow$$

$$\left(\frac{1}{1+z\pi_{l}}-\frac{1}{1+\pi_{l}}\right) > \left(\frac{1}{1+z\pi_{h}}-\frac{1}{1+\pi_{h}}\right)$$

And LHS is -0.25, while RHS is -8/3.

The second condition holds if and only if:

$$\begin{split} &(1-f)\Big((1-\tau)e_l-\alpha(\tau-C)\Big) > (1-f)\Bigg((1-\tau)e_l\left(\frac{1}{1+z\pi_h}-\frac{1}{1+\pi_h}\right)\Bigg) \Leftrightarrow \\ &1 > \left(\frac{1}{1+z\pi_h}-\frac{1}{1+\pi_h}\right) + \frac{\alpha(\tau-C)}{(1-\tau)e_l} \\ &\frac{\alpha(\tau-C)}{(1-\tau)e_l} < 0 \text{ and } z > 1 \text{ so } \left(\frac{1}{1+z\pi_l}-\frac{1}{1+\pi_l}\right) < 0 \Rightarrow \text{Inequality holds.} \end{split}$$

## Proof of corollary 2:

Businesspeople and delegate's optimal strategies are identical whether the level of taxes is high or low. The public only gains (ex post) from setting high taxes when there is an event of corruption and this happens only when both the delegate and the businessperson are of Low quality.

# Appendix 2: Other results

Table A1. Effect of Trust in Business Elites and Government on Preferences for Taxation

	Tax rate top Tax rate next Tax rate next 1% 9% 40%		Tax rate bottom 50%			
Panel A: Regression output	(1)	(2)	(3)	(4)		
Treatments						
$(\beta_1)$ High Business &	-0.461	-0.248	-0.012	0.098		
High Government	(0.976)	(0.766)	(0.603)	(0.529)		
$(\beta_2)$ High Business &	-1.037	-0.662	-0.349	-0.593		
Low Government	(0.820)	(0.653)	(0.516)	(0.440)		
$(\beta_3)$ Low Business &	-0.462	-0.153	-0.055	-0.057		
High Government	(0.824)	(0.657)	(0.517)	(0.441)		
$(\beta_4)$ Low Business &	1.351	1.386*	0.467	-0.170		
Low Government	(0.991)	(0.806)	(0.613)	(0.492)		
Other covariates				_		
Poor didn't make an effort	-3.858***	-3.008***	-1.089***	0.933***		
	(0.632)	(0.495)	(0.406)	(0.358)		
Rich made an effort	-7.174***	-4.803***	-1.383***	0.725**		
	(0.565)	(0.565) (0.445)		(0.305)		
Obama	8.248***	5.280***	(0.355) 2.226***	-1.216***		
	(0.599)	(0.479)	(0.381)	(0.323)		
Trust	-0.051	0.036	0.072	0.154**		
	(0.113)	(0.091)	(0.074)	(0.063)		
Observations	5915	5916	5914	5903		
Control group mean	34.693	26.499	17.751	9.332		
Donal D. Harratharia tration	.l					
Panel B: Hypothesis testing over t						
Effect of Trust in Business Elites		4 054***	0.207	0.424		
High Bus – Low Bus	-1.194** [0.0477]	-1.071***	-0.387	-0.134		
			[0.0264] [0.2900] [0.6495] -0.095 0.042 0.154			
High Bus – Low Bus  High Gov	s  High Gov		[0.9343]	[0.7267]		
HILD I DIE	-2.388***	-2.048***	-0.816	-0.423		
High Bus – Low Bus Low Gov	[0.0055]	[0.0037]	[0.1180]	[0.2809]		
Effect of Trust in Government						
High Gov – Low Gov	-0.618	-0.562	-0.092	0.402		
THEN GOV DOW GOV	[0.3056]	[0.2449]	[0.8006]	[0.1734]		
High Gov - Low Gov High Bus	0.576	0.414	0.337	0.690		
	[0.4943]	[0.5282]	[0.5111]	[0.1166]		
High Gov – Low Gov Low Bus	-1.813**	-1.539**	-0.521	0.114		
	[0.0360]	[0.0300]	[0.3186]	[0.7727]		

Notes. Panel A presents regressions estimates with robust standard errors in parenthesis; includes demographic controls (gender, age, race, education, and type of employment), plus political variables and pretreatment beliefs (include relative support for Obama in previous election, attitudes towards the rich and the poor, and general level of trust); a constant term (not shown) is included in every regression. Regarding the treatments, the control group is the omitted group. \*, \*\*, \*\*\* indicate statistical significance at the 10%, 5% and 1% levels, respectively. Dependent variables are the following: (1) Preferred tax rate for the top 1%. (2) Preferred tax rate for the next top 9% (1% of households earn more than them, but 90% earn less). (3) Preferred tax rate for the next top 40% (10% of households earn more than them, but 50% earn less). (4) Preferred tax rate for the bottom 50% in the income distribution (poorest). In Panel B we present linear combinations of certain treatment coefficients and p-values (in brackets) for the test of whether these linear combinations are equal to 0. High Bus – Low Bus |High Gov is the difference between the treatment coefficient High Business & High Government; High Bus – Low Bus is the weighted average of High Bus – Low Bus |High Gov and High Bus – Low Bus |Low Gov (analogous for other treatment groups). We considered the sample of people that spent at least three minutes in the survey (not considering the candy experiment and time spent in the treatment windows) and at least three seconds in every treatment (when applicable). Respondents assigned to treatments with punishment were not included.

Table A2. First stage

	Local gov.	Major Comp.	Police	Government	Banks	Press	Armed forces	Courts	Neighbors
Panel A: Regression output	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treatments									
$(\beta_1)$ High Business &	0.00695	0.0869	-0.0619	-0.0054	0.116	-0.349**	0.0440	0.113	0.0127
High Government	(0.134)	(0.144)	(0.168)	(0.158)	(0.159)	(0.163)	(0.146)	(0.143)	(0.134)
$(\beta_2)$ High Business &	-0.0883	0.0122	-0.0938	-0.423***	0.123	-0.420**	-0.0344	-0.185	0.110
Low Government	(0.133)	(0.145)	(0.164)	(0.159)	(0.160)	(0.166)	(0.150)	(0.148)	(0.138)
$(\beta_3)$ Low Business &	0.00458	-0.216	0.0299	0.194	0.153	-0.123	0.0150	0.279*	0.0385
High Government	(0.138)	(0.145)	(0.164)	(0.160)	(0.162)	(0.164)	(0.146)	(0.147)	(0.137)
$(\beta_4)$ Low Business &	-0.197	-0.399***	-0.221	-0.209	-0.118	-0.369**	-0.0897	-0.290*	0.125
Low Government	(0.139)	(0.144)	(0.170)	(0.162)	(0.163)	(0.164)	(0.152)	(0.150)	(0.138)
Observations	2462	2462	2462	2462	2462	2462	2462	2462	2462
Control group mean	5.482	4.526	5.972	4.297	4.169	3.948	7.020	5.592	6.382

Panel B: Hypothesis testing over the coefficients									
Effect of Trust in Business Elites									
High Bus – Low Bus	0.055	0.357***	0.017	-0.207*	0.102	-0.139	0.042	-0.031	-0.02
	[0.574]	[0.000]	[0.884]	[0.070]	[0.373]	[0.246]	[0.690]	[0.771]	[0.836]
High Bus – Low Bus  High Gov	0.002	0.303**	-0.092	-0.199	-0.037	-0.227	0.029	-0.166	-0.026
	[0.986]	[0.036]	[0.584]	[0.212]	[0.818]	[0.177]	[0.841]	[0.254]	[0.848]
High Bus – Low Bus  Low Gov	0.108	0.411***	0.127	-0.214	0.241	-0.051	0.055	0.104	-0.014
	[0.437]	[0.004]	[0.456]	[0.187]	[0.141]	[0.765]	[0.720]	[0.497]	[0.918]
Effect of Trust in Government									
High Gov – Low Gov	0.148	0.129	0.141	0.410***	0.132	0.159	0.092	0.434***	-0.092
	[0.133]	[0.207]	[0.237]	[0.000]	[0.251]	[0.185]	[0.387]	[0.000]	[0.342]
High Gov – Low Gov  High Bus	0.095	0.075	0.032	0.417***	-0.007	0.071	0.078	0.298**	-0.098
	[0.479]	[0.604]	[0.850]	[800.0]	[0.963]	[0.676]	[0.597]	[0.041]	[0.470]
High Gov – Low Gov  Low Bus	0.201	0.183	0.251	0.402**	0.271	0.246	0.105	0.569***	-0.086
	[0.163]	[0.207]	[0.140]	[0.014]	[0.102]	[0.145]	[0.487]	[0.000]	[0.533]

Notes. Robust standard errors in parenthesis (Panel A); the dependent variables are the level of trust that the respondent has on each group/organization (scale: 0-10). In Panel B we present the linear combination of certain treatment coefficients and p-values (in brackets) for the test of whether these linear combinations are equal to 0. High Bus – Low Bus |High Gov is the difference between the treatment coefficient High Business & High Government; High Bus – Low Bus is the weighted average of High Bus – Low Bus |High Gov and High Bus – Low Bus |Low Gov (analogous for other treatment groups). \*, \*\*\*, \*\*\* indicate statistical significance at the 10%, 5% and 1% levels, respectively. We considered the sample of people that spent at least 1.5 minutes in the supplementary survey (not considering the time spent in the treatment windows) and at least three seconds in every treatment.

# Appendix 3: Main survey questionnaire

The reader is referred to this web link for the full survey: https://hbs.qualtrics.com/SE/?SID=SV\_ahE7rZtC1sCrlnT

- 1. Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?
  - a. Need to be very careful (0)
  - b. Most people can be trusted (10)
- 2. Please think about poor people in the US:

Do you think they are poor mainly because (choose the most important reason)

- a. they did not make an effort
- b. they lacked opportunities
- c. they were unlucky
- 3. Please think about rich people in the US:

Do you think they are rich mainly because (choose the most important reason)

- a. they made an effort
- b. they were born into rich families
- c. they stole money
- d. they had good luck

American <u>business people</u> are amongst the most successful in the world. Some of the most famous include Bill Gates (founder and CEO of Microsoft) and Steve Jobs, (founder of Apple, NeXT and Pixar), who have revolutionized the technology industry. In several other areas, such as biotechnology, entertainment, medical devices, and high-end machinery, US business people have also been at the forefront of innovation.



Bill Gates, CEO and founder of Microsoft, a company that revolutionized the personal computer industry

Why do you think American business people have been so successful?

a. It is due to the system: business people in the US are encouraged to work hard and can gain money and prestige by creating truly good products.

- b. It is a combination of the system interacting with exceptional individuals, amplified by the availability of capital that allows the successful to expand their business.
- c. It is due to the individuals: there are remarkable business people in the US, who are exceptionally creative and naturally hard working.
- 4. Government officials regularly have private meetings with business people to discuss matters of mutual interest.

Some argue that such meetings are helpful because they allow the exchange of useful information between government and business and the design of more efficient regulation for complex areas.

Critics, on the other hand, argue that these meetings are harmful because they create the opportunity for undue influence, lobbying and the exchange of bribes.

In your view, what goes on at these meetings?

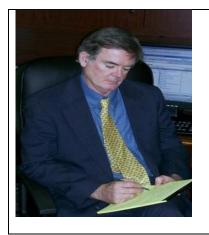
- a. Mainly exchange of bribes for favors (0)
- b. Mainly exchange of useful information (10)
- 5. There are some recent proposals to increase government regulations on firms in the US. How likely is it that you would support these type of proposals?
  - a. Very unlikely (0)
  - b. Somewhat unlikely (3-4)
  - c. Somewhat likely (6-7)
  - d. Very likely (10)
- 6. Here are some things the government might do for the economy.

Please show which actions you are in favor of and which you are against. (0=Strongly against, 2-3=Against, 5=Neither in favor nor against, 7-8=In favor, 10=Strongly in favor)

- a. Control of wages by law
- b. Control of prices by law

### American policymakers and institutions of government are some of the most successful in the world.

There are several famous cases of government officials who are dedicated and honest (one example is Robert McCarthy who helped improve the administration of two large federal programs). The US government is consistently ranked as one of the most honest and efficient in the world (for example, according to indices constructed by the World Bank, the US is one of the top countries in terms of Regulatory Quality and Control of Corruption).



Robert McCarthy, an employee of the federal government who received a prize in 2008 for honesty and efficiency

Why do you think the US government is so much more efficient and honest than the governments in other countries?

- a. It is a question of incentives: officials in the US can have a long and well-rewarded career in government by being honest and efficient. The temptations are not worth their while.
- b. It is due to the existence of independent checks: the American judiciary system has a long tradition of protecting the rule of law and combating corruption.
- 7. Going back to the topic of meetings (between government officials and business people), in the political arena we can find a wide range of views.

  Some politicians argue strongly in favor of these meetings while others argue strongly against them. Which type of politician are you more likely to support?
  - a. A politician that is against allowing these meetings (0)
  - b. A politician that is in favor of allowing these meetings (10)
- 8. Now I'd like you to tell me your views on two issues. How would you place your views on this scale? 0 means you agree completely with the statement on the left; 10 means you agree completely with the statement on the right; and if your views fall somewhere in between, you can choose any number in between
  - a. Competition is good. It stimulates people to work hard and develop new ideas (0)
  - b. Competition is harmful. It brings out the worst in people (10)
  - c. People should take more responsibility to provide for themselves (0)
  - d. The government should take more responsibility to ensure that everyone is provided for (10)
- 9. Some people think it is better to give <u>discretion to policymakers</u> to decide how much regulation to impose on the different sectors of the economy (e.g., how much regulation to impose on banks, on energy companies, etc).

What do you think?

- a. Yes, I think it is a good idea to leave them discretion to decide on the proper amount of regulation for each sector
- b. No, I don't want them to have discretion; I prefer the economy to have less regulation overall
- c. No, I don't want them to have discretion, I prefer the economy to have more regulation overall
- 10. Now we would like to ask you about the income tax rates\* that you think different people should pay. The income tax rate is the percentage of your income that you pay in federal income tax. For example, if you earn \$30,000 and you pay \$3,000 in income taxes, your income tax rate is 10%. Please use the sliders below to tell us how much you think each of the following groups should pay as a percentage of their total income.
  - a. The top 1% (richest)
  - b. The next 9% (1% of households earn more than them, but 90% earn less)
  - c. The next 40% (10% earn more than them, but 50% earn less)
  - d. The bottom 50% (poorest)

- 11. What was the role of fraud during the 2008 financial crisis in the US?

  Most analysts agree that there was a bubble as a result of excessive risk-taking in financial markets.

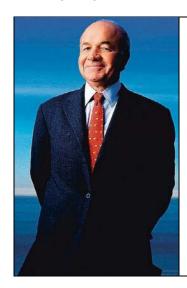
  But those analysts differ in the extent to which they believe fraudulent practices were involved.

  Which comes closest to your opinion?
  - a. There was some fraud but this did not cause the crisis.
  - b. There was a lot of fraud, but there was so much risk-taking that the crisis would have happened anyway.
  - c. There was a lot of fraud and it was a central cause of the crisis.
- 12. In the last election, where did you stand politically?
  - a. Supported Obama
  - b. Center (but leaning Obama)
  - c. Center (but leaning Romney)
  - d. Supported Romney

<sup>\*</sup>We consider only the Federal income tax, which is a tax on household income. If you receive a regular paycheck, this tax is automatically taken out of your pay. When you file a federal tax return each year, you calculate the exact amount you owe, and you get a tax refund from the federal government if you paid more than you owe. To keep things simple, we do not include other taxes such as social security taxes, state income taxes or sales taxes.

### Treatment Low Business

American <u>business people</u> have been involved in some major scandals over the years. Some of the most famous include Bernie Madoff (a Wall Street financier who was able to swindle investors for nearly 20 years) and Ken Lay (the former CEO of failed energy giant Enron who lobbied to obtain regulatory exemptions and government contracts). In several other areas, such as construction and medical supplies, there is also evidence of significant wrongdoing.



Ken Lay, CEO of Enron, the politically connected energy company that became a symbol of corporate abuse

Why do you think there has been so much wrongdoing in American business?

## Treatment Low Government

American <u>policymakers</u> and institutions of government have been involved in some major scandals over the years. There are several famous cases of government officials involved in major corruption scandals (one example is Sal DiMasi, who had a long career in government in spite of extorting bribe payments from several businesses, including one business owned by IBM). There are several other examples of significant wrongdoing in government.



Sal DiMasi, the Massachusetts politician who became a symbol of corruption in the State

Why do you think so much wrongdoing takes place in American government?

# Appendix 4: Supplementary survey questionnaire

The same as the main survey, except that following the treatment, this survey continues with:

- 1. Before proceeding to the next set of questions, we want to ask for your feedback about the responses you provided so far. It is vital to our study that we only include responses from people who devoted their full attention to this study. This will not affect in any way the payment you will receive for taking this survey. In your honest opinion, should we use your responses, or should we discard your responses since you did not devote your full attention to the questions so far?
  - Yes, I have devoted full attention to the questions so far and I think you should use my responses for your study.
  - No, I have not devoted full attention to the questions so far and I think you should not use my responses for your study.
- 2. I am going to name nine organizations/groups. For each one, could you tell me how much confidence you have in them: (0= none at all, 3-4= not very much confidence, 6-7= quite a lot of confidence, 10= a great deal of confidence)
  - o Local government
  - o Major Companies
  - o The police
  - o The government (in your nation's capital)
  - Banks
  - o The press
  - o The armed forces
  - o The courts
  - o Your neighbors
- 3. At the end of this survey we are going to donate \$200 to charity and we would like you to vote for the organization that should receive the money. The organization with the highest number of votes among the respondents of this survey will receive \$200. There is only a small number of people taking the survey so please take your time to decide. You will be informed of the results within a week.
  - a) I vote for Citizens for Tax Justice (an NGO that seeks to require the wealthy to pay their fair share; it is primarily concerned with federal tax policy in the US and its mission is to give ordinary people a greater voice in the development of tax laws).
  - b) <u>I vote for The American Red Cross</u> (an NGO that seeks to **provide humanitarian help**; it is primarily focused on disaster relief and emergency assistance within the US).
  - c) I don't want to vote.
- 4. Imagine that taxes to the top 1% (richest) of the population increase; what do you think will happen?
  - a. The money will be appropriated by corrupt government officials.
  - b. The money will be wasted without clear benefits for the population.
  - c. The money will be used to fund an increase in useful government spending.