

# A Commitment Theory of Populism

*Massimo Morelli, Antonio Nicolò, Paolo Roberti*

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Poschingerstr. 5, 81679 Munich, Germany

Telephone +49 (0)89 2180-2740, Telefax +49 (0)89 2180-17845, email [office@cesifo.de](mailto:office@cesifo.de)

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## Abstract

When voters' trust in politicians collapses, they demand simple policies that they can easily monitor. Disenchanted citizens therefore prefer committed delegates to politicians who propose themselves as competent policy makers but without a specific policy commitment (trustees). In a two-party competition, the unique asymmetric equilibrium is such that voters with lower interest for the common good select a committed delegate, while those with higher interest for the common good appoint a trustee. In this equilibrium, we show that the committed delegate also chooses all the strategies typically associated with populism in the literature. Hence, this paper puts forward a commitment theory of populism.

JEL-Codes: D720, D780.

Keywords: populism, competence, commitment, information acquisition, interest groups, moral universalism.

*Massimo Morelli*  
*Bocconi University*  
*Milan / Italy*  
*massimo.morelli@unibocconi.it*

*Antonio Nicolò*  
*University of Padua / Italy*  
*antonio.nicolo@unipd.it*

*Paolo Roberti*  
*Free University of Bozen-Bolzano / Italy*  
*paolo.roberti@unibz.it*

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# 1 Introduction

Recent literature on the wave of populism in the aftermath of the great recession has focused mostly on what may have caused it on the *demand* side, looking at the changes in attitudes, perceptions and political actions of voters in the 21st century. A first set of economists and some political scientists have focused on economic insecurity as a main source of mistrust in traditional institutions, and of demand for protection policies (see, e.g., Algan et al., 2017, Guiso et al., 2019 and 2021, Ananyev and Guriev, 2018).<sup>1</sup> A parallel strand of political science literature has focused instead on the cultural causes of distrust in political institutions (see, e.g., Norris and Inglehart, 2019). Both the economic and cultural mechanisms, well summarized in a survey article by Guriev and Papaioannou (2021), may have played a significant role in the sharp increase of the demand of populism. Such demand mainly takes the form of a demand for policies and credible promises *for the people* combined with strong anti-elite sentiments.<sup>2</sup> It also often takes the form of a demand for *protection* from immigration or globalization or automation if the threat is perceived in the economic domain, or from some other “other” if the threat is perceived as a threat to identity and one’s own culture.<sup>3</sup> These key observations – the increased anti-elite sentiment and lower trust in representative democracy on the one hand, and the greater demand of protection on the other – may together lead voters to desire unconditional policies: Brexit, the building of walls, the closing of harbors and borders, the fight against Chinese globalization expansion, nationalism.

In this paper we take the changes in voters’ preferences and political trust as given, and we focus instead on the *supply* side. More precisely, the question is what causes the entry and success in the political arena of candidates and parties who focus their rhetoric on anti-elite statements and emphasize closeness to the people, simple protection commitments, and anti-experts attitudes.

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<sup>1</sup>The immigration threat (see, e.g., Laitin, 2018), the globalization threat (see, e.g., Autor et al., 2020, Rodrik 2018, Colantone and Stanig, 2018) and the automation threat (see e.g. Acemoglu and Restrepo, 2017) all increased economic insecurity of certain classes of citizens even before the financial crisis, but Guiso et al. (2021) show that the latter has been the real watershed.

<sup>2</sup>See, e.g., Mudde (2004) for the most recognized definition of populism in political science, which primarily focuses on the pure people against corrupt elite framing.

<sup>3</sup>The connection between antielitism and short term protection can be found in the definition of populism in the encyclopedia Britannica, ([www.britannica.com/topic/populism](http://www.britannica.com/topic/populism)).

We answer this general question with a new theory that, in a nutshell, establishes the following logical chain: reduced trust implies greater chance of electoral success for a candidate who commits to policies that are easy to understand or monitor; and once a candidate shifts from the traditional trustee model of political agency to this commitment strategy, all the other features of populist supply mentioned above follow as rational complementary strategies.

First, we present a simple principal-agent baseline model, where a representative voter (principal) selects a politician (agent) who chooses a policy. The optimal policy is uncertain at the time the politician is appointed, and depends on the realization of a state of nature. The voter selects either a politician who commits to implement a policy that is ex-ante determined (a committed delegate) or one who promises to choose the ex-post optimal policy for the voter (a trustee). In the latter case, whether the politician will actually choose or not the ex-post optimal policy depends on (i) her competence, (ii) the probability that a lobby distorts her choice, and, (iii) voter's monitoring activity. Given that a third player, i.e., an interest group, a lobby or even a supranational institution, can influence the non-committed politician, it follows that the choice of commitment is more likely the greater the expected bias and the probable strength or influence of the interest group, the lower is the expected ability of the potential uncommitted politician, and the lower are the expected benefits that an optimal ex-post policy could bring to the principal compared to the cost of monitoring. A lower trust in politicians' competence, an increased fear that lobbies could capture them, and disenchantment about the benefits that an optimal policy can really bring to her, all shift the voter's preference towards a committed delegate, who panders to the voter's ex-ante desiderata. Since pandering to the ex-ante voter's beliefs is a component of populism, in line with Acemoglu et al. (2013), we call the committed delegate a populist, and we then characterize her complementary strategies when introducing electoral competition.

In the full-blown model, we introduce electoral competition between two parties. The state-contingent policy is common value, but the voters of the two parties may differ in terms of the weight that they assign to it compared to the non state-contingent component (ideology or private

benefits).<sup>4</sup> We show that there is a unique asymmetric equilibrium in which the party of voters who assign a lower weight to the common value policy chooses a committed delegate (populist) while the party of voters who attach a higher weight to the common value policy chooses a trustee (non populist). When someone puts a low weight on the utility loss from not getting the common value policy right, hence placing a relatively higher weight on private benefits, (s)he is an individual who could be described as having “low moral universalism”, using the terminology in Enke et al. (2020).<sup>5</sup> In an asymmetric equilibrium it is always the party with lower moral universalism that turns populist, endorsing, e.g., nationalism, protectionism, closed border policies.

An important corollary of our main results is that moral polarization is both relevant as a precondition for an asymmetric equilibrium that generates populist pandering behavior, as well as as a potential consequence of the campaigning incentives in such an asymmetric equilibrium. Indeed, we show that with endogenous turnout, a populist candidate would like to push down the moral universalism of her supporters, while a non-populist candidate would like to increase the moral universalism of her voters. On the other hand, we show that ideological polarization may actually reduce the likelihood of a populist equilibrium.

Next, we show that the features that the political science literature has identified as constitutive elements of populism (beyond pandering) can be simultaneously rationalized in our asymmetric populist equilibrium: the committed delegate has clear incentives to use anti-elite rhetoric, fueling voters’ fear and distrust towards competent politicians, while a trustee has an incentive to focus her campaign on her ability to choose the optimal policy ex-post. Moreover, fake news production, anti-media and anti-bureaucracy rhetoric can also easily emerge as complementary strategies for a committed delegate trying to defeat a non populist. We also show that commitment may be implicit and self-enforcing: in the absence of a commitment technology, an environment with low

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<sup>4</sup>Private benefits could be anything from transfer promises to one’s own group, protection of communal values, or even fixed values like being pro-choice or pro-life, all things that can be protected only conditional on the victory of one’s own party and do not depend on information.

<sup>5</sup>In Enke et al. (2020) moral universalism refers explicitly to trust and altruism for all, so that an individual with low moral universalism can be thought of as someone who instead trusts and cares only about people in her party, broadly defined. Placing a low weight on the common good with respect to private benefits is consistent with this dichotomy.

trust in politicians favors an incompetent candidate, who does not have more information than voters about the optimal policy. Once elected, she has to stick to the committed platform, for otherwise (s)he would prove to be biased. An additional corollary of the anti-expertise tendencies of a populist candidate is that, if and when (s)he is elected, (s)he should be expected to be in favor of firing expert bureaucrats who could undermine their campaign commitment.

The clearest example of the key role of the strategic commitment choice for the determination of the whole populist strategy is offered by the five-star movement in Italy: beside the fact that the five stars referred explicitly to five policies, four important things should be noted: (1) the commitment to term limits; (2) the commitment to give back part of the pay and benefits in case of individual election; (3) the commitment to cut substantially the number of MPs; and (4) the commitment not to accept any individual deviation from the movement’s mandate.<sup>6</sup> All these ancillary commitments aimed to signal a clear distance from traditional politics (not to be trusted), but may be responsible for ex-post inefficiencies.<sup>7</sup> Trump’s commitments to “America first” protectionist policies or to build a wall at all costs are other obvious examples with no need of further illustration.

The distinction between the committed delegate versus trustee model of political agency has first been introduced by Fox and Shotts (2009), in the context of optimal accountability of incumbents.<sup>8</sup> Kartik et al. (2017) show that in electoral competition the equilibrium degree of discretion left to a politician depends, like in our model, on the level of trust.<sup>9</sup> Some theories of populism already focused on a “pandering” form of commitment (see, e.g., Acemoglu et al., 2013). Our paper shows that this component is complementary to all the other features of the populist strategies emphasized in the political science literature, and we refer in the appendix to

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<sup>6</sup>See the strong emphasis on “vincolo di mandato” <https://beppegrillo.it/circonvenzione-di-elettore/>.

<sup>7</sup>Bellodi et al. (2021) show the consequences of populist commitments in Italy even when including all other populist parties.

<sup>8</sup>A similar distinction is present also in Ghosh and Tripathi (2012) and Bueno De Mesquita and Friedenber (2011), but in their context the committed delegate is an “ideologue”. In our paper ideology enters voters’ utility function, but it is not a constitutive feature of the populist’s strategy.

<sup>9</sup>On the importance of credibility, also see Van Weelden (2013). On commitment vs flexibility, Amador et al. (2006) is a standard reference.

preliminary evidence on the correlation between commitment strategy and the rest of the anti-elite populist campaigning. Related, Gennaro et al. (2021) display robust evidence for the last two US House elections that anti-elite rhetoric is a complementary strategy employed by outsiders in close asymmetric races in districts with higher distrust.

Levy et al. (2020) depict populist policies as simplistic ones desired by unsophisticated voters, who sometimes win elections because of an intense dislike for the status quo. Crutzen et al. (2020) show that if the people are divided in an informed minority and an uninformed majority, parties tend to cater more to the better informed or the elite, and hence the common people develop disaffection for the traditional parties, leading to entry incentives for a populist third party. Sonin et al. (2021) present a model where an informed minority (the elite) can advise the uninformed majority on candidates' competence, when one candidate is biased towards the elite and the other one is unbiased, and look at the conditions under which the uninformed majority follows the elite's advice. More than the partition of citizens along cognitive dimensions, we believe that the critical partition concerns the degree of moral universalism.<sup>10</sup> We show that low political information by voters can be a consequence (rather than a cause) of the populist choice, for different reasons with respect to the "rational ignorance" in Prato and Wolton (2017).

A recent set of papers have emphasized the changes in social identification, making the national vs global identity become the most relevant cleavage, even more relevant than the standard left-right ideology cleavage (see, e.g., Gennaioli and Tabellini, 2019, Besley and Persson, 2019, and Shayo, 2009). Their socio-psychological analysis offers a demand-side interpretation of this phenomenon. Our paper offers a complementary supply-side interpretation: once it becomes rational for a number of parties and politicians in the new circumstances to choose a protection commitment strategy, such parties and politicians become, as a rational consequence, strategic suppliers of messages about the protection of national and communal values. The lower trust in institutions and lower moral universalism of the audience of such political players imply that the

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<sup>10</sup>Enke et al. (2020) show clear evidence about the fact that moral universalism is the single most important parameter characterizing the main political divide in western democracies. See also Enke (2021) for a more general analysis of the relevance of moral values for political economy.

left-right dimension drops in salience, since ideological cleavages are orthogonal to the governance issues that relate to trust.

The paper is organized as follows: in section 2 we present the simplest possible baseline model, and the consequent baseline results are described in section 3. Section 4 is the core of the paper, where we sequentially and incrementally display the most interesting implications of the model when we add endogenous dispersed information acquisition, endogenous participation, fake news production and anti-elite campaigning. Section 5 describes some implications of our model for empirical research and section 6 concludes. All proofs are relegated to Appendix A, while Appendix B shows some recent evidence on the important correlation between commitment strategy and populist rhetoric.

## 2 The baseline model

A principal  $G$  (a party or a representative voter) delegates at time 0 an agent (a politician)  $g$  to make a policy choice  $q$  at time 1. The principal can either ask her chosen agent to *commit* ex-ante to policy  $\bar{q}$ , or else can choose to leave free-hand to the agent. At time 0, there is uncertainty about the optimal policy  $q^*$ . The optimal policy is a realization from a distribution with differentiable and strictly positive density  $f$  on the reals (with cumulative  $F$ ), with mean  $\bar{q}$  and variance  $\sigma^2$ .<sup>11</sup> Formally, the binary choice for principal  $G$  is between policy mandates  $P^G = C$  (*committed delegate*) and  $P^G = NC$  (non committed agent, or *trustee*). There are two potential agents to choose from, one with ability (type)  $t^g = h$  and one with ability  $t^g = l$ ,  $1 \geq h > l \geq 0$ . The ability  $t^g = h, l$  will affect the probability with which the agent can observe the realization of the optimal policy at time 1. If  $G$  chooses  $g$  with  $t^g = l$  there is no cost; whereas there is a cost  $\epsilon > 0$  for  $G$  if she wants to select the agent with  $t^g = h$ .<sup>12</sup>

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<sup>11</sup>The assumption that the policy advocated by the principal in case of commitment,  $\bar{q}$ , is optimal ex ante, is due to the decision to eliminate cognitive incapacities or any other ex-ante bias. The results of the paper would go through qualitatively even if  $\bar{q}$  were not ex-ante optimal.

<sup>12</sup>This cost represents the incentives needed to attract a high-ability agent, who has better options outside politics than a low-ability agent.

At time 1, if the agent is a committed delegate, the policy implemented is  $\bar{q}$ . If the agent is a trustee, the principal chooses the information acquisition effort  $s \in [0, 1]$ , with cost  $c(s)$  increasing and convex,  $c'(0) = 0$ ,  $\lim_{s \rightarrow 1} c'(s) = +\infty$ . With probability  $s$  the principal learns the optimal policy  $q^*$ , and we assume that in such a case the trustee chooses  $q^*$ .<sup>13</sup> With probability  $(1 - s)$  the principal does not learn the optimal policy, and a third player, lobby  $L$ , enters the game with probability  $p$ . The lobby has an ideal policy  $q^L$  which is drawn independently from a distribution with differentiable and strictly positive density  $\phi$  on the reals (with cumulative  $\Phi$ ), with mean  $\bar{q} + \beta$ , and variance  $\tau^2$ .<sup>14</sup> The realization of  $q^L$  is not observed by the principal. If the lobby has entered the game, it makes a transfer offer  $m > 0$  to the uncommitted agent in exchange for choosing the lobby's ideal policy. When making the offer, neither the lobby nor the agent know what the optimal policy  $q^*$  is.<sup>15</sup> If the offer is accepted, the chosen policy must be the one advocated by the lobby,  $q^L$ . If the offer is rejected the agent chooses  $q^*$  with probability  $t^g$  and  $\bar{q}$  otherwise.

The principal's payoff function is :

$$U^G(q) = -\lambda^G (q - q^*)^2 + I^G - c(s) - \epsilon \mathbb{1}_{|t^g=h}.$$

It has four parts: a state-contingent component that comes from the policy  $q$ ; a non-contingent component  $I^G$  derived by having her own agent as policy-maker; the cost of acquiring information  $c(s)$  and, finally, the cost of selection which is equal to  $\epsilon$  if  $t^g = h$ , and equal to zero if  $t^g = l$ . The weight  $\lambda^G > 0$  represents the intensity of the principal's preference for the policy  $q$  with respect to the other components.<sup>16</sup>

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<sup>13</sup> An intuitive justification of this assumption would be that the party keeps the politician as representative in the future unless she is corrupt with probability 1, which would be clear if she chooses a policy different from  $q^*$  when the principal knows it.

<sup>14</sup>Formally, we assume that  $\phi(q^L)$  is a translation by an amount  $\beta$  of a distribution function  $\hat{\phi}(\cdot)$ ,  $\phi(q^L) = \hat{\phi}(q^L + \beta)$ , where distribution  $\hat{\phi}(\cdot)$  has the same expected value as  $f(\cdot)$ . Hence for  $\beta = 0$ ,  $q^L$  and  $q^*$  have the same expected value  $\bar{q}$ . We also assume that  $\lim_{x \rightarrow \pm\infty} \phi(x)x^2 = 0$ , i.e., that the probability that the lobby's bliss point is extreme is sufficiently low.

<sup>15</sup>Assuming that the politician knows the optimal policy before accepting the lobby's offer, leads to similar results as the ones obtained in this model, but with a more complex analysis.

<sup>16</sup>The  $I^G$  component will become relevant only with electoral competition.

The payoff function for the agent  $g$  is

$$U^g(q) = R - \lambda^g (q - q^*)^2 + m,$$

where  $R$  are the standard ego-rents from holding office, and  $m$  is the money that may be obtained from the lobby.

The payoff function for the lobby is

$$U^L(q) = -\lambda^L (q - q^L)^2 - m.$$

### 3 Baseline equilibrium analysis

If  $G$  has chosen mandate  $P^G = C$  then  $g$  implements the committed policy choice  $\bar{q}$ . If  $G$  has chosen mandate  $P^G = NC$  and has observed the optimal policy (this occurs with probability  $s$ ), then the trustee chooses  $q^*$ . If  $G$  has not observed the optimal policy, with probability  $1 - p$  the lobby is not active, and the trustee chooses the best policy for the principal: if the trustee knows what the optimal policy  $q^*$  is, she chooses it, otherwise she chooses  $\bar{q}$ . With probability  $p$  the lobby is active, and the following lemma provides a condition such that the lobby makes an offer that the trustee accepts.

**Lemma 1.** *When  $\lambda^L > \lambda^g$ , in equilibrium the lobby successfully bribes the trustee and implements  $q^L$ .*

**Assumption 1:**  $\lambda^L > \lambda^g$ .

We assume for the rest of the paper that Assumption 1 holds, and it is quite realistic: an interest group puts high weight on the policy they want to influence by definition of interest group, and political agents often put lower weight on the policy also because of office holding standard incentives.

Given Lemma 1, the distortion occurs with probability  $p(1 - s)$ , and the expected loss for the principal when the lobby is active is:

$$\bar{L} := \int_{q^L \in \mathbb{R}} \int_{q^* \in \mathbb{R}} (q^* - q^L)^2 dF(q^*) d\Phi(q^L).$$

In the Appendix, in the proof of Proposition 1 part 2, we show that  $\bar{L}$  increases with  $\beta$ , the parameter shifting the distribution of  $q^L$  away from the expected ex-ante optimal policy of citizens,  $\bar{q}$ .

We are now ready to establish the baseline result:

- Proposition 1.**
1. *For  $\epsilon$  small enough and  $\lambda^G > 0$ , if  $G$  chooses  $P^G = C$ , then she chooses  $t^g = l$ ; if  $P^G = NC$ , then she chooses  $t^g = h$ .*
  2. *The principal is more likely to choose  $P^G = C$  the higher  $\beta$  and  $p$  are, and the lower  $h$  is.*
  3. *A higher  $\lambda^G$  reduces the opportunity cost of information acquisition, hence makes  $P^G = NC$  more likely.*

This baseline result establishes that pandering to what we expect to be right today (a component of populism, as discussed in the introduction) is indeed more appealing for the principal (party or voter) when the probability  $p$  of external influence and or the expected bias  $\beta$  that it implies are higher, and when even the best available politicians are not that great ( $h$  is low). Higher  $p$ , higher  $\beta$ , and lower  $h$  are all sources of *lower trust*. Moreover, a lower  $\lambda^G$  implies a lower benefit of having an ex-post optimal state-contingent policy compared to the cost of information acquisition.

To see what effects a reduction in trust (via increase of  $p$  or  $\beta$  or lower  $h$ ) has on the amount of information acquired in equilibrium by the principal, consider a set of parameters such that in equilibrium  $P^G = NC$ : a drop in trust increases information acquisition, but a sufficiently large drop may induce a switch to  $P^G = C$  and the information acquired in equilibrium drops to zero. Thus,

**Corollary 1.** *Trust has a non monotonic effect on information acquisition.*

The results contained in Proposition 1 are consistent with the results of the retrospective accountability model by Fox and Schotts (2009). Also in their model, a politician may act as a trustee (choosing a policy based on her competence) or as a committed delegate (choosing a policy based on the representative voter's beliefs). Hence, their accountability logic and our delegation logic converge in terms of conditions for different types of equilibrium political agency. Our baseline model offers also an important and novel observation: the principal chooses different types of delegation (commitment vs non commitment) also depending on the weight that she puts on the state-contingent policy dimension in her utility function, which involves costly information acquisition in case of no commitment. Voters demand a committed delegate and are willing to trade the possibility of getting an ex-post optimal policy for the safe option of clear and simple commitment that does not need any costly monitoring when trust is sufficiently low. In our baseline delegation model the principal fears the potential influence of interest groups, lobbies or elites, and this sets up the stage for our theory of populism, which will take its complete form when we introduce electoral competition. The next section shows, among other things, that the ex ante pandering commitment component of populism is conducive to moral polarization, anti-elite rhetoric and fake news production incentives, anti-media and anti-bureaucracy campaigning. All these are components of populist politics often emphasized in the political science literature, and all of these elements of the complete package of populist strategies are simultaneously rationalizable by our model, especially when the equilibrium is asymmetric.

## **4 Electoral competition, mobilization, and the rationalization of the full-fledged populism strategy**

What happens when we augment the model by allowing for primaries and general elections rather than a simple principal-agent choice, and how do mobilization strategies modify the baseline result?

What may explain the existence of an equilibrium in which one party chooses commitment but the other does not? And what role do the fundamentals play in such cases for the determination of the probability of winning for the populist party? Is the ex ante pandering commitment component of populism conducive to the other components of populist politics often emphasized in the political science literature? In this section we offer an answer to all these questions.

## 4.1 Main results

We now extend the model to allow for two-party electoral competition in order to fully characterize the equilibrium behavior of populist candidates and to emphasize what determines the probability of their electoral success.

With two parties in electoral competition,  $G = A, B$ , the state-contingent policy  $q$  affects the welfare of the citizens of both parties and therefore is a common value component of voters' utility function, while  $I^G$  (ideology or private benefits) is a private value component.<sup>17</sup> The optimal policy  $q^*$  is the same for both parties<sup>18</sup> and  $\lambda^G$  can be interpreted as a parameter of moral universalism (see Footnote 5). We will assume  $0 < \lambda^A < \lambda^B$ .

For simplicity, we assume that all candidates have the same  $\lambda$  which we denote by  $\lambda^w$ . Hence, regardless of the party affiliation, the elected policy-maker faces the same trade-offs when dealing with the lobby.<sup>19</sup>

We introduce the following modifications of the model:

- **Voting:** There is a mass of citizens who are members either of party  $A$  or party  $B$ , with equal (unitary) size. To avoid standard problems of free-riding in collective action, we assume rule utilitarian voting (see Feddersen and Sandroni, 2006a, and Coate and Conlin, 2004): voters

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<sup>17</sup>  $I^G$  could be interpreted as any private benefit accruing only to members of party  $G$ .  $I^G$  could alternatively be the value attached by  $G$  to having a pro-life (pro-choice) politician in power. In both interpretations  $I^G$  is not state dependent.

<sup>18</sup> In section 4.3.1 we discuss the robustness of our results to the case in which voters in party  $A$  and  $B$  have different optimal policies, both ex ante and conditional on information ex post.

<sup>19</sup> Assuming the same  $\lambda$  for all policy makers implies that the populist candidate is not necessarily more honest, but she is simply constrained by the commitment. We show in section 4.3.3 that, when candidates have the same  $\lambda$ s of their party, our results are even stronger.

maximize their party's aggregate utility. Each party  $G = A, B$  selects candidate  $g = a, b$  at the primaries. Party members select the candidate of the type and commitment level who maximizes party's aggregate utility also considering the choice being made in the other primary and the effect of this choice on the general election turnout. We assume that there exist at least two potential candidates, one with low ability  $l$  and one with high ability  $h$ . Thus candidate  $i$  is associated to ability (type) level  $t^i$ , with  $t^i \in \{l, h\}$ ,  $0 \leq l < h \leq 1$ . At the general election candidate  $a$  competes against candidate  $b$  and the winner will be the policy maker. The voters of party  $G = A, B$  have a binary choice between voting for their party representative or abstaining, and each group's optimal voting rule determines the threshold cost of voting below which all members are mobilized.

The decision to turn out in the general election for voter  $j$  of party  $G$  is denoted by  $\chi_j^G \in \{0, 1\}$ . The cost of voting for voter  $j$  in  $G$  is  $z_j + \gamma^G$ , where  $z_j \in [\underline{z}, \bar{z}]$  with  $\underline{z} < 0 < \bar{z}$ , uniform distribution, and  $\gamma^G \in [-\frac{1}{2\psi}, \frac{1}{2\psi}]$  is a party specific voting cost shock common to all members of  $G = A, B$  that modifies the distribution of voting costs right before the general elections. Each voter observes only their own party shock, not the one of the other party.  $\gamma^G$  is for simplicity distributed uniformly, and we assume  $\psi$  to be small, so that we are facing a close election in expectation.

- **Information acquisition:** Having replaced the single principal of the baseline model with a voting selection, we have to be consistent also in terms of information acquisition, assuming that, if the elected policy-maker is a trustee, then the endogenous information acquisition efforts are by her party members. We assume that citizens are heterogeneous also in their cost of information acquisition. Let  $s_j^G \in [0, 1]$  denote the amount of information acquired by a generic citizen  $j$  of party  $G$ . Again, party utility maximization determines the equilibrium information, denoted by  $s_j^{G*}$ , acquired by each citizen in line with the framework of Feddersen and Sandroni (2006b). Similarly to the baseline,  $S^G = \int_{j \in G} s_j dj$  is the probability with which the optimal policy is known by members of party  $G$ , which forces trustee  $g$  to implement

it no matter what. The cost of information is a continuous increasing and convex function  $k_j c(s_j^G)$  such that  $c(0) = c'(0) = 0$ ,  $\lim_{s \rightarrow 1} c'(s_j^G) = +\infty$ , and  $k_j$  is a realization from a uniform distribution between  $\underline{k} \geq 0$  and  $\bar{k} > \underline{k}$ . We assume sufficient convexity of the cost function.

**Assumption 2:** The cost function  $c(\cdot)$  is sufficiently convex.

This assumption guarantees that when the lobby becomes more harmful ( $p$  and/or  $\beta$  increase) the consequent increase in the information acquired by the members of party  $G$  (the winning party) in equilibrium, does not overcome the negative effect that such increase of lobby's harmfulness has on the utility of the members of the other party  $-G$ .

Citizen  $j$  of party  $G$  derives the following utility<sup>20</sup> from policy  $q$  and realized optimal policy  $q^*$ :

$$U_j^G(w, q, q^*) = -\lambda^G (q - q^*)^2 + I^G \mathbb{1}_{w=g} - k_j c(s_j^G) - (z_j + \gamma^G) \mathbb{1}_{\chi_j^G=1} - \epsilon \mathbb{1}_{t^g=h}.$$

Finally, the payoffs of the politicians and the lobby are the same as in the baseline model.

The agency type preferred by each party ( $C$  or  $NC$ ) remains unchanged even in the electoral competition context if  $I^G$  is neither too low nor too high: if too low, then party members may prefer to lose the election simply because in this way they can free-ride on the cost of monitoring; if  $I^G$  too high, party  $G$ 's primary concern becomes to win the election and therefore party  $G$  could strategically choose the optimal mandate for the other party to maximize the probability of winning the election, reducing the other party's turnout. The assumption that  $\psi$  is small is sufficient to guarantee that the range of values of  $I^G$  where neither of these extreme effects takes place is large.<sup>21</sup>

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<sup>20</sup>We disregard the cost of voting in the primary election since party members have aligned preferences and in the primary only those who have a negative cost of voting vote.

<sup>21</sup>To see this, note that when  $\psi \rightarrow 0$ , then the probability of winning of each party tends to  $\frac{1}{2}$  irrespective of the mandate and therefore each party chooses her optimal mandate, because strategic considerations on the effect that the mandate has on the other party's turnout are negligible. By continuity, if  $\psi$  is sufficiently small, each party chooses her preferred mandate in equilibrium. We maintain this assumption for most of this section. We briefly discuss at the end of the section what happens when the ideological component becomes predominant and the party may strategically choose the mandate that the other party's members prefer in order to increase the probability of

With these modifications, all the substantive results of Proposition 1 are essentially unchanged. In this more general context  $\lambda^G$  captures the weight of the common value component in the utility function, or in short, the degree of moral universalism of party  $G$ . A difference in the level of  $\lambda$  between parties may lead to an asymmetric equilibrium where one party proposes a committed delegate and the other party a trustee.

**Lemma 2.** *Given  $\lambda^A < \lambda^B$  it is possible to find parameter values under which  $P^A = C$  and  $P^B = NC$ , while it is impossible to find an equilibrium under which  $P^A = NC, P^B = C$ .*

This lemma establishes that if in an electoral competition only one party chooses the populist commitment in equilibrium, such a party must be the one with lower moral universalism.<sup>22</sup> Armed with this important observation, we can now characterize the determinants of the success (probability of winning) of a party in the asymmetric equilibrium, which, as we will argue in the following sections, is the case where the full-fledged populism strategy arises.

**Proposition 2.** *When the equilibrium is asymmetric, with  $P^A = C$  and  $P^B = NC$ , the probability of winning of candidate a (b) is*

- increasing in  $I^A$  ( $I^B$ ),
- increasing (decreasing) in  $p, \beta$  and decreasing (increasing) in  $h$ ,
- decreasing (increasing) in  $\lambda^A, \lambda^B$ .

Proposition 2 offers relevant insights. In the asymmetric equilibrium, the probability of winning for the committed candidate is decreasing in the trust related perceived parameters and decreasing in moral universalism. Electoral campaigns will therefore be polarizing in multiple dimensions. A committed candidate benefits from convincing the electorate of the risk of politicians being captured by elites, of the difficulty of monitoring them, and of the complexity in understanding the state of the world, while a trustee benefits from convincing the electorate about her expertise. Moreover, in an asymmetric equilibrium we predict a sort of *moral polarization*, with a candidate

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winning the election – reducing the other party’s turnout.

<sup>22</sup>It can also be noticed that if both parties choose  $NC$ , party  $A$  monitors less in case it wins the election, and therefore the lobby is more likely to be active.

adopting a divisive electoral campaign that further reduces the moral universalism of her supporters and the other candidate standing for a more cohesive and inclusive campaign. Thus the model provides a novel link between moral universalism, as in Enke et al. (2020), and populism. Enke et al. (2020) show that right-wing parties tend to display lower moral universalism, and that indeed lower moral universalism correlates with all the policy preferences of right-wing parties on all the most relevant policy dimensions. Thus, Lemma 2 and Proposition 2 highlight that it is natural to expect populist commitment choices to be made more likely by right-wing parties.

We have already discussed how the reduction in trust for traditional politicians (identified by three different parameters in our model) is a key culprit for the switch to simplistic populist commitments, and the literature shows how the increased distrust is due to globalization and immigration threats or the financial crisis. However, we can also conjecture that in the same period there has been a simultaneous cultural change, captured in the model by a reduction in  $\lambda$ . Such a cultural change can also be related to the sequence of crises, through one or more of the following channels: first, job insecurity makes one rely more on own network and group; second, life satisfaction going down makes one search more utility from in-group; third, social identification with other members of same group in similar situation increases.<sup>23</sup> If the common value policy is also more long term, a reduction in  $\lambda$  could also be observationally equivalent to a reduction of patience.

About the moral polarization hinted by our above proposition, de Vries (2018) finds evidence of an increase in the cosmopolitan-parochial divide between parties after the crisis – consistent with an increase in distance between  $\lambda^A$  and  $\lambda^B$  in an asymmetric equilibrium. While *moral* polarization is definitely important, as precondition as well as potential consequence of the differential campaign incentives, *ideological* polarization can actually reduce the likelihood of a populist equilibrium. The intuition is straightforward. Consider first a case in which  $(\lambda^A, \lambda^B)$  are such that the equilibrium is asymmetric and party  $A$ 's preferred mandate is  $P^A = C$ . Suppose now that  $I^A$  increases: when

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<sup>23</sup>Using the European Social Survey, it is possible to observe that regional economic shocks significantly increased in-group attitudes and decreased out-group attitudes, but mostly for people in finance and agriculture sectors. See also Guiso et al. (2021) for related evidence.

it becomes sufficiently large, party  $A$ 's primary concern becomes to win the election. Shifting to NC reduces the turnout incentives of party  $B$ 's voters, and hence it can be strategically chosen in order to increase the probability of winning. So if party  $A$  becomes ideologically "extremist" the populist equilibrium may actually disappear.<sup>24</sup>

## 4.2 The other components of the full-fledged populism strategy

The above analysis has shown that in an asymmetric equilibrium the effect of the parameters of the model on the probability of winning of each candidate goes in opposite directions, and therefore candidates will differentiate their electoral campaign. We now incorporate in our analysis two relevant aspects of political campaigns that have raised attention in recent years. Populism in western democracies has always been characterized by a rampant use of anti-elite rhetoric by populist candidates, as reflected in the definition itself of populism that prevails in political science. Second, with the new technologies we observe an increased diffusion of fake news and distorted information, often fomented by the same populist parties. We show that these phenomena are instrumental and fully rationalizable, since the use of anti-elite rhetoric, fake news production and mass media delegitimization, boost the probability of electoral success of a committed candidate in an asymmetric equilibrium

### 4.2.1 Fake news and mass media delegitimization

Suppose that each candidate  $g \in \{a, b\}$  at the general election can exert a costly effort (or campaign budget)  $n^g \in \mathbb{R}_+$  to circulate fake news, delegitimize and discredit national media outlets, and create doubts. Such efforts increase the cost of information acquisition by voters:  $(k_j + n^a + n^b)c(s_j^G)$ .<sup>25</sup> Let  $\Psi(n)$  be the cost of circulating fake news, assumed the same for both candidates,

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<sup>24</sup>A formal proof of this observation is in the Appendix.

<sup>25</sup>While generally news are produced by media and not candidates, we abstract from modeling the market for news, to keep this extension close to the main model. Moreover, candidates typically talk about news in their speeches and political campaigns, increasing the salience of a subset of the whole menu of news offered by media. By choosing to talk overwhelmingly about fake news or to constantly attack the main news sources, a candidate makes it more difficult for citizens to acquire correct information.

with  $\Psi(0) = 0$ , strictly increasing and convex.

**Proposition 3.** *Suppose  $P^A = C$  and  $P^B = NC$ . For  $R$  sufficiently large, candidate  $a$  exerts positive effort and candidate  $b$  zero effort in producing fake news.*

The intuition of this result is straightforward. In case candidates compete in the general election with asymmetric strategies, candidate  $a$  benefits from an increase in the cost of information acquisition because it decreases party  $B$ 's voters turnout and increases party  $A$ 's voters turnout. The fact that the candidate  $b$  does not provide any effort in producing fake news, derives from a feature of the lobbying subgame, in which the politician does not have any bargaining power with the lobby. In a model where the politician had bargaining power, the un-committed policy-maker would receive a larger offer and in this case she could benefit from increasing the cost of information acquisition because it would reduce voter's monitoring ex-post. However, increasing the cost of information acquisition would still imply a reduction of the citizen's utility of voting for the uncommitted candidate, hence the probability that her opponent  $a$  wins increases. When candidates have strong incentives to win elections, that is  $R$  sufficiently large, the committed candidate would still produce more fake news than non-committed candidate.

In case fake news do not affect the probability of winning the election, as it is in case both candidates offer an uncommitted policy, candidates will exert a positive effort to lower citizens' monitoring.

#### 4.2.2 Anti-elite rhetoric

Populist rhetoric is characterized by a strong anti-elitism. In this subsection we suggest how anti-elite rhetoric aiming to affect voters' beliefs about the likelihood that lobbies and elites could distort politicians' actions is a natural complement of commitment politics. We assume here that the candidate who wins the primary of party  $G$  chooses how to allocate a unitary endowment of time between campaigning on competence and anti-elite rhetoric, as in Gennaro et al. (2021). Formally, the choice  $\rho^g \in [0, 1]$ ,  $g = a, b$ , can be interpreted as the time spent on anti-elite rhetoric,

with the remaining time devoted to competence campaigning. This choice has the following impact on citizens' beliefs of competence and possibility of elite capture:

$$p(\rho^a, \rho^b) = p + \eta(\rho^a) + \eta(\rho^b), \text{ with } \eta(0) = 0, \eta' > 0, 2\eta(1) < (1 - p);$$

$$\hat{t}^g(\rho^g) = t^g + \theta(\rho^g), \text{ with } \theta(1) = 0, \theta' < 0, \theta(0) < (1 - t^g).$$

In words, the general election campaign effort by politician  $g$  of party  $G$  can be used to modify the prior of that party's citizens on either her competence or on the risk of elite capture.

**Proposition 4.** *In an asymmetric equilibrium, candidate  $a$  who has a policy commitment chooses  $\rho^a = 1$ , while candidate  $b$  who is uncommitted chooses  $\rho^b = 0$ .*

It is a weakly dominant strategy for any committed delegate candidate to allocate all her time campaigning to increase voters' perception on the probability that the lobby is active. Only in case both candidates are committed delegates a candidate is indifferent on which topic to devote her campaign. For a trustee it is a dominant strategy to devote her campaign to increase voters' beliefs about her competence.<sup>26</sup>

### 4.2.3 Consequences for the bureaucracy

Another feature of populists' behavior that could easily be seen as complementary (or even consequent) to the choice of a committed delegate form of political agency, is the strong anti-bureaucracy and anti-expert rhetoric (and action once in office) by populist politicians. Sasso and Morelli (2021) derive formally the implications of the committed delegate model of populism for bureaucratic turnover, bureaucrats' incentives and selection, and for some government quality effects. Bellodi et al. (2021) find strong and robust evidence that indeed once a populist enters office there is a significant increase in bureaucratic turnover, a significant reduction in the quality of the bureaucracy, and a significant reduction in government performance. The intuition for the mechanism

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<sup>26</sup>Notice that, even if we allow negative campaigning about the competence of the opponent, in an asymmetric equilibrium the committed delegate would still prefer to allocate her time on an anti-elite rhetoric as long as the mobilisation effect of this rhetoric is stronger than other effects. In a related paper, Gennaro et al. (2021) study the sensitivity of the anti-elite component of the populist campaign strategy in US elections to economic insecurity variation and district characteristics.

and how it relates to our model is straightforward: a bureaucracy of experts can block or alter the (ex-post inefficient) policies that populists have committed to during the campaign, and populists do not want that.

### 4.3 Extensions

We now discuss a number of directions in which our results can be extended. First, we discuss the realistic possibility that the two parties have heterogeneous preferences over the policy that affects all citizens. Second, we consider the case in which voters of different parties care about different policies; and finally we discuss the relation between competence and endogenous commitment.

#### 4.3.1 Heterogeneous Preferences

In the paper we have assumed that  $q$  is a common value policy. How do the results change when the policy that needs information acquisition affects all citizens but they may disagree on what is the optimal policy to implement even when recognizing the state of the world? Assume that there is still an underlying (common) state of the world  $q^*$  but parties have heterogeneous preferences over the optimal policy to implement:  $q^{A*} = q^* - \delta$  is the optimal policy for party  $A$  members and  $q^{B*} = q^* + \delta$  is the optimal policy for party  $B$  members.<sup>27</sup> The parameter  $\delta \geq 0$  captures the degree of preference heterogeneity among parties. Suppose here for simplicity that if a party chooses commitment, it chooses the policy that maximizes their members' aggregate ex-ante utility, and therefore  $\bar{q}^A = \bar{q} - \delta$  and  $\bar{q}^B = \bar{q} + \delta$ .<sup>28</sup>

The trade-off faced by citizens in each party is the same as before. Thus Proposition 2 still holds.

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<sup>27</sup>For example, consider the case in which the single most important or salient national policy is openness towards immigrants or openness to globalization. In these two typical examples for the literature on populism,  $\delta$  captures the cultural or socioeconomic differences between a left-wing and a right-wing voter even under full information. Yet, the optimal policy on globalization or immigration also depends on the realization of many economic and political factors.

<sup>28</sup>We assume here that each party chooses her preferred policy disregarding strategic consideration on turnout. Should we allow each party to choose which policy to commit to in  $[\bar{q} - \delta, \bar{q} + \delta]$  with strategic turnout consequences in mind, the choice of commitment best response could display convergence, in order to reduce turnout of the opponents. We decided to ignore this level of strategic thinking, also because it would require at the time of primaries a common knowledge of the distributions of the costs of voting and costs of information acquisition of the whole population, a pretty unrealistic scenario.

In any asymmetric equilibrium the probability that a committed candidate wins is decreasing in the trust and in moral universalism of her party members as also on the other party members. However, by introducing two important differences in the two groups' preferences (the  $\lambda$ s and their optimal policies), the model naturally leads to a larger set of possible equilibrium outcomes. Lemma 2 states that, if there is an equilibrium with a committed delegate and a trustee, then the latter is the candidate running with the party that has the larger  $\lambda$ . Depending on parameter values, this Lemma could fail to apply to this extension. Indeed, by introducing heterogeneity in the principal's preferences, we also added an asymmetry in their expected disutility of the lobby's bias. Let  $\bar{L}(G)$  denote the expected loss for party  $G \in \{A, B\}$  when the lobby successfully bribes the politician:

$$\bar{L}(G) := \int_{q^L \in \mathbb{R}} \int_{q^* \in \mathbb{R}} (q^{G^*} - q^L)^2 dF(q^*) d\Phi(q^L).$$

One of the parties suffers a larger expected disutility from the lobby, because her optimal policy in expectation will be farther from the lobby's bliss point, with respect to her opponent. If such principal is the one with a larger  $\lambda$ , and the bias is sufficiently large, she could choose commitment to avoid the bias, while her opponent, with a lower  $\lambda$ , could choose no-commitment because her bias from lobbying is much smaller.

Left-wing populism is actually characterized by a strong anti-elite sentiments, especially against financial elites who have opposing interests to those of the poor. This extension would then suggest that, even in the absence of a lower  $\lambda$ , left-wing parties could resort to commitment strategies because their optimal policy is very far from the one of special interests.<sup>29</sup>

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<sup>29</sup>Consider the cases of Podemos in Spain, or Chavez's movement in Venezuela. Podemos rallied strongly against "la Casta financiera", deemed responsible for the economic crisis, while Chavez campaigned against the foreign powers controlling Venezuelan natural resources.

### 4.3.2 Multidimensional policies

Consider now an extension in which there are two national policies to be decided, e.g., security  $q_a$  and welfare policy  $q_b$ . Suppose for simplicity that for party  $A$   $\lambda_{q_a}^A > 0$  but  $\lambda_{q_b}^A = 0$ , and vice versa for party  $B$ , so that even if both policies enter additively in the utility function each voter considers only the policy dimension most important for her. In this case once again all our results qualitatively continue to hold. Moreover, our results clarify the role of moral universalism for the choice of a populist strategy within each party: for party  $A$  a lower  $\lambda_{q_a}^A$  implies that committing to “America first” or disengagement becomes preferable to more flexible international policies; similarly, for a voter of party  $B$  a lower  $\lambda_{q_b}^B$  implies that a commitment to a simple citizenship income can be preferred to more elaborate welfare policies. In fact, security at the more global level or welfare considerations for others have low relevance when moral universalism is low.

### 4.3.3 Heterogeneous $\lambda$ of candidates

In the main model we assumed that all candidates attach the same weight to policy in their utility function. What happens if candidates have different  $\lambda$ s? Let us assume, for simplicity, that candidate  $g$  has the same  $\lambda^G$  of her party members. Candidate  $a$  therefore, having a lower moral universalism than candidate  $b$ , is more willing to sell out to the lobby because  $m(\bar{\lambda}^g)$  is increasing in  $\lambda^g$ . Hence, voters of party  $A$  are more prone to select a candidate who proposes commitment, with respect to voters of party  $B$ , because their trustee is easier to bribe. Thus, adding this heterogeneity to our model further strengthens our results: citizens with lower value attached to policy are more likely to vote for a committed delegate.

### 4.3.4 Incompetence as a commitment device

Some final remarks concern the possibility of endogenous and partial commitment. First, observe that as long as the commitment is credible, voters do not acquire information about the state of the world, so they never push the policy-maker to change the ex-ante optimal policy. Still, a policy-

maker may learn with positive probability what is the ex-post optimal policy and realize that it is very far from  $\bar{q}$ . If commitment is not full, a committed politician may propose to change ex-post the policy and voters face the dilemma whether this bid depends on her superior knowledge or lobby pressure. If voters can select in the primary a candidate  $g$  of any ability  $t^g \in [0, 1]$ , choosing a candidate with  $t^g = 0$  is a commitment device. A candidate with zero ability will never learn the optimal ex-post policy and voters should assign probability one that the policy-maker is derailed by the lobby if the commitment is not maintained. Di Tella and Rotemberg (2018) offer an explanation for the observation that voters sometimes seem to prefer incompetent politicians. In their model, voters are disappointment averse and more competent politicians are more likely to betray them. Our result offers an alternative explanation for why voters sometimes seem to prefer incompetent policy-makers.

## 5 Empirical predictions

The model presented in this work has rich empirical implications. We list them now and discuss the available empirical evidence to support them.

1. *Higher distrust towards elites pushes towards populism.* There is a large literature showing that the demand for populism is positively impacted by a drop in trust in politicians, political parties, political institutions, and ruling classes in general. For European citizens, this can take the form of not trusting European institutions and a general suspicion that the political class will not be pursuing the interests of common people (Dustman et al. 2017, Algan et al., 2017, Foster and Frieden, 2017, and Guiso et al., 2021).
2. *Populist politicians have lower competence.* The model predicts that, on average, we should expect politicians that support commitment policies to have lower competence. A Gallup poll in 2019 showed that Trump scored relatively low among voters in terms of policy competence.<sup>30</sup> Moreover, in Italy, looking at municipal elections from 1998 to 2019, simple linear

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<sup>30</sup>See <https://news.gallup.com/poll/260495/trump-seen-marginally-decisive-leader-not-honest.aspx>

probability model estimates conditioning on the population size of the municipality confirm that being populist is associated with a decrease in the probability of having a university degree by 6 percentage points (see Bellodi et al. 2021).

3. *Citizens with lower moral universalism are more likely to vote for populist politicians.* Enke et al. (2020) show that right-wing citizens are generally characterized by a lower moral universalism, a feature that is persistent throughout the Western world. Broad confirmation of our empirical prediction comes from noticing that populism has been recently mostly a right-wing phenomenon. Notice that, in the cases in which populism had left-wing characteristics, leftist voters were the ones mostly worried about elite capture by lobbies. This fear, consistently with our model, pushed them to demand commitment policies even in the absence of lower moral universalism (see extension 4.3.1 on heterogenous preferences).
4. *Populist politicians circulate more fake news .* There is large anecdotal evidence and increasing literature (see, e.g., Ross and Rivers 2018) showing that Donald Trump circulated fake news through his Twitter account and during his public speeches, especially during the 2016 and 2020 US electoral campaigns. Similarly, Jair Bolsonaro contributed to the diffusion of fake news both during the 2018 Brazilian Presidential campaign, and during the COVID crisis, see Ricard and Medeiros (2020).
5. *The turnout of populist (non populist) supporters is increasing (decreasing) in the distrust towards the elites.* The work by Guiso et al. (2021) shows, with European data, that turnout decreases when citizens trust less the ruling class, but conditional on voting, they choose populist candidates. These results support our empirical prediction, if the decline in turnout of non-populist supporters is larger than the increase in turnout of populist voters.
6. *Populists specialize on anti-elite rhetoric during electoral campaigns.* Gennaro et al. (2021) confirm empirically that Donald Trump resorted to anti-elite rhetoric during the 2016 electoral campaign, more than his opponent, Hillary Clinton, and more evidently in speeches

made in districts with higher voters' disillusion due to economic insecurity. Moreover, using data on the 2018 and 2020 congressional elections, they show that politicians who run as outsiders in districts with high economic insecurity and hence lower trust tend to specialize in anti-elite rhetoric. Vitale (2021) finds evidence of correlation between commitment and anti-elite rhetoric (see appendix B) on the same U.S. data. Guiso et al. (2017) document high correlation between anti-elite rhetoric and short term protection policy platforms using CHES data set. Future work could be devoted to verifying whether indeed populist rhetoric by populist politicians is systematically higher in asymmetric races.

7. *Citizens' information acquisition is non-monotonic with respect to the distrust towards elites.* Galasso et al. (2021) provide preliminary evidence about this prediction.
8. *Ideological polarization is not necessarily a cause of increased populism.* We showed that, when the ideological component in the utilities of citizens is large, candidates do not propose commitment. This implies that candidates will also not implement all the complementary strategies analyzed in the paper (circulation of fake news, anti-elite rhetoric) and should focus instead on the ideological part of their proposals. Instead we expect to observe that, when the ideological component is low and there is large moral polarization (given by very different values of moral universalism), the whole bundle of populist features realizes. This empirical prediction thus speaks to the intense debate on the ideological content of populism (see, e.g., Stanley, 2008, and Freeden, 2016), suggesting a nuanced relationship, whose empirical test is an interesting venue for future research.

On top of the empirical implications listed above, we wish to reiterate the implications for bureaucratic efficiency and government performance: our model suggests that populists, when in office, should want to maximize the probability of keeping their promises, and in fact the word "promise" is prominent in the populism dictionary used in text analysis. Hence there should be a consistent tendency by populist incumbents to fire expert bureaucrats who want instead to match the state of the world. This prediction is fully worked out in Sasso and Morelli (2021) and

empirically confirmed in Bellodi et al. (2021).

## 6 Concluding remarks

We have shown that commitment to a popular policy is a natural consequence of a collapse of trust, and it is rationally complemented by the other elements that characterize populism when a party using the pandering commitment strategy has to face a traditional non committed candidate. The populist equilibrium is more likely to arise when there is moral polarization, while ideological polarization is not necessarily related to the populism phenomenon, since we show that the space of parameters such that a populist equilibrium exists may actually shrink when ideological polarization increases.

Adam Smith in the last chapter of the wealth of nations already noticed that stagnation and inequality, combined with excessive division of labor and fear of replacement by machines, may generate a collapse of the moral sentiments necessary for the good functioning of commercial society, namely ingenuity, frugality and prudence. But beside this decay of individual moral values that were functional to capitalism, as emphasized in Censolo and Morelli (2021), it is easy to imagine that also moral universalism may go down. Fear of globalization, distrust for politicians, increased fears of a zero-sum game, bring citizens to be less generous and more self-absorbed and therefore less prone to care about the utility of those distant from them, in space and intergenerationally, and hence to put a lower weight on common-value policies. The fact that the party with lower moral universalism is the most likely to turn populist in a two-party competition is consistent with the observation that populism in western democracies emerged mostly on the right of the political spectrum: an average right-wing voter (an average Republican in the US) typically cares less about (and trusts less) the public good provision by the state.

One important direction for future research concerns dynamics. While Levy, Razin and Young (2020) study the dynamics of intensity of preferences of voters of two given groups, the sophisticated and the unsophisticated, the dynamics of learning that can be envisioned as a follow-up of our paper

has as main components the interplay between learning on new policy dimensions and on the real power of the elite(s) in biasing policy-making. Under some conditions a long phase of non-populist equilibrium can be followed by short or long phases of populist equilibria or committed delegation on both sides, and with different exit patterns depending on the fundamentals. Learning dynamics both on the variance of the optimal policy and on the strength of the elite(s) may vary with the characteristics of the equilibrium supply (non populist or populist, symmetric or asymmetric) in non trivial ways. We conjecture that if the elite is monolithic or one-sided, then a populist equilibrium could last much longer than when there are multiple competing elites, because with expected interest groups' pressure on two different sides the expected equilibrium distortion may be lower. An additional direction of extension of our model could be that when a populist is in office we can learn about the costs of populism or on unexpectedly important new policy dimension. For example the cost of having incompetent bureaucrats could be updated upwards during a pandemic, and on newly relevant dimensions like logistics. Another important conjecture on the potential follow-up implications of our model is that if the lobby is not expected to be extreme, then if the policy-maker is more constrained (as it is the case for the policy-maker in a country with no independent monetary or fiscal policy) the value of uncommitted policy-makers goes down, and populist equilibria can surface.

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## Appendix A (proofs)

*Proof of Lemma 1:* Consider a lobby with preferred policy  $q^L$  that makes an offer  $m$  to the agent  $g$ . If the agent accepts the offer, she gets:  $m - \lambda^g \int_{q^* \in \mathbb{R}} (q^L - q^*)^2 dF(q^*)$ , which includes  $m$ , the money from the lobby, and the expected utility loss from implementing the lobby's preferred policy. If the agent refuses the lobby's offer, she receives utility  $-(1 - t^g) \lambda^g \int_{q^* \in \mathbb{R}} (\bar{q} - q^*)^2 dF(q^*) = -(1 - t^g) \lambda^g \sigma^2$ . In fact, with probability  $t^g$  she discovers (and implements) the optimal policy  $q^*$  and with the complementary probability, she does not discover the optimal policy, hence she implements  $\bar{q}$ . The agent accepts the lobby's offer if

$$m - \lambda^g \int_{q^* \in \mathbb{R}} (q^L - q^*)^2 dF(q^*) \geq -(1 - t^g) \lambda^g \sigma^2. \quad (1)$$

Notice that

$$\begin{aligned} \int_{q^* \in \mathbb{R}} (q^L - q^*)^2 dF(q^*) &= \int_{q^* \in \mathbb{R}} [(q^L - \bar{q}) - (q^* - \bar{q})]^2 dF(q^*) \\ &= \int_{q^* \in \mathbb{R}} [(q^L - \bar{q})^2 + (q^* - \bar{q})^2 - 2(q^L - \bar{q})(q^* - \bar{q})] dF(q^*) = (q^L - \bar{q})^2 + \sigma^2. \end{aligned} \quad (2)$$

By substituting the latter expression in inequality (1), we obtain  $m \geq \bar{m} := \lambda^g [t^g \sigma^2 + (q^L - \bar{q})^2]$ .

The lobby chooses to bribe the agent if

$$-\bar{m} \geq -\lambda^L t^g [(q^L - \bar{q})^2 + \sigma^2] - \lambda^L (1 - t^g) (q^L - \bar{q})^2,$$

where we made use again of simplification (2). By substituting the expression for  $\bar{m}$  in the inequality above, we obtain

$$-\lambda^g (q^L - \bar{q})^2 - \lambda^g t^g \sigma^2 \geq -\lambda^L (q^L - \bar{q})^2 - \lambda^L t^g \sigma^2.$$

From the latter inequality, if  $\lambda^L \geq \lambda^g$ , we obtain that the lobby successfully bribes the agent.

□

*Proof of Proposition 1:* Let us prove each point sequentially. We disregard the  $I^G$  component, since it is irrelevant for this baseline result.

1) Consider the utility of the principal when  $G$  selects  $C$ :  $-\lambda^G \sigma^2 - \epsilon \mathbb{1}|_{t^g=h}$ . If  $G$  chooses  $C$ , her utility from policy does not depend on the competence of her agent. If selecting a competent agent is costly ( $\epsilon > 0$ ),  $G$  selects an agent with low competence  $t^g = l$ .<sup>31</sup> Suppose that  $G$  chooses  $NC$ . Let  $s^* \in (0, 1)$  denote the optimal amount of information acquired by  $G$  when choosing  $NC$ . We derive  $s^*$  and its properties in point 3 below.  $G$ 's utility from  $NC$  is therefore  $-\lambda^G(1 - s^*) \left[ (1 - p)(1 - t^g)\sigma^2 + p\bar{L} \right] - c(s^*) - \epsilon \mathbb{1}|_{t^g=h}$ . Notice that expression  $-\lambda^G(1 - s^*) \left[ (1 - p)(1 - t^g)\sigma^2 + p\bar{L} \right] - c(s^*)$  is increasing in  $t^g$ . We disregard the effect of  $t^g$  on  $s^*$ , because of the envelope theorem. With abuse of notation we define  $s^*|_{t^g}$  the amount of information acquired when the ability of the agent is  $t^g$ . If  $\epsilon$  is smaller than the positive threshold  $\bar{\epsilon} := -\lambda^G(1 - s^*|_{t^g=h}) \left[ (1 - p)(1 - h)\sigma^2 + p\bar{L} \right] - c(s^*|_{t^g=h}) + \lambda^G(1 - s^*|_{t^g=l}) \left[ (1 - p)(1 - l)\sigma^2 + p\bar{L} \right] + c(s^*|_{t^g=l})$  then, when  $G$  chooses  $NC$ , she selects a competent agent.

2) A principal  $G$  prefers mandate  $C$  to mandate  $NC$  if

$$-\lambda^G \sigma^2 > -\lambda^G(1 - s^*) \left[ (1 - p)(1 - h)\sigma^2 + p\bar{L} \right] - c(s^*) - \epsilon, \quad (3)$$

where from now on, we simply write  $s^*$  to denote the optimal amount of information acquired when the agent is type  $h$ . When we analyze how the utility from choosing  $NC$  varies with  $\beta$ ,  $p$  and  $h$ , we disregard their effect on  $s^*$ , because of the envelope theorem. We first show that the utility from choosing  $NC$  is decreasing in  $\beta$ . We compute the derivative of the expected loss  $\bar{L}$

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<sup>31</sup>She would simply be indifferent with  $\epsilon = 0$ .

with respect to  $\beta$ . Taking advantage of an integration by parts we have:

$$\begin{aligned} \int_{q^L \in \mathbb{R}} \int_{q^* \in \mathbb{R}} (q^* - q^L)^2 dF(q^*) \frac{\partial}{\partial \beta} \phi(q^L) dq^L &= \int_{q^* \in \mathbb{R}} (q^* - q^L)^2 \hat{\phi}(q^L + \beta) \Big|_{-\infty}^{+\infty} dF(q^*) + \\ &2 \int_{\hat{q}^L \in \mathbb{R}} \int_{q^* \in \mathbb{R}} (q^* - \hat{q}^L + \beta) dF(q^*) \hat{\phi}(\hat{q}^L) d\hat{q}^L = 2 \int_{\hat{q}^L \in \mathbb{R}} \int_{q^* \in \mathbb{R}} q^* dF(q^*) \hat{\phi}(\hat{q}^L) d\hat{q}^L - \\ &2 \int_{\hat{q}^L \in \mathbb{R}} \int_{q^* \in \mathbb{R}} \hat{q}^L dF(q^*) \hat{\phi}(\hat{q}^L) d\hat{q}^L + 2\beta \int_{\hat{q}^L \in \mathbb{R}} \int_{q^* \in \mathbb{R}} dF(q^*) \hat{\phi}(\hat{q}^L) d\hat{q}^L. \end{aligned}$$

Recall that  $\lim_{q^L \rightarrow \pm\infty} (q^* - q^L)^2 \hat{\phi}(q^L + \beta) = 0$ . Moreover in the integral

$2 \int_{\hat{q}^L \in \mathbb{R}} \int_{q^* \in \mathbb{R}} (q^* - \hat{q}^L + \beta) dF(q^*) \hat{\phi}(\hat{q}^L) d\hat{q}^L$  we made the change of variable  $q^L + \beta = \hat{q}^L$ . Finally, the expected values of distributions  $f$  and  $\hat{\phi}$  are equal (see footnote 14). Hence the derivative of  $\bar{L}$  with respect to  $\beta$  is equal to  $2\beta$ , which is positive if  $\beta > 0$ . It follows that the utility from choosing  $NC$  is decreasing in  $\beta$ .

We now show that the utility from choosing  $NC$  decreases in  $p$ . The derivative of the utility from choosing  $NC$  with respect to  $p$  has the same sign of the expression  $-(\bar{L} - (1-h)\sigma^2)$ . The following lemma shows that the last expression is negative.

**Lemma 3.** *If  $\beta = 0$ ,  $(1-h)\sigma^2 < \bar{L} = \sigma^2 + \tau^2$ .*

*Proof of Lemma 3.* First of all notice that the following holds:

$$\bar{L} > (1-h) \int_{q^* \in \mathbb{R}} \int_{q^L \in \mathbb{R}} (q^* - q^L)^2 d\Phi(q^L) dF(q^*).$$

Moreover, for  $\beta = 0$ , the expected values of the distributions  $f$  and  $\phi$  are equal, and therefore the following holds:

$$\begin{aligned} \int_{q^* \in \mathbb{R}} \int_{q^L \in \mathbb{R}} (q^* - q^L)^2 d\Phi(q^L) dF(q^*) &= \\ \int_{q^* \in \mathbb{R}} \int_{q^L \in \mathbb{R}} (q^* - \bar{q} - q^L + \bar{q})^2 d\Phi(q^L) dF(q^*) &= \\ \int_{q^* \in \mathbb{R}} \int_{q^L \in \mathbb{R}} [(q^* - \bar{q})^2 + (q^L - \bar{q})^2 - 2(q^* - \bar{q})(q^L - \bar{q})] d\Phi(q^L) dF(q^*) &= \sigma^2 + \tau^2. \end{aligned}$$

Hence the lemma is proven.

Since  $\bar{L}$  increases with  $\beta$ , as we have shown above, it follows that  $\bar{L} > (1 - h)\sigma^2$  for any value of  $\beta \geq 0$ . Finally, the proof that the utility from choosing  $NC$  is increasing in  $h$  easily follows from direct inspection.

3) Conditional on mandate  $NC$ , the principal chooses the amount of information to be acquired maximizing

$$-\lambda^G(1 - s) \left[ (1 - p)(1 - h)\sigma^2 + p\bar{L} \right] - c(s) - \epsilon.$$

When  $s^*$  is interior, the FOC is:

$$\lambda^G \left[ (1 - p)(1 - h)\sigma^2 + p\bar{L} \right] = c'(s^*).$$

$s^*$  is interior because of the INADA conditions on  $c(\cdot)$ :  $c'(0) = 0$ ,  $\lim_{s \rightarrow 1} c'(s) = +\infty$  and  $c'(s) > 0$ , for  $s \in (0, 1)$ . The second order conditions and uniqueness of  $s^*$  are satisfied because  $c(\cdot)$  is convex. Notice that, the larger  $\lambda^G$  is, the higher the amount of acquired information is. For  $\lambda^G = 0$ ,  $G$  is indifferent between  $C$  and  $NC$  for the following two reasons: (i)  $G$  does not acquire any information when choosing  $NC$ ; (ii) if  $P^G = NC$ , she selects an incompetent agent because  $\epsilon > \bar{\epsilon} = 0$  (see point 1 of this proof).

The derivative of the difference between rhs and lhs of inequality (3) with respect to  $\lambda^G$  is equal to  $-\sigma^2 + (1 - s^*) \left[ (1 - p)(1 - h)\sigma^2 + p\bar{L} \right]$ , where the derivatives of  $s^*$  with respect to  $\lambda^G$  are omitted for the envelope theorem. Notice that, for  $\lambda^G \rightarrow +\infty$ , the previous expression is negative, because  $s^* \rightarrow 1$ . The second derivative of the difference between rhs and lhs of inequality (3) with respect to  $\lambda^G$  is negative, because  $\frac{\partial s^*}{\partial \lambda^G} > 0$ , hence this difference is concave in  $\lambda^G$ , it is 0 at  $\lambda^G = 0$  and its derivative for  $\lambda^G \rightarrow +\infty$  is negative. This proves the claim, because there exists a threshold for  $\lambda^G$  the principal chooses  $C$  only below such threshold.

□

*Proof of Corollary 1:* Let us prove that an increase in  $\beta$  has a non-monotonic effect on informa-

tion acquisition. Let us assume that the set of parameters is such that the equilibrium mandate is  $NC$ . An increase in  $\beta$  increases information acquisition, as shown in point 3 of the previous proof. However, a larger  $\beta$  has a negative effect on the utility from  $NC$ . Moreover the derivative of  $\beta$  on the utility from  $NC$  grows unbounded. Thus, for a sufficiently large  $\beta$ , the equilibrium mandate becomes  $C$ , in which case the principal does not acquire information.

□

*Proof of Lemma 2:* The proof of the existence of an asymmetric equilibrium is provided below as a part of the proof of Proposition 2.

*Proof of Proposition 2:* Let us solve the game by backward induction. If the winner  $w$  has mandate  $P^w = C$ , then citizens do not acquire information and the policy implemented is  $\bar{q}$ . If the winner  $w$  has mandate  $P^w = NC$ , the equilibrium analysis of the subgame starting at the lobby's take-or-leave-it offer is equal to the one in the previous model, hence omitted. If the elected politician belongs to group  $G$ , that is  $w = g$ , citizen  $j \in G$  maximizes the following utility, when choosing whether getting informed:

$$-\lambda^G \left(1 - \int_{j \in G} s_j dj\right) \left[(1-p)(1-t^g)\sigma^2 + p\bar{L}\right] - \int_{j \in G} \frac{k_j}{\bar{k} - \underline{k}} c(s_j^G) dj - \epsilon \mathbb{1}_{t^g=h}.$$

Similarly to the baseline model, the equation that determines the amount of information acquisition by citizen  $j \in G$  is

$$\frac{\lambda^G (\bar{k} - \underline{k}) (p\bar{L} + (1-p)(1-t^g)\sigma^2)}{k_j} = c'(s_j^{G*}).$$

We analyze now citizens' decision to vote. Let us define a citizen's expected utility from policy, when the politician  $g$  is a trustee of ability  $t^g$ . Notice that the utility delivered to a member of group  $G$  when the trustee politician is  $g$  is different from the utility delivered to a member of group  $G$  when the trustee politician is  $-g$ , because a voter acquires information only if her representative is elected. With abuse of notation we denote by  $v^G(NC)$  the utility of group  $G$  when the mandate of no-commitment is implemented by politician  $g$ . When needed, we refer to  $NC^{-G}$  as the mandate

of no-commitment implemented by politician  $-g$ . We have

$$v^G(NC) = -\lambda^G (1 - S^{G*}) (p\bar{L} + (1-p)(1-t^g)\sigma^2) - \int_{j \in G} \frac{k_j}{\bar{k} - \underline{k}} c(s_j^{G*}) dj - \epsilon \mathbb{1}_{|t^g=h},$$

where  $S^{G*} := \int_{j \in G} s_j^{G*} dj$ . Notice that  $v^G(NC)$  is increasing in  $t^g$  when  $\epsilon$  is sufficiently small, and decreasing in  $p$  and  $\beta$ , as we already proved in Proposition 1. Notice also that  $v^G(NC^{-G})$  is equal to  $-\lambda^G (1 - S^{-G*}) (p\bar{L} + (1-p)(1-t^{-g})\sigma^2)$ . The expected utility of having an elected politician who is a committed delegate is :

$$v^G(C) = -\lambda^G \sigma^2.$$

Let us denote by  $\Delta \mathbb{E}(P^G, P^{-G})$  the difference between the expected utility from policy for voters of party  $G$  of electing  $g$  candidate and the expected utility of having in office the other candidate  $-g$ . The following lemma illustrates citizens' decision to vote.

**Lemma 4.** *For each party  $G$ , there is a threshold  $z^G = (\underline{z} + \bar{z}) (I^G + \Delta \mathbb{E}(P^G, P^{-G})) - \gamma^G$ , such that only citizens in party  $G$  with a cost of voting below  $z^G$  vote. The probability of winning of candidate  $g$  positively depends on  $I^G + \Delta \mathbb{E}(P^G, P^{-G})$ , and negatively on  $I^{-G} + \Delta \mathbb{E}(P^{-G}, P^G)$ .*

*Proof of Lemma 4:* Let us first define party  $A$ 's candidate probability of victory, which is the probability that party  $A$ 's voters are more than party  $B$ 's voters:  $\mathbb{P}\left(\frac{z^A + \underline{z}}{\underline{z} + \bar{z}} > \frac{z^B + \underline{z}}{\underline{z} + \bar{z}}\right)$ . Notice that we can simplify the denominator  $\underline{z} + \bar{z}$ ;  $z^A$  maximizes the following expected utility for citizens in party  $A$ :

$$\mathbb{P}(z^A > z^B) (I^A + v^A(P^A)) + [1 - \mathbb{P}(z^A > z^B)] v^A(P^B) - \int_{-\underline{z}}^{z^A} \frac{z_j + \gamma^A}{\underline{z} + \bar{z}} dz_j,$$

where  $P^A$  and  $P^B$  are the policies proposed respectively by candidates  $a$  and  $b$  (selected in the primaries).  $z^B$  maximizes the corresponding aggregate utility for a member of party  $B$ . It follows

that the best response function of party  $A$  satisfies:

$$\frac{\partial}{\partial z^A} \mathbb{P}(z^B < z^A) \left( I^A + \Delta \mathbb{E}(P^A, P^B) \right) - \frac{1}{\underline{z} + \bar{z}} (z^A + \gamma^A) = 0.$$

Let us conjecture that  $\frac{\partial}{\partial z^A} \mathbb{P}(z^B < z^A) = k^A$ , a constant with respect to  $z^A$ . Similarly, we conjecture  $\frac{\partial}{\partial z^B} \mathbb{P}(z^B > z^A) = k^B$ . Hence, it follows that  $z^A = k^A (\underline{z} + \bar{z}) \left( I^A + \Delta \mathbb{E}(P^A, P^B) \right) - \gamma^A$ . Analogously, from the best response function of party  $B$ , we get  $z^B = k^B (\underline{z} + \bar{z}) \left( I^B + \Delta \mathbb{E}(P^B, P^A) \right) - \gamma^B$ . Given the best response function of party  $B$ , the probability of winning of party  $A$  is

$$\mathbb{P}(z^B < z^A) = \mathbb{P}\left(k^B (\underline{z} + \bar{z}) \left( I^B + \Delta \mathbb{E}(P^B, P^A) \right) - \gamma^B < z^A\right) =$$

$$\mathbb{P}\left(k^B (\underline{z} + \bar{z}) \left( I^B + \Delta \mathbb{E}(P^B, P^A) \right) - z^A < \gamma^B\right) = \frac{1}{2} - \psi \left\{ k^B (\underline{z} + \bar{z}) \left( I^B + \Delta \mathbb{E}(P^B, P^A) \right) - z^A \right\}.$$

Therefore  $\frac{\partial}{\partial z^A} \mathbb{P}(z^A > z^B) = k^A = \psi$ , confirming our initial conjecture. Similarly it can be proven that  $k^B = \psi$ , which implies that

$$\begin{aligned} z^A &= \psi (\underline{z} + \bar{z}) \left( I^A + \Delta \mathbb{E}(P^A, P^B) \right) - \gamma^A, \\ z^B &= \psi (\underline{z} + \bar{z}) \left( I^B + \Delta \mathbb{E}(P^B, P^A) \right) - \gamma^B. \end{aligned}$$

Finally the probability of winning of the candidate of party  $A$  is

$$\frac{1}{2} - \psi^2 (\underline{z} + \bar{z}) \left( I^B + \Delta \mathbb{E}(P^B, P^A) \right) + \psi^2 (\underline{z} + \bar{z}) \left( I^A + \Delta \mathbb{E}(P^A, P^B) \right) - \psi \gamma^A. \quad (4)$$

The comparative statics stated in the claim immediately follow. The lemma is proven. Suppose now that in equilibrium  $P^A = C$  and  $P^B = NC$ . At the primaries, only citizens with negative cost of voting vote. The electoral competition among candidates in the primaries ensures that party  $G$ 's nominee is the candidate whose type and mandate maximize the expected utility of

party members. For  $\psi \rightarrow 0$ , the probability of winning of either candidate at the general elections approaches  $\frac{1}{2}$ . Thus, parties would like to select the candidate and mandate that maximize their utility from policy. We already noticed that  $v^B(NC)$  is increasing in the ability of the politician. Hence, if the mandate is equal to  $NC$ , the nominee's type is  $t^b = h$  when  $\epsilon$  is sufficiently small and for  $\psi \rightarrow 0$ . By continuity of the probability of winning of candidate  $b$ , the same is true for  $\psi$  is sufficiently low. Moreover,  $v^B(NC)$  is decreasing in  $p$  and  $\beta$ . Therefore, in an asymmetric equilibrium, if candidate  $b$  has mandate  $P^B = NC$  and her opponent has mandate  $P^A = C$ ,  $\Delta\mathbb{E}(P^B, P^A) = v^B(NC) - v^B(C)$  is decreasing in  $p$ ,  $\beta$  and increasing in  $h$ . The difference in utilities for a group  $A$  citizen is  $\Delta\mathbb{E}(P^A, P^B) = v^A(C) - v^A(NC^B)$ . The derivative of  $v^A(NC^B)$  with respect to  $p$  is

$$-\lambda^A (1 - S^{B*}) (\bar{L} - (1 - h)\sigma^2) + \lambda^A [(1 - p)(1 - h)\sigma^2 + p\bar{L}] \int_{j \in B} \frac{\partial s_j^{B*}}{\partial p} dj, \quad (5)$$

where by the implicit function theorem

$$\frac{\partial s_j^{B*}}{\partial p} = \frac{\lambda^B (\bar{k} - \underline{k}) (p\bar{L} + (1 - p)(1 - h)\sigma^2)}{k_j c''(s_j^{B*})}. \quad (6)$$

The sign of expression (5) is ex-ante ambiguous. The derivative of the probability of winning of candidate  $a$  with respect to  $p$  has the same sign of the following expression:

$$(\lambda^A + \lambda^B) (1 - S^{B*}) (\bar{L} - (1 - h)\sigma^2) - \lambda^A [(1 - p)(1 - h)\sigma^2 + p\bar{L}] \int_{j \in B} \frac{\partial s_j^{B*}}{\partial p} dj.$$

If  $c''(\cdot)$  is sufficiently large (Assumption 2), and given Lemma 3, expression (5) is negative, because the denominator of expression (6) is larger, reducing  $\frac{\partial s_j^{B*}}{\partial p}$ . Hence we have proven that the probability of winning of candidate  $a$  increases with  $p$ . Similarly, we prove that the probability of winning of candidate  $a$  increases with  $\beta$  and decreases with  $h$ . Now we discuss the effects of  $\lambda^A$  and  $\lambda^B$  on the probability of victory of the two candidates. First we need the following Lemma.

**Lemma 5.** *If  $\psi$  is sufficiently low, in equilibrium  $P^A = C$  and  $P^B = NC$  if and only if  $v^A(C) > v^A(NC)$  and  $v^B(C) < v^B(NC)$ .*

*Proof of Lemma 5.* When  $\psi \rightarrow 0$ , the probability of winning of either candidate approaches  $\frac{1}{2}$ . Given that party  $G$ 's nominee is the candidate whose type and mandate maximize the expected utility of party members, it is the candidate who proposes a mandate that maximizes their utility from policy. Hence,  $P^A = C$ , if and only if  $v^A(C) > v^A(NC)$ . Similarly,  $P^B = NC$ , if and only if  $v^B(C) < v^B(NC)$ . By continuity of the probability of winning of candidate  $g$ , the same is true for  $\psi$  is sufficiently low. □

To complete the proof, let us first show that the probability of winning of candidate  $a$  ( $b$ ) decreases (increases) with  $\lambda^B$ . Notice that  $v^G(C) - v^G(NC)$  is equal to 0 at  $\lambda^G = 0$  and is concave in  $\lambda^G$ , as shown in the proof of Proposition 1. Given that  $v^B(C) - v^B(NC) < 0$ , expression  $v^B(C) - v^B(NC)$  is decreasing in  $\lambda^B$ . Therefore  $v^B(NC) - v^B(C)$  is increasing in  $\lambda^B$ . Notice, moreover, that  $v^A(C) - v^A(NC^B)$  decreases with  $\lambda^B$  because  $S^{B*}$  increases with  $\lambda^B$ . Hence, by Lemma 4, also the probability of winning of candidate  $a$  ( $b$ ) decreases (increases) with  $\lambda^B$ . Let us now show that the probability of winning of candidate  $a$  ( $b$ ) decreases (increases) with  $\lambda^A$ . Consider the following inequality:  $v^B(C) - v^B(NC) = -\lambda^B \sigma^2 + \lambda^B (1 - S^{B*}) (p\bar{L} + (1-p)(1-h)\sigma^2) + \mathbb{E}_{k_j, j \in B} [k_j c(s_j^{B*})] + \epsilon < 0$ . Dividing by  $\lambda^B$  the lhs and rhs of the previous inequality, subtracting the cost of information acquisition, subtracting  $\epsilon$  and multiplying by  $\lambda^A$ , we obtain  $v^A(C) - v^A(NC^B) = -\lambda^A \sigma^2 + \lambda^A (1 - S^{B*}) (p\bar{L} + (1-p)(1-h)\sigma^2) < 0$ . Collecting  $\lambda^A$  in the lhs of the latter inequality, it is immediate to show that  $v^A(C) - v^A(NC^B)$  decreases with  $\lambda^A$ . Consequently, also the probability of winning of candidate  $a$  ( $b$ ) decreases (increases) with  $\lambda^A$ . □

*Proof of Lemma 2:* When  $\psi \rightarrow 0$ , the impossibility of an equilibrium where  $P^A = NC$  and  $P^B = C$  follows directly from noticing that: first, the proof of Lemma 5 shows that if  $P^A = NC$

and  $P^B = C$  then  $v^A(C) < v^A(NC)$  and  $v^B(C) > v^B(NC)$ ; second, as shown in the proof of Proposition 1,  $v^G(C) - v^G(NC)$  is equal to 0 at  $\lambda^G = 0$  and it is concave in  $\lambda^G$ . Hence if  $\lambda^A < \lambda^B$ , it cannot be that  $v^A(C) < v^A(NC)$  and  $v^B(C) > v^B(NC)$ . By continuity of the probability of winning of candidate  $g$ , the same is true for  $\psi$  is sufficiently low.

Let us show now that there are parameter values such that, in equilibrium,  $P^A = C$  and  $P^B = NC$ . For  $\psi \rightarrow 0$ , proving the existence of an equilibrium such that  $P^A = C$  and  $P^B = NC$  is equivalent to proving that there are parameter values such that  $v^B(NC) > v^B(C)$  and  $v^A(C) > v^A(NC)$ . Given that, in the proof of Proposition 1 we already proved that  $v^G(C) - v^G(NC)$  is negative for a sufficiently large  $\lambda^G$ , and given the concavity of  $v^G(C) - v^G(NC)$ , we only need to show that  $v^G(C) - v^G(NC)$  is increasing in  $\lambda^G$  at  $\lambda^G = 0$ . The derivative of  $v^G(C) - v^G(NC)$  with respect to  $\lambda^G$ , computed at  $\lambda^G = 0$ , is  $-\sigma^2 + [(1-p)(1-h)\sigma^2 + p\bar{L}]$ , where  $S^{G*} = 0$  for  $\lambda^G = 0$ . When  $\beta \rightarrow \infty$ ,  $-\sigma^2 + [(1-p)(1-h)\sigma^2 + p\bar{L}]$  is positive, because  $\frac{\partial \bar{L}}{\partial \beta} > 0$ , with the derivative not converging to 0 for high levels of  $\beta$ . Therefore, there exists a threshold  $\bar{\beta}$  such that the derivative of  $v^G(C) - v^G(NC)$  with respect to  $\lambda^G$ , computed at  $\lambda^G = 0$  is positive for  $\beta > \bar{\beta}$ .

□

**Proposition.** *There is a set of parameters such that when  $I^A$  is small the equilibrium is asymmetric with  $P^A = C$  and  $P^B = NC$ , while for  $I^A$  sufficiently large, the equilibrium is symmetric and both candidates propose no commitment,  $P^A = P^B = NC$ .*

*Proof:* Consider  $\psi \rightarrow 0$ . In this case we have proven that in equilibrium  $P^A = C$ . Moreover the same is true for  $\psi$  larger than 0 but sufficiently low. Consider the latter case. Starting from the set of parameters such that in equilibrium  $P^A = C$ , and increasing  $I^A$ , we show that group  $A$ 's best response switches to  $P^A = NC$ . Let us assume  $v^B(NC) > v^B(C)$  and  $v^A(C) > v^A(NC)$ . Let redefine for conciseness  $\mathbb{P}^G(P^A, P^B)$  as the probability that the candidate of party  $G$  wins when the candidate of party  $A$  proposes  $P^A$ , and the candidate of party  $B$  proposes  $P^B$ . Moreover we define the (subgame) equilibrium threshold for turnout of party  $G$  as a function of the policy mandates of the two candidates in the general election:  $z^G(P^A, P^B)$ . Finally, let  $\mathbb{E}_{\gamma^G}\{\dots\}$  denote

the expectation with respect to  $\gamma^G$ , the party specific voting cost shock that realizes at the general election. The following expression is the difference in group utility of party  $B$ , when candidate  $b$  has mandate  $P^B = NC$  and when candidate  $b$  has mandate  $P^B = C$ , for a given mandate  $P^A$  by candidate  $a$ :

$$\mathbb{E}_{\gamma^B} \left\{ \mathbb{P}^B(P^A, NC) (I^B + v^B(NC)) + (1 - \mathbb{P}^B(P^A, NC)) v^B(P^A) - \int_{-\underline{z}}^{z^B(P^A, NC)} \frac{z + \gamma^B}{\underline{z} + \bar{z}} dz - (7) \right. \\ \left. \mathbb{P}^B(P^A, C) (I^B + v^B(C)) - (1 - \mathbb{P}^B(P^A, C)) v^B(P^A) + \int_{-\underline{z}}^{z^B(P^A, C)} \frac{z + \gamma^B}{\underline{z} + \bar{z}} dz \right\}.$$

If it is positive,  $b$ 's equilibrium mandate is  $P^B = NC$ . We derive the previous expression with respect to  $\lambda^B$ :

$$\mathbb{P}^B(P^A, NC) \frac{\partial}{\partial \lambda^B} v^B(NC) - \mathbb{P}^B(P^A, C) \frac{\partial}{\partial \lambda^B} v^B(C) + \frac{\partial}{\partial \lambda^B} v^B(P^A) [\mathbb{P}^B(P^A, C) - \mathbb{P}^B(P^A, NC)]. \quad (8)$$

By the envelope theorem we did not include the derivatives of the equilibrium threshold  $z^B$  with respect to  $\lambda^B$ . Notice that  $\frac{\partial}{\partial \lambda^B} v^B(P^A)$  is negative. The difference  $\mathbb{P}^B(P^A, NC) - \mathbb{P}^B(P^A, C)$  is equal to  $\psi^2(\underline{z} + \bar{z}) (v^B(NC) - v^B(C)) - \psi^2(\underline{z} + \bar{z}) (v^A(C) - v^A(NC^B))$ .  $v^A(NC^B)$  grows with  $\lambda^B$  because  $S^{*B}$  grows with  $\lambda^B$ , reaching a maximum of 0 when  $\lambda^B \rightarrow \infty$ .  $v^B(NC) - v^B(C)$  grows unbounded with  $\lambda^B$ , so when  $\lambda^B$  is sufficiently large the difference  $\mathbb{P}^B(P^A, NC) - \mathbb{P}^B(P^A, C)$  is positive. For a sufficiently large  $\lambda^B$ , expression (8) is thus larger than the following:

$$\mathbb{P}^B(P^A, C) \frac{\partial}{\partial \lambda^B} [v^B(NC) - v^B(C)] + \frac{\partial}{\partial \lambda^B} v^B(P^A) [\mathbb{P}^B(P^A, C) - \mathbb{P}^B(P^A, NC)].$$

which is positive for  $\lambda^B$  sufficiently large. Therefore, for  $\lambda^B$  sufficiently large, expression (7) grows with  $\lambda^B$ , with the derivative not converging to 0 for large  $\lambda^B$ . Then for a sufficiently large  $\lambda^B$ , expression (7) is positive:  $b$ 's equilibrium mandate is  $P^B = NC$ . Now we would like to show that there is a set of parameters such that the best response of group  $A$  to  $P^B = NC$  is  $P^A = C$

when  $I^A$  is not too large, while  $P^A = NC$  for a sufficiently large  $I^A$ . Consider  $\psi \rightarrow 0$ . In this case we have proven that in equilibrium  $P^A = C$ . Moreover the same is true for  $\psi$  larger than 0 but sufficiently low. Consider the latter case. Starting from the set of parameters such that in equilibrium  $P^A = C$ , and increasing  $I^A$ , we show that group  $A$ 's best response switches to  $P^A = NC$ . Let us write the condition such that the best response of group  $A$  to  $P^B = NC$  is  $P^A = C$ :

$$\mathbb{E}_{\gamma^A} \left\{ \mathbb{P}^A(C, NC) (I^A + v^A(C)) + (1 - \mathbb{P}^A(C, NC)) v^A(NC) - \int_{-\underline{z}}^{z^A(C, NC)} \frac{z + \gamma^A}{\underline{z} + \bar{z}} dz - \right. \\ \left. \mathbb{P}^A(NC, NC) (I^A + v^A(NC)) - (1 - \mathbb{P}^A(NC, NC)) v^A(NC^B) + \int_{-\underline{z}}^{z^A(NC, NC)} \frac{z + \gamma^A}{\underline{z} + \bar{z}} dz \right\} \geq 0 \quad (9)$$

Let us derive the lhs of inequality (9) with respect to  $I^A$ :

$$\psi^2(\underline{z} + \bar{z}) (v^A(C) - v^A(NC)) - \psi^2(\underline{z} + \bar{z}) (v^B(NC^A) - v^B(C)).$$

By the envelope theorem we did not include the derivatives of the equilibrium threshold  $z^A$  with respect to  $I^A$ . Consider  $(v^B(NC^A) - v^B(C) = \lambda^B (- (1 - S^{A*}) (p\bar{L} + (1 - p)(1 - h)\sigma^2) + \sigma^2)$ . Notice that  $S^{A*}$  increases with  $\lambda^A$  and let us fix a value of  $\lambda^A$  such that  $- (1 - S^{A*}) (p\bar{L} + (1 - p)(1 - h)\sigma^2) + \sigma^2 > 0$ . If  $\lambda^B$  is sufficiently large, the derivative is negative and becomes arbitrarily large. Thus, there is threshold for  $I^A$ , such that inequality (9) is not satisfied, and group  $A$  best responds to  $P^B = NC$  by selecting in the primaries a candidate with mandate  $P^A = NC$ .

□

*Proof of Proposition 3:* We focus on the asymmetric equilibrium where candidate  $a$  has mandate  $C$  and candidate  $b$  has mandate  $NC$ . The utility of candidate  $a$  if  $b$  is elected, is  $-(1 - S^{B*})\lambda^w [(1 - p)(1 - h)\sigma^2 + p\bar{L}]$ . Candidate  $a$  maximizes

$$\mathbb{P}^A(C, NC) [-\lambda^w \sigma^2 + R] - (1 - \mathbb{P}^A(C, NC)) (1 - S_B^*) \lambda^w [(1 - p)(1 - h)\sigma^2 + p\bar{L}] - \Psi(n^a),$$

with respect to  $n^a$ .

The utility from having the  $NC$  policy for candidate  $b$ , if she is elected and the optimal policy is not revealed through information acquisition, is

$$-(1-p)(1-h)\lambda^w\sigma^2 - p\lambda^w\bar{L}.$$

The expected bribe is  $\mathbb{E}_{q^L \in \mathbb{R}}[\bar{m}]$ . Candidate  $b$  therefore maximizes

$$\begin{aligned} (1 - \mathbb{P}^A(C, NC)) \left[ (1 - S_B^*) \left( -\lambda^w(1-p)(1-h)\sigma^2 - p\lambda^w\bar{L} + p\mathbb{E}_{q^L \in \mathbb{R}}[\bar{m}] \right) + R \right] \\ - \mathbb{P}^A(C, NC)\lambda^w\sigma^2 - \Psi(n^b), \end{aligned}$$

with respect to  $n^b$ . Notice that, by increasing the cost of information acquisition, candidate  $b$  increases the probability that  $a$  is elected, because the probability  $\mathbb{P}^A(C, NC)$  depends negatively on the utilities that every citizen gets from having an uncommitted candidate in office.

The optimal amount of effort exerted by candidate  $a$  solves the following first order condition, where we used expression (4) for  $\mathbb{P}^A(C, NC)$ :

$$\begin{aligned} \left[ -\lambda^w\sigma^2 + R + \lambda^w(1 - S_B^*) \left( (1-p)(1-h)\sigma^2 + \lambda^w p\bar{L} \right) \right] \cdot \\ \psi^2 \left[ (\underline{z} + \bar{z}) \mathbb{E}_{k_j, j \in B} \left[ c(s_j^{B*}) \right] - \lambda^A \left( p\bar{L} + (1-p)(1-h)\sigma^2 \right) \frac{\partial S^{B*}}{\partial n^a} \right] + \\ (1 - \mathbb{P}^A(C, NC)) \lambda^w \left[ (1-p)(1-h)\sigma^2 + p\bar{L} \right] \frac{\partial S^{B*}}{\partial n^a} = \Psi'(n^a). \end{aligned}$$

By the envelope theorem, derivatives with respect to  $s_j^*$  in the utility of  $B$  citizens (present in the probability of winning) are not included. Expression  $-\lambda^w\sigma^2 + R + \lambda^w(1 - S^{B*}) \left( (1-p)(1-h)\sigma^2 + \lambda^w p\bar{L} \right)$  is the difference in utility for candidate  $a$  when she is elected with respect to her opponent. This difference is positive when  $R$  is sufficiently large. Moreover, the following holds:  $\frac{\partial S^{B*}}{\partial n^a} < 0$ , because a larger cost of information acquisition reduces citizens' information. Hence candidate  $a$  benefits from fake news because, increasing the cost of monitoring of group  $B$  citizens, she reduces

their expected benefit of electing an uncommitted candidate and therefore increases her chances to be elected. Moreover, less monitoring decreases also the utility by no-commitment of group  $A$ 's citizens, thus increasing their turnout. However, if candidate  $a$  is not elected, a higher cost of information acquisition implies less monitoring for her opponent and therefore  $a$  has a lower expected utility from policy. When  $R$  is sufficiently large, the positive effect of fake news on  $a$ 's probability of victory dominates.

The optimal amount of effort exerted by candidate  $b$  solves the following first order condition:

$$\begin{aligned}
& - \left( (1 - S^{B*}) \left( -\lambda^w (1 - p)(1 - h)\sigma^2 - p\lambda^w \bar{L} + p\mathbb{E}_{q^L \in \mathbb{R}}[\bar{m}] \right) + R + \lambda^w \sigma^2 \right). \quad (10) \\
& \quad \psi^2 \left[ (\underline{z} + \bar{z}) \mathbb{E}_{k_j, j \in B} \left[ c \left( s_j^{B*} \right) \right] - \lambda^A \left( p\bar{L} + (1 - p)(1 - h)\sigma^2 \right) \frac{\partial S^{B*}}{\partial n^a} \right] \\
& - \left( 1 - \mathbb{P}^A(C, NC) \right) \left( -\lambda^w (1 - p)(1 - h)\sigma^2 - p\lambda^w \bar{L} + p\mathbb{E}_{q^L \in \mathbb{R}}[\bar{m}] \right) \frac{\partial S^{B*}}{\partial n^b} = \Psi' \left( n^b \right),
\end{aligned}$$

Expression  $(1 - S^{B*}) \left( -\lambda^w (1 - p)(1 - h)\sigma^2 - p\lambda^w \bar{L} + p\mathbb{E}_{q^L \in \mathbb{R}}[\bar{m}] \right) + R + \lambda^w \sigma^2$  is the difference in utility for candidate  $b$  when she is elected with respect to her opponent. Again, this difference is positive, when  $R$  is large. Increasing the circulation of fake news lowers the probability that candidate  $b$  is elected, because it increases the cost of information, and therefore of monitoring a non-committed candidate. Notice that the following holds:  $-p\lambda^w \bar{L} + p\mathbb{E}_{q^L \in \mathbb{R}}[\bar{m}] = -\lambda^w p(1 - h)\sigma^2$ , because the elected politician is kept indifferent between accepting and rejecting the lobby's contribution (see the proof of Lemma 1). Hence we can simplify the following expression:  $-\lambda^w (1 - p)(1 - h)\sigma^2 - p\lambda^w \bar{L} + p\mathbb{E}_{q^L \in \mathbb{R}}[\bar{m}] = -\lambda^w (1 - h)\sigma^2$ , which is negative. Therefore, conditional on being elected, the non-committed politician in expectation is worse off when citizens do not discover the optimal policy. Given that all expressions on the left hand side of equation (10) are negative, there is no benefit for candidate  $b$  in circulating fake news.

□

## Appendix B (new empirical evidence on commitment and populism score)

Vitale (2021) uses a populism index built in Gennaro et al. (2020) and a new and simple commitment dictionary in order to see if there is a significant correlation. Gennaro et al. (2020's index has two components, considered as the two main characteristics of a populist rhetoric i.e. the elite portrayed as corrupt and betraying the people and the virtuous people and their direct access to power. The idea of a commitment dictionary is to capture the rigidity of the candidate in choosing a policy and promising to implement it, regardless of the state of the world he will have to face. The dictionary proposed is thus the following:

**Commitment:** [commit, guarante, ensur, assur, respons, undertak, uncondit, regardless, doubtless, swear].

The correlation is evaluated on the text-data of candidates for the 2018 and 2020 U.S. House elections, and the model estimated is the following:

$$Populism\_score_i = \beta_0 + \beta_1 \times Commitment\_score_i + \beta_2 \times Controls_i + FE + \epsilon_i$$

where  $i$  refers to the individual candidate, *Populism score* and *Commitment score* are the sum of the tfidf scores<sup>32</sup> of each word in the two dictionaries. In addition, *Controls* is a vector of candidate individual-level controls including: the number of words in the platform, the gender, the party affiliation and the education of the candidate. To conclude, *FE* is a series of district fixed effects to avoid any endogeneity due to characteristics of the district the candidate was running for.

The results in Table 1 support one of our main predictions, namely that the choice of commitment strategy in an electoral campaign should correlate with the use of anti-elite rhetoric. The first two columns report the results of the OLS estimate for the House election in 2018. In column (1)

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<sup>32</sup>“Term-Frequency Inverse-Document-Frequency ”(tfidf) is a score obtained with a standard procedure that adds a penalty to words that appear in more documents and are less likely to contain distinctive information.

**Table 1:** Main Estimates

Dep. Variable	(1)	(2)	(3)	(4)	(5)	(6)
	Populism score					
Commitment score	0.313*** (0.0698)	0.194*** (0.0908)	0.439*** (0.0541)	0.268*** (0.0760)	0.391*** (0.0430)	0.293*** (0.0528)
Observations	519	519	789	789	1,314	1,314
Election	House	House	House	House	All	All
Year	2018	2018	2020	2020	All	All
Controls	No	Yes	No	Yes	No	Yes
District FE	No	Yes	No	Yes	No	Yes

\*  $p_j : 1$ , \*\*  $p_j : 05$ , \*\*\*  $p_j : 01$

the coefficient is estimated without controlling for demographic characteristics and fixed effects. The latter are added in column (2). The coefficient of interest is positive and highly significant. Columns (3) and (4) report coefficients for the House election in 2020, without and with controls and fixed effects, the coefficients are very similar and highly significant. The last two columns merge the two datasets used before: again the coefficients are positive and highly significant, both with and without controls. Results can be confirmed also when using only the 292 candidates that ran in both House 2018 and House 2020 election.

Vitale (2021) also shows a very useful congressional records similarity result. The behavior of populist candidates once elected in national parliaments is analysed. The most comprehensive source to evaluate a candidate commitment to his own policies proposals made during the electoral campaign is represented by congressional records. A Congressional Record is a verbatim account of the remarks made by senators and representatives while they are on the floor of the Senate and the House of Representatives. It also includes all bills, resolutions, and motions proposed, as well as debates, and roll call votes. The decision to use this type of data allows to avoid all the institutional constraints that would bias the evaluation of the effective implementation of such policies. What is possible to measure with Congressional records is thus the degree to which a legislator keeps pushing on the same priorities he established before the election. Our model would

suggest a positive correlation between populism score and similarity of priorities between campaign speeches and congressional records. Data confirm this intuition. To have a measure of reliability of a candidate and to assess whether he presents the same topics after the election the cosine similarity between his speeches during the campaign and congressional records is used. Cosine similarity measures the similarity between two vectors of an inner product space. It is measured by the cosine of the angle between two vectors and determines whether two vectors are pointing in roughly the same direction. It is often used to measure document similarity in text analysis. The measure varies between 0 and 1.

The econometric model used to establish the correlation is the following:

$$Similarity\_score_l = \beta_0 + \beta_1 \times Populism\_score_l + \beta_2 \times Controls_l + FE + \epsilon_l$$

where  $l$  refers to the legislator,  $Controls$  is the same vector of individual controls used in previous analysis and  $FE$  is a vector of State fixed-effects.

Table 2 presents the results. Using congressional records of 2019 (the only full year available) and 2018 campaign speeches it is possible to assess that a positive correlation is at work. Both the coefficient with and without controls in columns one and two are positive and highly significant. In columns three and four the same exercise using the commitment score as independent variable is replicated. The idea is to see if more committed candidates before the elections are the ones closer to their promises once elected. Results suggest that this is indeed the case. Coefficients are again positive and highly significant.

**Table 2:** Similarity and populism

Dep. Variable	(1)	(2)	(3)	(4)
			Similarity	
Populism score	0.299*** (0.0466)	0.206*** (0.0519)		
Commitment score			0.407*** (0.0724)	0.340*** (0.0728)
Observation	200	200	200	200
Controls	No	Yes	No	Yes
State FE	No	Yes	No	Yes

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$