Experience Open to Interpretation: US Presidents and Economic Coercion

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Abstract

We assume that the motivation for the use of economic sanctions is rooted in the ambition of the policy-makers to change the behaviour of a target state. Yet, given the low effectiveness of sanctions, scholars suggest that sanctions are imposed to address the expectations of the domestic audience and the motivation is symbolic. I test the symbolic argument, look for the presence of an audience benefit for an imposition of sanctions and an audience cost for issuing of an empty threat and investigate potential confirmation bias among US presidents. I find no evidence for higher popularity following an imposition of sanctions, nor lower popularity after an empty threat. However, I do observe that US president are more likely to follow up on a threat of sanctions if they experienced a spell of lower approval ratings. US presidents do play at the home crowd with sanctions, but the crowd is indifferent.

Introduction

A few weeks before the Russian invasion of Ukraine the US President Joe Biden publicly warned that Russia will pay "a heavy price" if it enters Ukrainian territory.[1] The word price was not used only in a figurative sense, as the US President referred to a package of economic sanctions crafted against Russia. The message that has emerged after the introduction of sanctions by Biden against Russia has been mixed — ranging from claims that the approval rating of the President is raising[2], to insights on why the approval rating is not changing[3] and discussion on whether we should expect it to change at all.[4] It seems that while the dynamics of the presidential approval ratings following sanctions is a salient part of the public discourse, it is also open to interpretation. Current empirical research, analogously, argues that US presidents observe an increase in approval ratings when using economic sanctions, regardless of the outcome, as the public rewards active foreign policy (Whang, 2011) or that US presidents observe a decline in approval ratings following imposition of sanctions, driven by a public dislike for costly foreign policy decisions (Webb, 2018).

Political leaders seeking electoral success think about how their actions resonate with the public. High public approval rating is a "desirable commodity" pursued by political leaders, as it increases prospects of reelection, legitimises policy choices, offers a positive media appearance and helps political associates competing in elections (Donovan et al., 2020), while foreign policy decisions appear to influence public opinion (Whang, 2011; Webb, 2018; Holsti, 1992; Kertzer and Zeitzoff, 2017). Consequently, we may expect that foreign policy choice of political leaders may be partially motivated by domestic audience costs or benefits. However, political leaders operate in an environment with long-term approval rating trends driven by, for example, the economy or the electoral cycle (Hardie et al., 2020; Hibbs, 2000; Cuzán, 2022; Guntermann et al., 2021; Wlezien, 2015, 2017; Stimson, 1976; Fauvelle-Aymar and Stegmaier, 2013), while also undertaking a number of policy decisions relevant for the public across many policy areas at the same time. This may influence the ability of political leaders to disentangle the effect of an individual policy on the sentiments of the public, and undermine learning from past experience of other leaders. Thus, long-term trends and overlapping events introduce uncertainty into the interpretation of the sentiments of the public and its proxy — for example dynamics of the approval ratings — reducing the ability of political leaders to assess how voters respond to policy decisions.

Yet, current theory predominantly assumes that political leaders are neither biased in their estimates of the domestic audience costs or benefits of foreign policy choices, nor that they are faced with approval ratings movements open to interpretation (Minozzi, 2013). At the same time, the literature offers very few insights on the presence and size of the effect that foreign policy decisions

[1] https://www.theguardian.com/us-news/live/2022/jan/20/biden-presidency-democrats-senate-voting-rights-trump-live-latest

[2] https://edition.cnn.com/2022/03/13/politics/biden-approval-gas-prices-ukraine/index.html

[3] https://edition.cnn.com/2022/03/31/politics/biden-polling-inflation-russia-ukraine/index.html

[4] https://edition.cnn.com/2022/03/13/politics/biden-approval-gas-prices-ukraine/index.html

have on public opinion — both at the threat stage (Kertzer and Brutger, 2016; Levendusky and Horowitz, 2012; Tomz, 2007; Davies and Johns, 2013) and when engaging in coercion (Whang, 2011; Webb, 2018), and the insights are predominantly drawn from survey experiments, not actual approval ratings. In fact, scholarship frequently assumes presence of the audience cost for issuing empty threats or audience benefit for engaging in coercion based on the behaviour of the agents, inferring it indirectly from the choices of the political leaders (Walentek et al., 2021; Goenner, 2007; Wallace, 2013; Eyerman and Roberta, 1996; Gelpi and Griesdorf, 2001; Partell and Palmer, 1999; Drezner, 2003). This stands in contrast to a prospect that "human belief formation is often very different from that posited in the standard rational choice model" (Minozzi, 2013) and rests on an assumption that political leaders systematically correctly estimate audience benefits and costs, while researchers themselves mark these phenomena as "difficult to study with observational data" (Kertzer and Brutger, 2016) — only data available to the political leaders.

Given the literature on confirmation bias in the context of politics (Donovan et al., 2020; Evans and Pickup, 2010; Leeper and Slothuus, 2014), challenges in identifying the drivers of approval ratings (Wlezien, 2015, 2017; Cuzán, 2022) and difficulties of policy leaders to recognise the preferences of the public (Walgrave et al., 2023), we may ask whether political leaders are susceptible to confirmation bias too. If yes, we may observe political leaders to behave as if audience benefits or costs are present — while, in fact, the public is indifferent to the policy choices of the political leader. As a result, we may observe indirect evidence for audience costs and benefits, derived from the (rational) actions of the political leader, while the sentiments among the public are not an actual phenomena and there is no symbolic value to the exercise of coercion in foreign policy, nor a price to pay for issuing empty threats.

The objective of this article is two-fold. First, it sets out to offer a formal model of behaviour of political leaders in an environment where information on the dynamics of public opinion is open to interpretation and leaders have prior assumptions about the public in respect to coercion in international relations. Then, the article offers an empirical test of the hypothesis derived from the theoretical model and a set of hypotheses rooted in the current scholarship. It assesses whether US presidents are more likely to engage in economic coercion if they observe low levels of approval ratings, and examines whether US presidents observe higher levels of popularity if they engage in economic sanctions (a domestic audience benefit) or observe lower levels of popularity for issuing empty threats of economic sanctions (a domestic audience cost) or both.

I use the data on monthly approval ratings for US presidents from the Truman to the Clinton presidency — a total of 624 presidency-months — and take advantage of the updated TIES data set (Morgan et al., 2014) that offers detailed information on the imposition of economic sanctions and also includes observations on threats-only of sanctions. This data allows for an elaborate research design where I employ a differences-in-differences (diff-in-diff) empirical strategy, along the recent

advancement in sanction scholarship — where threats-only serve as counterfactual events (Walentek et al., 2021; Gutmann et al., 2021). Moving away from a before-and-after comparison allows us to address a potential bias stemming from long-term time trends in presidential popularity. The use of threats-only as counterfactual events also allows to strengthen the empirical strategy — accounting for potential self-selection by political leaders into imposition of sanction or merely stopping at the threat level, based on past performance in approval ratings, and creates scope to uncover the presence of audience costs for issuing of empty threats.

I find that US presidents do not experience higher levels of popularity after imposition of economic sanctions. This result also holds if we account for potential heterogeneity resulting from success of imposed sanctions. I also do not observe lower levels of popularity in the approval ratings of US presidents following empty threats. The non-findings of this article stand in contrast to the past work on the effects of imposition of economic sanctions on approval ratings and the research on the response of the public to issuing of empty threats. However, I do observe that US president behave as if they are likely to observe a boost in approval ratings for imposition of sanctions or a drop in popularity for not following up on a sanction regime, or both. US presidents facing a foreign policy decision are more likely to impose sanctions, rather than stop at the threat stage, if they have observed lower levels of approval ratings prior to the decision on sanction imposition.

Consequently, the findings of this article support the argument that foreign policy decisions are, for a part, driven by audience costs and benefits; however, in a backward-looking fashion. US presidents do appear to consider public opinion when making foreign policy decisions — either hoping for an audience benefit for acting up or fearing an audience cost for issuing empty threats — yet only when experiencing a spell of lower approval ratings. Nevertheless, in contrast to the assumptions in the current scholarship, the data shows that neither the benefit nor the cost materialises for the political leaders. Thus, this work shows the importance to reflect on beliefs formation among decision-makers. Instances in which the research community struggles to establish a consensus on the direction or mere presence of a particular dynamic, one has to be careful assuming that political leaders' beliefs overlap with true sentiments of the public.

Role of economic sanctions

Work on the instrumental motivation for economic sanctions focuses on the effectiveness of the tool. Researchers set out to identify the conditions under which sanctions result in policy concessions from the target state and study when international cooperation is likely to lead to success (Baldwin, 1985; Morgan and Schwebach, 1997; Drezner, 1999; Baldwin, 1999; Ang and Peksen, 2007; Bapat and Kwon, 2015; Jeong and Peksen, 2019; McCormack and Pascoe, 2017; Hufbauer et al., 2007; De Vries et al., 2014; Giumelli, 2015; Drezner, 2000; Doxey, 1972; Miers and Morgan, 2002; Heine-

Ellison, 2001; Martin, 1993; Bapat and Morgan, 2009). Following Whang (2011), "the instrumental use explanation focuses on the extent to which the sender's goals are accomplished as a result of sanctions," and goals are understood as success in international affairs. This approach to the motivation underpinning economic sanctions is consistent with the Almond-Lipmann consensus (Holsti, 1992), where "public opinion on international affairs is inconsistent and largely irrelevant for foreign policy making" (Heinrich et al., 2017), so the foreign policy is a field left to experts.

The alternative — symbolic (or expressive) — motivation for economic sanctions is rooted in research that contrasts with the Almond-Lipmann consensus and points to the interest in foreign policy of the domestic audience and the presence of a domestic benefit to a political leader for pursing a particular foreign policy (Page and Shapiro, 1983; Holsti, 1992; Oppermann and Viehrig, 2009; Kertzer and Zeitzoff, 2017). These scholars argue that political leaders enjoy a domestic audience benefit for issuing economic sanctions (Galtung, 1967; Kaempfer and Lowenberg, 1988; McLean and Roblyer, 2017; Heinrich et al., 2017; Barber, 1979), regardless of the policy outcome (Whang, 2011). Voters appear to value economic sanctions because "when military action is impossible for one reason or another, and when doing nothing is seen as tantamount to complicity, then something has to be done to express morality" (Galtung, 1967, 411), and voters in democracies favour policy instruments that are "consistent with democratic values" (McLean and Roblyer, 2017, 234). Here, economic sanctions, as opposed to military interventions, appear to serve well.[5]

The benefits or costs resulting from the symbolic value of economic sanctions are, however, "difficult to quantify" (Whang, 2011). Researchers interested in the symbolic motivation for economic sanctions therefore focus on theory development (Kaempfer and Lowenberg, 1988) or employ a single-case study approach (Galtung, 1967) or experimental design (McLean and Roblyer, 2017; Heinrich et al., 2017; Nomikos and Sambanis, 2019). With the notable exception of Whang (2011) and Webb (2018), where the presence and size of an audience benefit is identified empirically for US presidents. As a consequence, scholars offer limited estimation on how much a political leader benefits from issuing economic sanctions. In addition, research does not identify whether a successful intervention yields additional support to political leaders — a potential instrumental aspect to the variation in approval rating.

Consequently, the literature on public opinion and the symbolic role of economic sanctions positions us to pursue two questions: (i) what is the domestic audience benefit for a political leader imposing an economic sanction, and (ii) is there an additional benefit from a successful effort?

Scholars pursuing the study of symbolic motivation for economic sanctions also ignore a body of research that incorporates both the symbolic and the instrumental motivation of policy-makers, and also brings the role of the domestic audience into consideration — the crisis bargaining literature

[5]One could argue that symbolic motivation for sanction is also instrumental, as sanctions become an instrument of domestic politics. For the sake of consistency with current research, I retain the symbolic-instrumental distinction in this study, where the former refers to sanctions as an instrument of domestic politics and the latter to sanctions as an instrument of foreign policy, with a focus on coercing the target state to adopt a policy change.

(Schultz, 1999, 2001; Fearon, 1997, 1994; Bas and Schub, 2018; Kertzer and Brutger, 2016). In that strand of research, backing down on a threat is penalised by the voters because the "audience costs are about inconsistency: whether because of instrumental concerns about the country's reputation or normative concerns about national honor, publics dislike leaders who say one thing and do another" (Kertzer and Brutger, 2016). Given the experimental (McLean and Roblyer, 2017; Heinrich et al., 2017) and empirical (Whang, 2011; Webb, 2018) evidence for the presence of a domestic audience benefit for imposing an economic sanction, the experimental evidence for the presence of audience cost in general (Kertzer and Brutger, 2016; Levendusky and Horowitz, 2012; Tomz, 2007; Davies and Johns, 2013), and indirect evidence of audience cost in respect to sanctions in particular (Walentek et al., 2021), we should expect to observe directly a domestic audience cost for issuing empty threats of sanctions too, in the data on approval rates. While research has focused on the instrumental value of threats of economic sanctions (Drezner, 2003; Whang et al., 2013; Walentek et al., 2021) or inclusion of empty threats into the data on sanctions (Eaton and Engers, 1999; Fearon, 1994; Smith, 1995), the presence and size of the domestic audience cost of issuing an empty threat of economic sanction has not been studied. This allows us to pose a third question: (iii) is there a domestic audience cost for issuing an empty threat of economic sanctions and, if yes, how large is it?

Consequently, we can list three hypotheses, based on the literature on the symbolic motivation for economic sanctions and the audience cost:

H1: The popularity of a political leader in a sender state increases when economic sanctions targeting another state are introduced.

H2: The popularity of a political leader in a sender state decreases if an economic sanction is only threatened but not imposed.

H3: The popularity of a political leader in a sender state increases more when introduced economic sanctions to target another state are successful.

Information open to interpretation

Review of the literature on audience benefits and costs, in the Section above, has shown that scholars of conflict in international relations traditionally depict the choices of the policy-maker as a sequence of decisions taken by a rational and utility-maximising agent (Schultz, 1999, 2001; Fearon, 1997, 1994; Bas and Schub, 2018; Kertzer and Brutger, 2016). At first an agent is faced with a policy issue, resulting from harmful actions of another state (e.g., abuse of human rights or violation of trade rules), and has to decide whether to threaten coercion and demand a return to the status quo ante or accept the status quo. If the agent chooses to accept the status quo the game finishes and if the agent chooses to threaten coercion the game moves to the next stage, where the target of the threats can either back down and withdraw the harmful policy or stand firm. In case of the latter, the

agent has to decide whether to realise the threat of coercion or not. If the agent decided to exercise coercion (e.g., introduce economic sanctions) she observes an audience benefit for taking action (i.e., symbolic value of coercion) and a material/economic cost (e.g., costs of sanctions). However, if the agent stops at an empty threat and does not engaged in coercion, she observes an audience cost, as voters punish inconsistency, but does not bear the material/economic cost.

Previous Section has also highlighted that there is no consensus in the scholarship on the size and the mere presence of the audience costs and benefits. Current research indicate a number of possibilities; namely — that the true state of public opinion is that (i) voters do punish for empty threats, (ii) are indifferent about empty threats, (iii) support coercive action and (iv) are indifferent about coercive action. While the theoretical work assumes that the policy makers are able to clearly identify the direction of change among voters' sentiments resulting from their (in)action in case of conflict, supporting empirical evidence is very limited. In addition, current theoretical models do not allow for any information on the movement in the approval rating to be open to interpretation by political leaders, a potential source of (confirmation) bias in the assessment of the effects of a policy. This assumption appears remote from the existing evidence about belief-formation among individuals (Minozzi, 2013) and, given the lack of consensus and limited evidence among the research community for or against the presence or absence of audience cost and benefits, leads us to question whether political leader are able to identify the true values of audience costs and benefits themselves. Given the work on confirmation bias (Donovan et al., 2020; Evans and Pickup, 2010; Leeper and Slothuus, 2014), we may further develop this question and ask whether political leaders do not read information open to interpretation in a biased way, based on varying and imperfect beliefs about the voters preferences (Walgrave et al., 2023). To address this, I propose a model of belief updating in a setting open to interpretation and randomly distributed prior assumptions, based on the work of Fryer et al. (2019).

Simple model of beliefs updating

An agent seeking electoral success is making choices over time, wanting to maximise its approval rating; the agent is updating its beliefs about the true state of public opinion accordingly. Economic sanctions matter in an economic and political sense and impact approval ratings through audience costs and benefits. It is important for an agent seeking electoral success to identify the true audience cost of not following up on a threat of sanctions (A) and the audience benefits for imposing sanctions (B). While there is a also a prospect that the audience is indifferent about not following up on threats (A') or about imposing sanctions (B') or both. Thus, there are four possible states of public opinion in respect to economic coercion, depicted by the following pairs $\omega \in A, B; A, B'; A', B; A', B'$. An agent is exposed to a series of signals of public opinion — approval rating data from polls — described by s_t and with one signal at a given date, where $t \in 1, 2, 3, ...$ Signals belong to a set

a, b, a', b', aa', bb', where a indicates to the agent that A is the true state of public opinion, b indicates that B is the true state, a' indicates that A' is the true state, b' indicate that B' is the true state, aa' is a signal open to interpretation about the audience cost for empty threats, and bb' is an ambiguous signal about audience benefit for sanction imposition. An ambiguous signal is a movement (or it's lack) in the opinion polls that does not offer a clear indication of the sentiments of public opinion towards a policy choice of the agent.

We assume that with probability equal to q, the signal sequence starts as a or a' or b or b' and matches the true public opinion with a probability $p > 1/2$ for both audience costs and benefits. Yet, the agent faces an exogenous probability equal to π that the signal becomes ambiguous (i.e., aa' or bb'). Let us also assume that the agent's prior belief about the state of public opinion is $\omega = AB$, following a probability $\lambda_0 \in (0, 1)$. From this simple model we can conclude, using the standard law of large numbers, that a Bayesian-updating agent will converge to place a probability equal to 1 on the true state of public opinion in respect to domestic audience costs and benefits if we allow for a sufficient sequence of signals and signals open to interpretation can be ignored by the agent.

Convergence on coercion

The simple model, leading to convergence of agent's beliefs on the true state of public opinion, assumes a long-term perspective for the agent. Decision-makers may not be granted such a long-term perspective, as their time in the office may be constrained and foreign policy crises appear independent of their tenure in the office. In addition, given the multiple channels that influence public opinion decision-makers are likely to relatively frequently observe signals open to interpretation, undermining the prospects of ignoring them in the short run. Thus, we model an agent that operates in a short-term environment, where ambiguous signals $s_t = aa'$ or $s_t = bb'$ are interpreted based on past experience t.

Let us look at an example. The true state of public opinion is $\omega = A, B$ (i.e., the public punishes for empty threats and rewards the use of coercion) and the share of signals open to interpretation is $\pi = 1/2$ and the probability that a signal represents the true sentiments of the public is $p > 2/3$. We assume that with a probability equal to $1/4$ the signal sequences begins with a or a' or b or b'. For this specification, a sequence of signals may be $b, aa', bb', b, a, bb', a', aa', b', aa', ...$

In our model, the agent interprets $s_t = aa'$ $s_t = bb'$ using the current belief $\lambda_t - 1$, consequently $s_t = aa'$ is interpreted as a if $\lambda_t - 1 > 1/2$ and as a' if $\lambda_t - 1 < 1/2$. By the same token, $s_t = bb'$ is interpreted as b if $\lambda_t - 1 > 1/2$ and as b' if $\lambda_t - 1 < 1/2$.

Let us assume that an agent observes a belief where $\lambda_0 = 3/4$ both for audience costs and benefits. After observing the first signal of public opinion $s_1 = b$ from our series the agent updates the belief about audience benefits to $\lambda_{1,b} = 6/7$, while beliefs about costs remain at $\lambda_{1,a} = 3/4$. Then, when observing the following reading of public opinion, the agent interpreters $s_2 = aa'$ as a

and belief about audience cost becomes $\lambda_{2,a} = 6/7$. At $s_3 = bb'$ the agent interprets the ambiguous signal as b and updates the belief about audience benefits to $\lambda_{3,b} = 12/13$. Our example sequence would eventually look as $b, a, b, b, a, b, a', a, b', a, ...$, and the beliefs about audience costs and benefits would converge towards 1.

We can also assume an agent with another set of prior beliefs about audience costs and benefits — where $\lambda_0 = 1/4$ for both — and assume that they observe the same sequence of signals. After observing the first signal $s_1 = b$ the agent updates the belief about audience benefits to $\lambda_{1,b} = 2/5$, while beliefs about costs remain at $\lambda_{1,a} = 1/4$. Next, the agent interpreters $s_2 = aa'$ as a' and belief about audience cost updates to $\lambda_{2,a} = 1/7$. At $s_3 = bb'$ the agent interprets the ambiguous signal as b' resulting in belief about audience benefits equal to $\lambda_{3,b} = 1/4$. Our example sequence would eventually look as $b, a', b', b, a, b', a', a', b', a', ...$, and the beliefs about audience costs and benefits would converge towards 0.

Furthermore, the two examples show that if the prior beliefs do not follow the same parameter values, for example $\lambda_a = 3/4$ for audience costs and $\lambda_b = 1/4$ for audience benefits, we will observe that the agent update the beliefs in opposing directions — where one belief converges towards 1 and the other towards 0.

The conclusion from the simple updating model is that two agents in a short-term setting with different, yet not extreme, prior beliefs about the public preferences in respect to economic sanctions will arrive at different conclusion when observing the same sequence of approval rating data.

Thus, if we assume a distribution of prior beliefs about the domestic audience costs and domestic audience benefits that is not extreme and random among a population of agents, we arrive at an outcome where agents will hold an equal share of the beliefs that set AB; A'B; AB' and A'B' represent the true state of public opinion. This leads to a population of agents predominantly, by a factor of *three to one*, inclined to follow up on a threat of sanction — either because of the audience benefit (A'B) or cost (A,B'), or both (AB). Consequently, we may expect that political leaders, on average, are likely to engage in economic coercion, once a threat has been issued, if experiencing lower approval ratings — in order to avoid a further deterioration of the ratings, to boost it, or both. This allows us to form the fourth hypothesis:

H4: A political leaders is more likely to follow up on a threat of economic sanctions, if she has observed lower approval ratings.

Research design

In this study, I match the updated TIES data set on economic sanctions (Morgan et al., 2014) with US monthly data on the approval rating of US presidents based on Gallup polls.[6] The additional data on threatened-only and imposed sanctions allows me to address potential bias in previous

[6]The TIES data set is available at: http://sanctions.web.unc.edu.

research, offer an elaborate research design, by introducing threats-only as a counterfactual event to imposition of sanctions — an approach consistent with recent empirical research on economic coercion (Walentek et al., 2021; Gutmann et al., 2021) and a long-standing argument on the role of audience costs for following up on sanction threats (Smith, 1995).

Twin problem of false counterfactuals

The data on approval ratings of US president and economic sanctions calls to our attention two problems of false counterfactuals. First, comparing the period just before and just after the use economic sanctions may suffer from a bias, as it does not account for the time trends. This is particularly troubling for inferences, if political leaders are more likely to engage in economic coercion in the periods of rising or falling support for reason exogenous to the sanction itself. For example, a US president may be more likely to engage in economic sanctions when approval ratings are climbing thanks to a boom in the economy. The opposite may hold, a US president experiencing a decrease in popularity may attempt to use economic sanctions to hedge against the decreasing approval ratings, a prospect consistent with recent scholarship on sanctions and US presidents (Attia, 2023). A visualisation of the data on US presidents approval ratings in Figure 1 further supports this concern, as time trends appear strong — what has been already signalled by the literature (Hardie et al., 2020; Hibbs, 2000; Cuzán, 2022; Guntermann et al., 2021; Wlezien, 2015, 2017; Fauvelle-Aymar and Stegmaier, 2013). We can observe that both imposed sanction, and threats of sanctions, take place within wider shifts in popularity. As a result, we should be careful about our ability to generate unbiased inferences from only a "before and after" analysis of the effects of sanctions imposition on approval ratings.

A remedy to this issue, rooted both in the theoretical (Eaton and Engers, 1999) and empirical (Walentek et al., 2021; Gutmann et al., 2021) scholarship on sanctions, is to employ threats-only of economic sanctions as a counterfactual event. Both threatened-only and imposed sanction allow us to compare relatively close cases; namely — instances when a US president faced a foreign policy challenge that is exogenous (at first) to the popularity dynamic itself and can be addressed with economic coercion. A comparison of the difference between the popularity of a US president before imposition of sanctions and after, with the difference in the approval ratings before and after issuing of an empty threat of sanctions should allow us to hedge against the bias posed by the time trend and in both cases offer clear theoretical predictions — audience cost for empty threats and audience benefits for imposition.[7] Yet, here we run into the risk of selection bias — our second problem with false counterfactuals. US presidents may decide to pursue a sanction regime, or stop at a mere threats, based on the past approval ratings; what reflects our earlier concern about the backward-looking strategies of policy leaders (Whang, 2011; Attia, 2023). We need to study the periods

[7] This assumes that the foreign policy challenges present themselves to policy-leaders at a random fashion and that US presidents do not orchestrate them themselves, in order to address them at a specific time to gain popularity.

that lead up to sanction imposition and use of threats-only in order to asses whether they are not systematically different. Thus, the prospect of self-selection into a threat-only or an imposition of sanction creates a risk for inferences based on a comparison between the approval rating following these two foreign policy decisions, taken by US presidents.

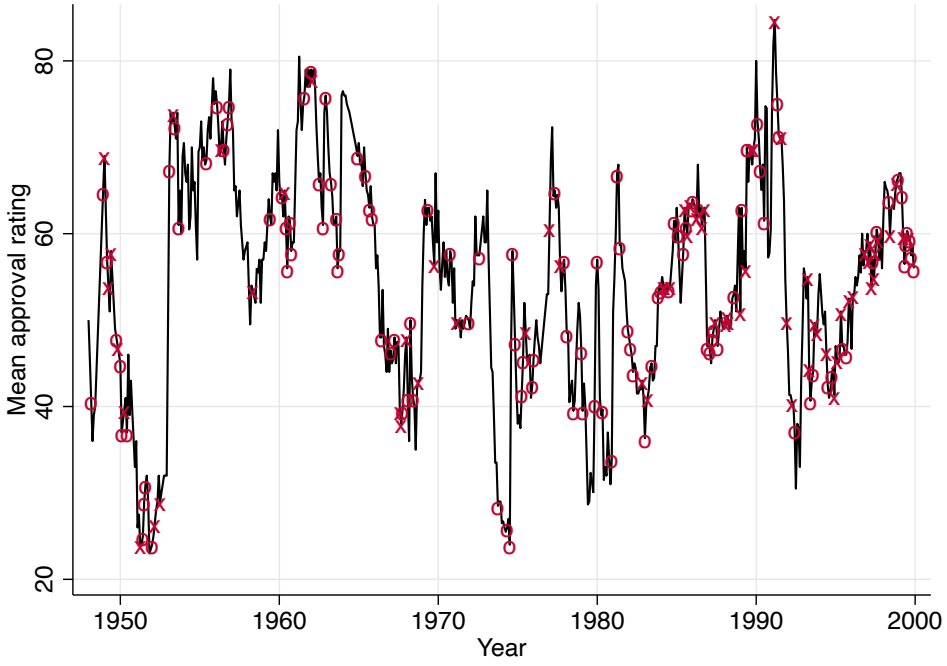


Figure 1: Approval ratings of US presidents and imposed sanctions (x) & threats-only (o).

One potential strategy to address the twin problem of the time trend and the selection bias is the differences-in-differences (diff-in-diff) design. It allows us to address the problem of false counterfactuals, by comparing the imposed sanction episodes and threatened-only sanction episodes before and after the imposition of a sanction or public use of a threat, accounting for the period leading up to the foreign policy action of imposition or issuing of a threat-only (leads) and following the two policy actions (lags).[8] Effectively, this article compares the difference in the differences of two means, where I identify the mean approval rating prior to an imposition and an empty threat — and calculate the difference — and then I identify the mean approval rating after the imposition and an empty threats — and again I calculate the difference. Then, I compare the two differences to identify an effect of imposition of sanctions on popularity. The expectation is that there is no statistically significant difference in the mean approval ratings prior to the policy action — either imposition or an empty threat. What is more, the expectation is that there is a statistically significant difference between the approval rating following the two policy actions. There are two, reinforcing, potential sources of this variation in the levels of popularity: (i) an increase of popularity following an imposition of sanctions, and (ii) a decrease in popularity following an empty threat.

[8]The use of words lead and lag are somewhat different to the customary statistical jargon, yet strongly established in social sciences for this methodology (Angrist and Pischke, 2009).

Both mechanism increase the difference in mean approval ratings between imposition and threats-only, after a decision is taken by a US president. A descriptive overview of the approval rating dynamics — both for the mean level and the month-to-month change — is depicted in Figure 2, below.

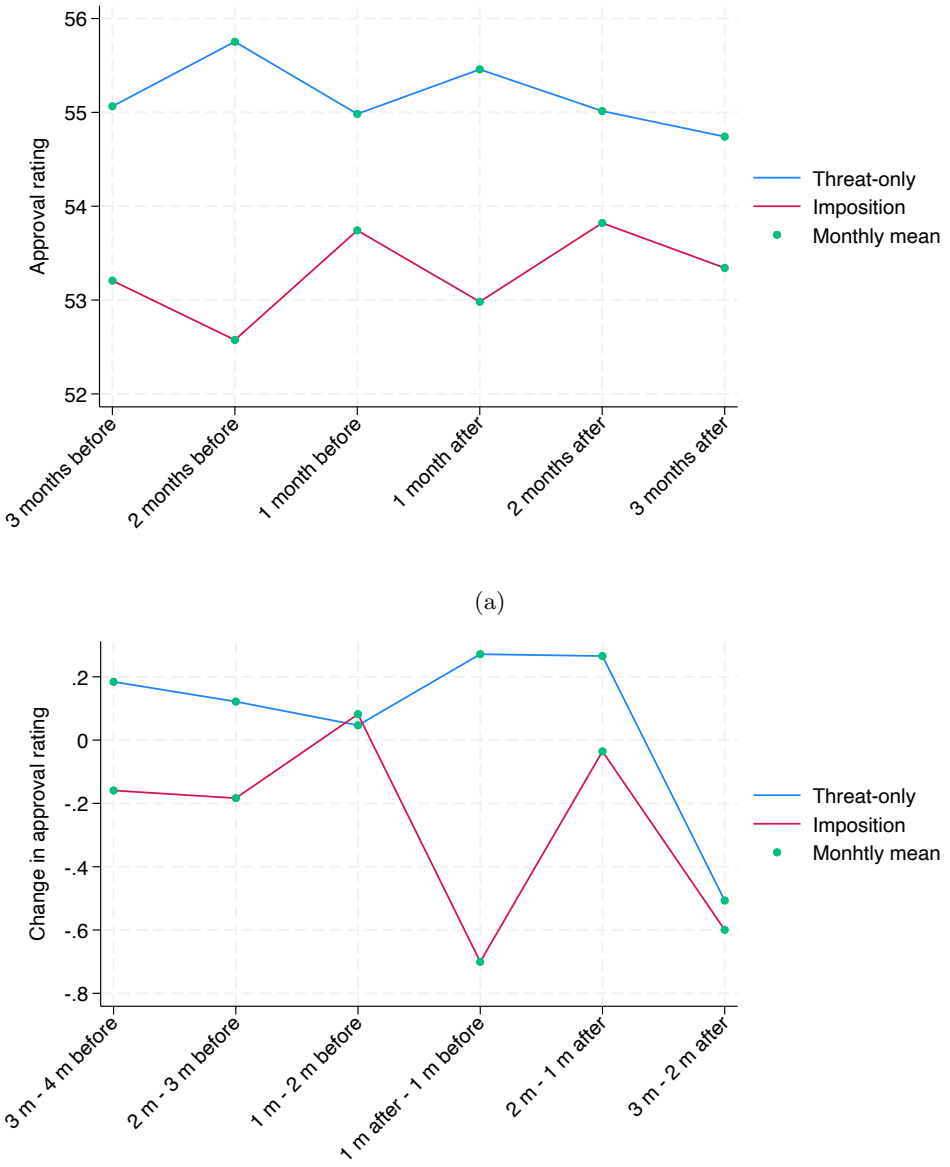


Figure 2: Approval ratings for US presidents before and after imposition of sanction and threats-only of sanctions — (a) mean monthly level of approval ratings, and (b) month-to-month change in approval ratings.

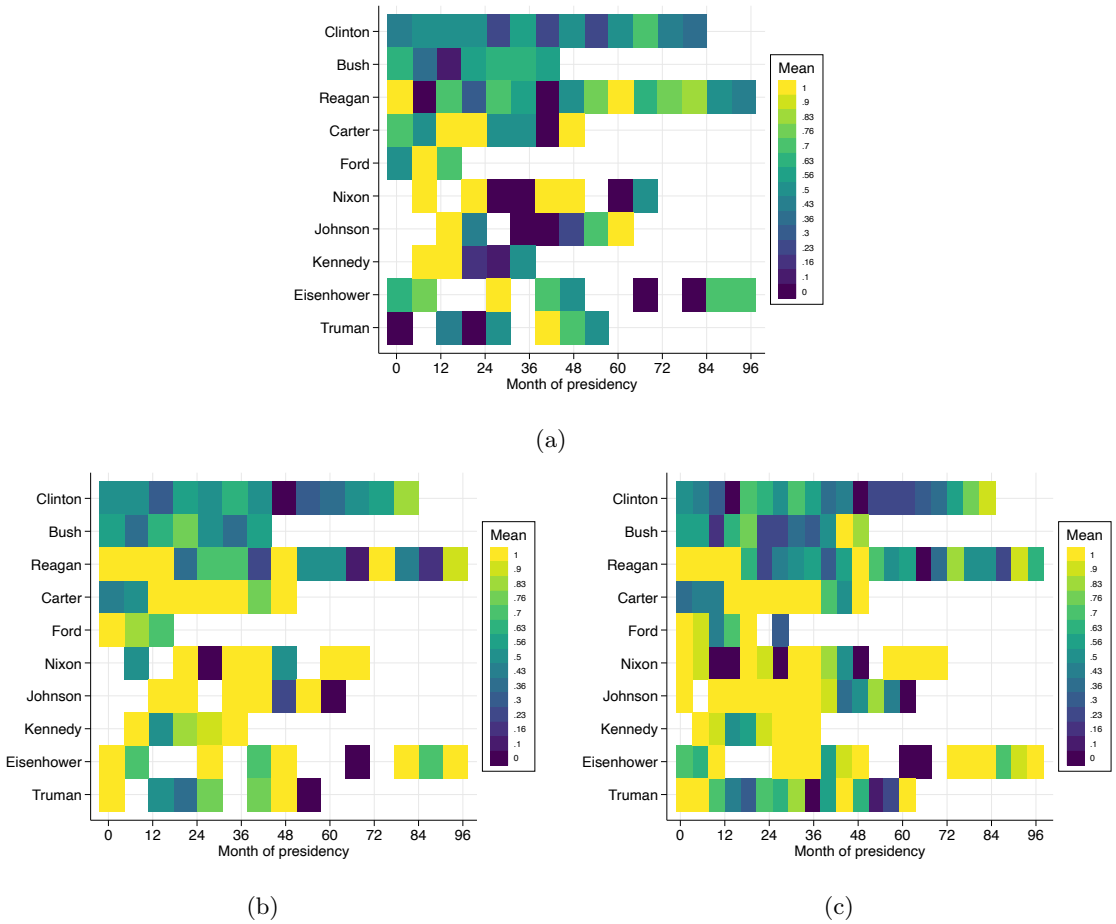
Finally, positioning this design in a regression framework allows to control for the variation in approval ratings that stems from factors exogenous to economic coercion — for example economic or military — and to account for both time-invariant characteristics of presidents and time-specific aspects of the electoral cycle with fixed effects — adding more precision to our estimates and moving away from simple descriptive statistics presented in Figure 2. Furthermore, diff-in-diff allows to

address one more issues that stem from the literature; namely — success of sanctions. By extending the diff-in-diff design to a triple differences design (diff-in-diff-in-diff), I can address potential heterogeneity in the variation in approval ratings following imposed sanctions that stems from successful interventions. It allows to offer a robustness test where I investigate whether US presidents observe an additional boost in popularity from a successful exercise of economic coercion.

Unit of analysis in a complex setting

While diff-in-diff helps to account for the twin problem of false counterfactual and address potential bias resulting from selection and time trends, the data on economic sanctions and approval ratings of US presidents poses another challenge, namely — the unit of analysis. In the data set, we observe 624 presidency-months from year 1948 to year 2000. In this period we observe 558 policy actions — either imposition of economic sanctions or threats-only. However, the foreign policy actions are not limited to one per month — the 558 decisions took place in 231 months, leaving 393 months with neither an imposition nor a threat-only of economic coercion. As a result many months encompass both failed and successful interventions and combine imposed sanctions and threats only. Consequently, if our unit of analysis is only an imposed sanction and we look at the change in approval rating following an imposition for many observations we run into two problems. First, an identification problem arises, as the same approval rating change is assigned to many policy choices. Second, omitted variable bias sets in, as some months may have a greater share of threats-only than imposed sanctions. Here, due to audience costs, theory would suggest that we should observe a decrease in approval ratings.

Figure 3, below, offers a visual representation of this challenge and a solution to address it. Panel (a) depicts the mean rate of success of the foreign policy actions in a given months. It accounts for both imposed sanctions and threats only. The closer the value is to 1 the higher is the share of successful interventions in a given month. Yellow indicates success and blue failure. Blank spaces indicate lack of economic coercion — neither a sanction was imposed nor an empty threat issued. Panel (b) shows us the number of imposition, relative to threats-only, for each president for each month in office. The closer is the monthly score to 1 the higher the share of imposed sanctions in all economic foreign policy actions taken in a given months. Yellow rectangles indicate months with only imposed sanctions and blue shows months with only threats that were not followed upon. Panel (c) follows Panel (b) and adds information about leads (3 months up to the imposition of a sanction or issuing of an empty threat) and lags (2 months that follow the month of an imposition of a sanction or an empty threat). Again the figure depicts the relative ratio between imposition and threats-only, where a number closer to 1 indicates a higher number of impositions, leads of impositions or lags of impositions — relative to threats only. As in Panel (b), yellow depicts impositions and blue threats only. The data observes 534 presidency months that are either a lead or a lag. Not all US presidents served full 96 months, hence a white tail for a number of observations.



(a)

(b) (c)

Figure 3: Imposed sanctions and threats-only over time for US presidents — (a) mean rate of success, (b) imposed sanctions relative to threats-only and (c) imposed sanctions relative to threats-only — including 3 leads and 3 lags.

The three panels visualise the complexity of the data and the potential solution. In this study, I divide the sample into four categories. First, the time before the imposition of an economic sanction or an empty threat, where I identify 3 months before the policy actions as leads (i.e. months leading up to the policy action). Second, the time after the imposition of an economic sanction or an empty threat, where I identify both the imposition or threat-only month and two following month (lags). I use the relative imposition measure to determine whether a particular month identifies as an imposition or a threat-only, with the relative imposition score above 0.5 indicating an imposition. This organisation of the data allows us to employ a diff-in-diff analysis, with a clear-cut before and after period and an assignment of treatment (i.e. imposition of economic sanctions) and control (i.e. threats only) groups. It also allows to study potential heterogeneity in the treatment assignment, employing the diff-in-diff-in-diff design, where we observe whether the treatment has a larger effect for presidency months with a mean success rate greater than 0.5. In other words, whether voters are more responsive if most of the foreign policy actions in a given month resulted in a change in the behaviour of the target state.

Econometric strategy

In this study, I use a two-way fixed effects diff-in-diff model with a formal specification of the leads and the lags, based on the work of Autor (2003). The model has the following specification:

$$y_{(i,t)} = \lambda_i + \delta_t + \beta_{-3}D_{(i,t)} + \beta_{-2}D_{(i,t)} + \beta_{-1}D_{(i,t)} + \beta_1 D_{(i,t)} + \beta_2 D_{(i,t)} + \gamma_{i,t} + \epsilon \quad (1)$$

where y is our outcome variable, *monthly mean approval rating*, for president i at time t, λ and δ are, respectively, individual (*president*) and time (*election proximity*) fixed effects. D indicates the treatment dummy (the leads and the lags), and γ is a vector of control variables. Our parameter of interest is β_1, it shows us the treatment effect in the month of the sanction imposition. Parameter β_2 shows us the treatment effect in the month following the imposition and allows to identify a potential decay effect of the treatment. I omit the last lag in the specification in order to avoid the dummy variable trap, and I incorporate three leads into the model. The parameters of the leads, respectively, β_{-3}, β_{-2} and β_{-1} offer a formal test for the parallel trend and inform us about potential self-selection into treatment. The individual fixed effect, at the president level, allows to account for the variation in the outcome variable that is specific to a particular president but time-invariant. The time fixed effects, at the election proximity level, allows us to account for variation that is specific to the electoral process, but constant for all presidents. Control variables allow us to account for the variation in the approval rating that stems from economic factors relevant for different socio-economic groups (*unemployment* and *inflation*) and from another form of coercion in international relations, namely — military interventions (*major war*). To account for potential heterogeneity in the treatment rooted in success of a policy action, I follow the diff-in-diff-in-diff design introduced by Gruber (1994) and interact the constitutive terms in the diff-in-diff model specified in Equation 1 with the dichotomous *success* variable. Here the parameter of interest is the interaction of the first lag listed in the model specification in Equation 1 (*treatment post*$_1$) with the *success* variable. Table A.1, in the Appendix, provides a descriptive overview of the sample.

To further validate the analysis, I also investigate the difference in the change in the approval ratings (month-to-month) following the statistical strategy discussed above. As before, I expect the change in the monthly approval ratings to not differ prior to the issuing of threats-only or imposition of sanctions. I also expect a difference in the change of approval ratings after the US president has taken a decision. This result ought to be driven by either a positive change (month-to-month) in the mean approval ratings following imposition of sanctions, resulting from an increase in popularity, or a negative change (month-to-month) following threats-only and resulting from a decrease in popularity, or both mechanism being present at the same time.[9]

[9] I use the start month, following the TIES data coders, as the reference point both for imposed sanction and threats-only.

Results

In Table 1, I report the results of the difference-in-differences estimation, where I examine the effect of imposed sanctions and threats-only on the approval rating of US presidents. Model (1) and (2) follows the specification from Equation 1, based on the work of Autor (2003). Model (3) and (4) extend this framework following Gruber (1994) and interact the *success* variable to obtain a triple differences regression. In all models, I include both president fixed effects and election proximity fixed effects. Model (2) and Model (4) also control for economic and military conflict factors' influence on the approval ratings of the US presidents. For clarity, I do not list all the coefficients for each model and limit Table 1 to the estimates of core interest; however, in the Appendix in Table A.2 I list all the estimands. Models (1) to (4) use robust standard errors to account for potential heteroskedasticity. In the Appendix, in Table A.3, I also report the results of an analysis using the month-to-month change in approval ratings as an outcome variable, while following the same diff-in-diff model as specified in Equation 1.

Table 1: Effect on approval rating — difference-in-differences(-in-differences) estimation. Standard errors are displayed in parentheses: *** indicates $p < 0.01$, ** indicates $p < 0.05$ and * indicate $p < 0.1$.

Variables	Model (1)	Model (2)	Model (3)	Model (4)
approval rating				
treatment pre_3	-1.191	-1.145		
	(±1.262)	(±1.235)		
treatment pre_2	**-2.310****	**-2.491****		
	(±1.154)	(±1.096)		
treatment pre_1	**-2.379****	**-2.694****		
	(±1.175)	(±1.122)		
treatment $post_1$	-1.294	-1.519		
	(±1.145)	(±1.096)		
treatment $post_2$	-0.727	-1.112		
	(±1.138)	(±1.111)		
success × treatment $post_1$			2.952	1.780
			(±3.082)	(±2.977)
major war		10.58		10.44
		(±7.449)		(±8.883)
inflation		**-0.337*****		**-0.332*****
		(±0.0712)		(±0.0765)
unemployment		**-2.289*****		**-2.177*****
		(±0.440)		±(0.461)
Constant	**42.40*****	**61.37*****	**42.23*****	**60.81*****
	(±2.831)	(±4.317)	(±3.140)	(±4.699)
Observations	534	534	534	534
R-squared	0.430	0.473	0.476	0.513
President FE	YES	YES	YES	YES
Election proximity FE	YES	YES	YES	YES
Control variables	NO	YES	NO	YES
Diff-in-Diff-in-Diff	NO	NO	YES	YES

First, I asses Hypothesis (1), where I expect that imposition of economic sanctions has a positive effect on the popularity of a political leader, and Hypothesis (2), that argues that empty threats has a negative effect on the popularity of the policy-maker. The former hypothesis is rooted in the domestic audience benefit argument, where political leaders experience a boost in popularity for issuing of a sanction, regardless of the outcome. The latter hypotheses represents a key concept in conflict bargaining theory, where political leaders experience a domestic audience cost for not following up on promises. In contrast to past scholarship, I do not find support for the presence

of a domestic audience benefit, nor for the presence of a domestic audience cost for US presidents in respect to economic coercion. The coefficient for the *treatment* $post_1$ variable is not statistically significant. This tells us that US presidents do not observe, on average, a higher approval ratings following imposition of economic sanctions, nor they experience a domestic audience cost if they issue threats-only. The null results signal that the audience appears to be indifferent to their foreign policy choices. I also account for a potential delay, or decay, in the effect of the imposition or threats-only with a lag *treatment* $post_2$; however, this coefficient is also not statistically significant. Thus, I fail to identify a domestic audience cost or a domestic audience benefit for US presidents for economic sanctions and, as a results, I reject Hypothesis (1) and (2). I asses Hypothesis (1) also in the light of monthly change in the approval rating (see Table A.3), where I also do not identify a statistically significant difference in the month-to-month change in the approval rates for imposition of sanctions and use of threats-only.[10]

Second, I test Hypothesis (3), that argues for the presence of the domestic audience benefit if, and only if, a sanction regimes is successful. This hypothesis combines the instrumental and symbolic motivation for imposition of economic sanctions. In Model (3) and (4), where I conduct a diff-in-diff-in-diff analysis, the interaction between the dichotomous *success* and *treatment* $post_1$ variable is not statistically significant, despite the coefficients pointing in the expected direction. Hence, I do not identify heterogeneity in our treatment condition that may possibly undermine our findings from Model (1) and (2) and offer an instrumental angle to the domestic audience benefit argument. Consequently, I do not find support for Hypothesis (3).

Third, while there is no evidence for a domestic audience benefit or cost in respect to economic coercion, the data suggests a pattern of behaviour of US presidents that supports Hypothesis (4) and the theoretical model rooted in beliefs updating and developed in the theory section. In Model (1) and (2), I observe that imposition of sanctions is, on average, preceded by two respective leads *treatment* pre_2 and *treatment* pre_1 of an approval rating lower by 2.3 percentage points ($p > 0.05$), relative to periods preceding a threat only.[11] This statistically significant and meaningful difference in the average level of approval rating signals that US presidents self-select into imposition of sanction. US presidents are more likely to impose a sanction if they observe a lower average level of approval ratings in the two months leading up to the foreign policy decision. In other words, I do not observe a meaningful difference — both in the level of approval and in the monthly change in approval ratings — after an imposition of a sanction or issuing of an empty threat. Yet, I do observe a statistically significant difference in the approval rating levels in the time up to an imposition of

[10] In fact, the month-to-month change points, albeit without statistical significance, in the opposite direction, with approval ratings decreasing for imposition of sanctions and increasing for the use of threats only in the first month following the policy decision. Yet, for imposition the month-to-month change appears to follow a random walk, and for both imposed sanctions and threats-only the month-to-month change is not large — around $1SE$.

[11] For reference, the US trade war with China led to a 2 to 3 percentage point decrease in the approval rating (month to month) of President Trump in the summer of 2019 (see: https://edition.cnn.com/2019/09/10/politics/trump-approval-rate-economy-poll/index.html).

sanctions or issuing of threats-only. I also observe that the negative trend decays, as me move back in time, and the first lead, *treatment* pre_3, losses statistical significance. Hence, the results suggest that US presidents are backward-looking and a spell of lower popularity makes them more likely to impose a sanction, rather than stop at a mere threat. This may be driven by a belief in the presence of a domestic audience benefit or a fear of a domestic audience cost, or both. While in fact none of the effects appears to be present and voters seem indifferent to economic coercion — whether it is imposed or merely threatened and successful or not.

Finally, in respect to the control variables, the coefficients for the two economic indicators (*inflation* and *unemployment*) are significant ($p < .01$) and negative, both in Model (2) and (4), in line with the expectations. The military conflict indicator, *major war*, is not statistically significant; however, it points in the expected direction.

Conclusion

The objective of the research presented in this article is to study the symbolic motivation for economic sanctions and prospects for confirmation bias among political leaders. To this end, I investigate whether US presidents experience lower levels of popularity when issuing an empty threat of economic sanctions, higher levels of popularity for imposing an economic sanction, and an additional boost in voters' approval for a successful sanction effort. The theoretical framework of domestic audience benefits and costs resulting from foreign policy decisions of political leaders, and the potential role of the policy outcomes, underpinned the expectations put forward in this study. A formal model of Bayesian updating supported the theoretical insights about the role of confirmation bias in a foreign policy context. As a result this article speaks both to the literature on economic sanctions and on the role of public opinion in crisis bargaining in international conflict, and meaningfully contributes to both, intertwined, scholarships.

I find no evidence for the presence of a domestic audience benefit for issuing economic sanctions in the approval ratings of US presidents, nor a domestic audience cost for not following up on a threat. I also find no evidence of an additional benefit from engaging in successful economic sanction. This study fails to support both the empirical (Whang, 2011; Webb, 2018) and experimental (McLean and Roblyer, 2017; Heinrich et al., 2017) research on domestic audience benefit and economic sanctions. Nor do I observe the empirical implications arising from the crisis bargaining theory on the presence of a domestic audience cost for not following up on threats of coercion (Schultz, 1999; Fearon, 1994; Kertzer and Brutger, 2016; Levendusky and Horowitz, 2012; Tomz, 2007).

The set of non-findings in this article may at first appear as a scratch to the foundation of a broad body of work based on the crisis-bargaining model and the underlying expectations of domestic audience cost and benefits (Whang and Kim, 2015; Drezner, 2003; Morgan and Campbell,

1991; Whang et al., 2013; Lacy and Niou, 2004; Whang, 2011; Blanchard et al., 2000; Lektzian and Sprecher, 2007; Dorussen and Mo, 2001; Lektzian and Souva, 2003; Wallace, 2013; Hart, 2000). However, I do find that US presidents act as if domestic audience benefits or domestic audience costs, or both, are present. Furthermore, I develop a theoretical model of beliefs updating that clarify how this dynamic arises when policy-makers operate in a setting with information open to interpretation. It appears that US presidents are likely to hold beliefs about electoral benefits of imposition of economic coercion, costs of empty threats, or both, and sustain biased beliefs about these preferences of the public. The data shows that US presidents are more likely to choose imposition over mere threats of sanctions if they have observed a lower level of approval ratings in the two months that precede a foreign policy decision. This signals that US presidents are backward-looking in their foreign policy choices, at least in respect to economic coercion, and to a part motivated by their beliefs about the public opinion. Consequently, we observe the empirical implication of domestic audience costs and benefits in foreign policy choices, while it systematically does not appear to materialise for the political leaders.

It is important to note that the null findings presented in this article may also be interpreted not as indifference of the public, but potential balancing of audience costs for threatening or engaging in coercion (i.e., "belligerence cost" proposed by Kertzer and Brutger (2016)) and audience benefits for acting in international relations, either through threats or imposition. The potential balancing of these phenomena offers an interesting avenue for future research. At the same time, the existence of these costs does not rule out the selection bias underpinning the decisions of US presidents in respect to economic coercion, as they are likely to experience information open to interpretation on the sentiments of public opinion and their foreign policy choices. The research community ought to be careful in projecting the results of studies on public opinion onto the behaviour of political leaders and reflect on the assumptions of perfect rationality and information among the political leaders as 'human belief formation" substantially differs from what standard rational choice models assume (Minozzi, 2013).

To summarise, this work contributes to three important aspects of the study of coercion in international relations. First, it argues that there is no audience benefit for imposition of economic sanctions, even if we account for the success of interventions. Second, it shows that there may be no domestic audience cost for policy-makers, if they do not follow up on threats. Third, the article shows that US presidents may act as if the audience cost or benefit, or both, are present. This supports the fact that research does observe the empirical implications of the audience costs and benefits in international relations, yet highlights the prospects for confirmation bias among political leaders.

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Appendix

Table A.1: Summary statistics.

Variables	N	Mean	SD	Min	Max
president	624	5.671	2.889	1	10
approval rating	624	54.43	12.77	23	84.75
Δ approval rating	526	-0.107	4.113	-17.25	23.5
unemployment	624	5.678	1.575	2.5	10.8
inflation	624	71.30	48.09	23.4	168.3
election proximity	624	11.5	6.928	0	23
major war	624	0.00481	0.0692	0	1
success	534	0.206	0.405	1	0
treatment $post_1$	534	0.174	0.380	0	1
treatment $post_2$	534	0.170	0.376	0	1
treatment $post_3$	534	0.178	0.383	0	1
treatment pre_1	534	0.176	0.381	0	1
treatment pre_2	534	0.176	0.381	0	1
treatment pre_3	534	0.185	0.389	0	1

Table A.2: Effect on approval rating — difference-in-differences(-in-differences) estimation. Standard errors are displayed in parentheses: *** indicates $p < 0.01$, ** indicates $p < 0.05$ and * indicate $p < 0.1$. All coefficients reported.

Variables	Model (1)	Model (2)	Model (3)	Model (4)
approval rating				
treatment $pre3$	-1.191	-1.145	-0.803	-0.780
	(1.262)	(1.235)	(1.419)	(1.378)
treatment pre_2	-2.310**	-2.491**	-1.474	-1.721
	(1.154)	(1.096)	(1.340)	(1.289)
treatment pre_1	-2.379**	-2.694**	-1.483	-1.849
	(1.175)	(1.122)	(1.326)	(1.270)
treatment $post_1$	-1.294	-1.519	-2.994*	-2.845*
	(1.145)	(1.096)	(1.617)	(1.582)
treatment $post_2$	-0.727	-1.112	-0.576	-0.967
	(1.138)	(1.111)	(1.280)	(1.239)
success			5.883	3.904
			(5.648)	(5.857)
success × $treatmentpost_1$			2.952	1.780
			(3.082)	(2.977)
major war		10.58		10.44
		(7.449)		(8.883)
inflation		-0.337***		-0.332***
		(0.0712)		(0.0765)
unemployment		-2.289***		-2.177***
		(0.440)		(0.461)
Eisenhower	26.73***	28.37***	25.61***	27.37***
	(1.997)	(2.185)	(2.204)	(2.409)
Kennedy	30.91***	36.52***	30.10***	35.32***
	(2.130)	(2.565)	(2.360)	(2.861)
Johnson	13.12***	15.23***	12.72***	14.69***
	(2.383)	(2.720)	(2.598)	(2.999)
Nixon	9.846***	17.05***	8.846***	15.86***
	(2.472)	(2.782)	(2.710)	(3.078)
Ford	6.120***	24.37***	5.915**	23.21***
	(2.197)	(3.934)	(2.396)	(4.192)
Carter	7.525***	27.99***	5.979**	26.04***
	(2.339)	(4.560)	(2.550)	(4.979)
Reagan	13.24***	47.67***	12.49***	45.86***
	(1.916)	(6.788)	(2.052)	(7.218)
Bush	20.94***	61.74***	21.03***	59.97***
	(2.619)	(8.193)	(2.933)	(8.740)
Clinton	14.32***	61.08***	14.12***	59.92***
	(1.938)	(9.872)	(2.070)	(10.63)
election proximity (1 m)	-1.532	-1.611	-1.298	-1.115
	(3.248)	(2.979)	(3.823)	(3.414)
election proximity (2 m)	-0.684	-0.914	-1.483	-1.599
	(3.302)	(3.023)	(3.876)	(3.592)
election proximity (3 m)	-4.125	-3.894	-4.939	-4.778
	(3.072)	(2.859)	(3.278)	(3.037)
election proximity (4 m)	-5.756*	-5.289*	-4.288	-3.715
	(3.152)	(2.826)	(3.675)	(3.207)
election proximity (5 m)	-5.525*	-5.233**	-4.463	-4.694
	(2.947)	(2.600)	(3.266)	(2.893)
election proximity (6 m)	-4.157	-4.148	-3.578	-3.916
	(2.928)	(2.699)	(3.167)	(2.977)
election proximity (7 m)	-4.904*	-5.109*	-4.121	-4.850
	(2.950)	(2.680)	(3.356)	(3.074)
election proximity (8 m)	-4.097	-4.324	-2.799	-3.434
	(3.052)	(2.790)	(3.358)	(3.117)
election proximity (9 m)	-2.952	-3.255	-1.906	-2.355
	(3.097)	(2.869)	(3.780)	(3.599)
election proximity (10 m)	0.715	0.0669	4.144	3.273
	(2.991)	(2.796)	(3.184)	(2.948)
election proximity (11 m)	0.307	-0.183	-0.0660	-0.573
	(3.015)	(2.945)	(3.386)	(3.305)
election proximity (12 m)	-1.353	-2.137	-1.584	-2.456
	(2.973)	(2.844)	(3.524)	(3.340)
election proximity (13 m)	-2.177	-2.799	-2.321	-2.874
	(2.925)	(2.907)	(3.241)	(3.212)
election proximity (14 m)	-2.244	-3.097	-1.441	-1.907
	(2.886)	(2.837)	(3.422)	(3.358)
election proximity (15 m)	-0.693	-1.685	-0.151	-1.415
	(2.987)	(2.899)	(3.592)	(3.434)
election proximity (16 m)	0.516	-0.902	2.616	0.887
	(2.879)	(2.851)	(3.278)	(3.279)
election proximity (17 m)	1.118	0.186	2.890	1.535
	(2.922)	(2.830)	(3.796)	(3.702)
election proximity (18 m)	1.224	0.333	1.437	0.783
	(2.930)	(2.796)	(3.529)	(3.484)
election proximity (19 m)	0.433	-0.743	0.935	-0.249
	(3.020)	(2.891)	(3.307)	(3.103)
election proximity (20 m)	1.302	0.0355	0.720	-1.004
	(3.214)	(3.109)	(3.495)	(3.311)
election proximity (21 m)	1.145	-0.919	0.471	-1.379
	(3.259)	(3.157)	(3.843)	(3.651)
election proximity (22 m)	0.757	-0.610	-1.459	-2.876
	(3.298)	(3.333)	(3.512)	(3.573)
election proximity (23 m)	-0.557	-0.394	-1.431	-1.402
	(3.177)	(2.967)	(3.407)	(3.132)
Constant	42.40***	61.37***	42.23***	60.81***
	(2.831)	(4.317)	(3.140)	(4.699)
Observations	534	534	534	534
R-squared	0.430	0.473	0.476	0.513
President FE	YES	YES	YES	YES
Election proximity FE	YES	YES	YES	YES
Control variables	NO	YES	NO	YES
Diff-in-Diff-in-Diff	NO	NO	YES	YES

Table A.3: Effect on change in approval rating — difference-in-differences estimation. Standard errors are displayed in parentheses: *** indicates $p < 0.01$, ** indicates $p < 0.05$ and * indicate $p < 0.1$. All coefficients reported.

Variables	Model (1)	Model (2)
change in approval rating (month-to-month)		
Δ treatment pre_3	0.0683	0.0706
	(0.491)	(0.493)
Δ treatment pre_2	-0.0477	-0.0886
	(0.508)	(0.511)
Δ treatment pre_1	0.0228	-0.00594
	(0.516)	(0.521)
Δ treatment $post_1$	-0.617	-0.642
	(0.531)	(0.534)
Δ treatment $post_2$	0.390	0.329
	(0.505)	(0.511)
maj war		2.236
		(3.506)
inflation		-0.00717
		(0.0364)
unemployment		-0.244
		(0.192)
Eisenhower	0.597	0.669
	(0.823)	(0.865)
Kennedy	-0.274	0.165
	(0.834)	(0.958)
Johnson	-0.0661	-0.0786
	(0.806)	(0.846)
Nixon	0.756	1.042
	(0.884)	(1.066)
Ford	0.130	1.252
	(1.033)	(1.949)
Carter	0.0982	0.974
	(0.907)	(2.073)
Reagan	0.551	1.912
	(0.635)	(3.419)
Bush	0.389	1.609
	(1.059)	(4.430)
Clinton	0.421	1.616
	(0.655)	(4.969)
election proximity (1 m)	-2.466*	-2.472*
	(1.376)	(1.383)
election proximity (2 m)	-0.295	-0.282
	(1.127)	(1.126)
election proximity (3 m)	-0.574	-0.539
	(1.741)	(1.759)
election proximity (4 m)	-2.234*	-2.171*
	(1.242)	(1.240)
election proximity (5 m)	-3.077***	-3.033***
	(1.178)	(1.171)
election proximity (6 m)	-1.494	-1.465
	(1.194)	(1.205)
election proximity (7 m)	-2.208	-2.194
	(1.352)	(1.365)
election proximity (8 m)	-2.997**	-2.982**
	(1.169)	(1.174)
election proximity (9 m)	-3.160***	-3.146***
	(1.210)	(1.205)
election proximity (10 m)	-1.212	-1.209
	(1.250)	(1.240)
election proximity (11 m)	-1.444	-1.456
	(1.328)	(1.345)
election proximity (12 m)	-1.010	-1.036
	(1.366)	(1.366)
election proximity (13 m)	-2.198**	-2.200**
	(1.079)	(1.087)
election proximity (14 m)	-2.660**	-2.685**
	(1.210)	(1.222)
election proximity (15 m)	-1.803	-1.834
	(1.136)	(1.143)
election proximity (16 m)	-1.789	-1.895*
	(1.122)	(1.140)
election proximity (17 m)	-1.463	-1.463
	(1.401)	(1.392)
election proximity (18 m)	-1.777	-1.768
	(1.237)	(1.233)
election proximity (19 m)	-2.350*	-2.363*
	(1.258)	(1.267)
election proximity (20 m)	-1.860	-1.874
	(1.207)	(1.199)
election proximity (21 m)	-1.086	-1.224
	(1.745)	(1.738)
election proximity (22 m)	-0.222	-0.219
	(1.564)	(1.567)
election proximity (23 m)	-1.725	-1.712
	(1.258)	(1.264)
Constant	1.337	2.598
	(1.056)	(1.905)
Observations	526	526
R-squared	0.055	0.059
President FE	YES	YES
Election proximity FE	YES	YES
Control variables	NO	YES