

Audience Costs and the Credibility of Public versus Private Threats in International Crises

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Abstract

The credibility of public versus private threats in international crisis bargaining has received scholarly attention. While public threats are often believed to be more credible than private ones because of audience costs, others contend that private threats should be equally credible or even more. Also, the effect of public threats can be conditioned by other domestic factors such as hawkishness and a leader's unpopularity. To test these competing expectations, I conducted a conjoint survey experiment that examines how observers assess resolve to fight in an international crisis with a sample of U.S. citizens ($N=1203$). Three major findings stand out. First, evidence suggests that both types of threats increase the perceived likelihood that a country will stand firm. Second, though their effect size is small, public threats are more effective than private ones. Lastly, I find support for the conditional effect of public threats, indicating that the underlying mechanism of the credibility of public threats is domestic audience costs.

1 Introduction

Public threats such as John F. Kennedy's blockade announcement during the 1962 Cuban Missile Crisis are often believed to be credible in international crisis bargaining, and a bedrock of this expectation is audience costs. Audience costs are generated when a political leader escalates an international crisis but backs down from a threat (Fearon, 1994; Schwartz and Blair, 2020). If threats are public, there is an opportunity for domestic audiences to punish their leader, which should increase audience costs. On the other hand, since the public may not know the existence or content of threats when they are issued privately, these threats should be dismissed due to a lack of audience costs. In early October 1950 during the Korean War, for example, China sent its message that it would militarily intervene if the U.S. forces crossed the 38th parallel, but this message was transmitted through Indian Ambassador Kavalam Madhava Panikkar. Ultimately, the U.S. decision-makers perceived the Chinese warnings as bluffs (Christensen, 1992, p.129). This anecdote corroborates the view of the supremacy of public over private threats. As a consequence, audience cost theory expects that public threats should be more credible in crisis bargaining than private ones (Fearon, 1994, 1997).

However, the comparative advantage of public over private threats is controversial. Previous empirical studies either focus on only public statements (Altman, 2021; McManus, 2017) or find that public statements are no more (or even less) credible than private ones (Katagiri and Min, 2019; Yarhi-Milo, 2013). Some policymakers also believe in the superiority of private communication. For example, during the Berlin Crisis from 1958-59, United States Ambassador to Germany David K.E. Bruce argued that the U.S. stand "should be conveyed privately to Khrushchev so that at least he would make no miscalculations" (Diary Entry by the Ambassador to Germany (Bruce), 1993).

For one thing, this lack of evidence may be due to the difficulty in obtaining information on the publicity of threats from standard datasets used for studies on crisis bargaining. Also, eliminating selection bias with observational studies on audience costs is challenging (Schultz,

2001b). In this context, it is likely that leaders do not randomly choose public versus private threats, but rather choose the threat that they feel will be most effective for a given situation. Survey experiments are a solution for this kind of selection bias (Tomz and Weeks, 2013). In this study, I propose a modified version of a conjoint survey experiment by Kertzer, Renshon and Yarhi-Milo (2021) to compare the credibility of public and private threats. Three major findings of this experiment stand out. First, evidence suggests that both types of threats increase the perceived likelihood that a country will stand firm. Second, I find evidence that public threats are more effective than private threats, though the substantive difference is small. Third, the results suggest that the effect of public threats is conditioned by domestic hawkishness and a leader's unpopularity, which means the underlying mechanism of the credibility of public threats is domestic audience costs.

This study makes theoretical and empirical contributions to the literature on coercion, audience costs, and secrecy.¹ Scholars on audience costs and crisis bargaining have proposed various models and have debated whether public or private threats are more credible. An empirical examination of public versus private threats answers which model is more plausible. Also, this study has the potential to speak to policy-makers. For instance, considering that China is rising and there are some indications that the Chinese government is intensifying its foreign policy activities and expanding its scope, it is paramount for the decision-makers of the U.S. and its allies to consider which type of threats can deter Chinese aggression. Furthermore, this work has a broader implication beyond the debate on threats because students of IR often apply the dichotomy of publicity versus privacy to other types of international commitments. For example, proposing a deal between China and the United States over a potential unification of two Koreas, Kydd (2015, p.74) argues that “the eventual agreement must be written down, made public, and blessed by a multilateral forum in order to generate maximal incentives to honor the commitment.” This notion stems from audience cost theory suggesting that publicity drives states to follow through on commitments.

¹Carnegie (2021) provides a comprehensive review on secrecy in international relations and foreign policy.

2 Literature on Audience Costs and Public Versus Private Threats

Audience costs emerge when a leader escalates an international crisis but backs down (Fearon, 1994; Schwartz and Blair, 2020). While audiences can be international (Fearon, 1994; Morrow, 2000; Luo, 2021), theories on audience costs usually focus on the role of domestic audiences. They suggest that domestic audiences disapprove of a leader who backs down in an international crisis, resulting in political costs for the leader such as the loss of election or other types of leader removal (Fearon, 1994; Tomz, 2007; Weeks, 2008). In turn, states with strong domestic audiences should prevail in international crisis bargaining because they can credibly signal their resolve to fight once a crisis escalates. Assuming the existence of audience costs, we can expect which country or leader is less likely to back down and more advantaged in international crises.

Despite its usefulness, the views and evidence for domestic audience costs are divided. (Schultz, 2012, p.369) maintains that audience costs are the dark matter in international relations, while Mercer (2012) offers a more critical view by saying that audience costs are toys. One of the propositions from audience cost theory is a democratic advantage in crisis bargaining (Fearon, 1994), but its evidence is controversial.² While some studies provide findings consistent with this expectation (Kurizaki and Whang, 2015; Partell and Palmer, 1999), critics contend that regime types do not play an important role and/or democracies are no more advantaged in crises (Downes and Sechser, 2012; Kertzer, Renshon and Yarhi-Milo, 2021; Snyder and Borghard, 2011; Trachtenberg, 2012). Others provide more nuanced views claiming that democracies do not necessarily generate large audience costs and the magnitude of audience costs can depend, for example, on the types of autocracies (Weeks, 2008), the media access (Choi and James, 2007; Potter and Baum, 2014), and domestic instability (Yu, Whang and Lee, 2022). Overall, however, there are many different views on

²On the latest review on democratic advantage, see Drezner (2022), especially on page 5 on audience costs.

which domestic factors lead to the generation of audience costs.

Since selection problems with the assessment of audience costs are difficult to address (Schultz, 2001*b*; Kurizaki and Whang, 2015), many scholars use experiments to test hypotheses drawn from audience cost models. In his canonical survey experiment, Tomz (2007) finds that approvals (disapprovals) of a U.S. president decrease (increase) when the president threatens to militarily intervene but ultimately backs down. Many successive experimental studies replicate his finding (e.g., Davies and Johns, 2013; Levy et al., 2015; Li and Chen, 2021; Quek, 2017). Nonetheless, many other studies contend that this result is susceptible to a small change in a research design (Croco, Hanmer and McDonald, 2021), a leader's justification (Levendusky and Horowitz, 2012), the substance of policies (Chaudoin, 2014), and the outcome of policy actions (Nomikos and Sambanis, 2019). Also, though other scholars propose many different types of audience costs from the costs for backing out such as those due to backing in (Levy et al., 2015; Quek, 2017) or due to belligerency (Kertzer and Brutger, 2016), these findings have been similarly debatable (Nomikos and Sambanis, 2019; Takei and Paolino, 2023).

Because of these mixed findings, scholars in international relations need to investigate other observable implications to “look for audience costs” (Gartzke and Lupu, 2012; Schultz, 2001*a*). One of the underinvestigated observable implications is the credibility of public versus private threats. In the next section, I detail the hypotheses derived from audience cost theory on the credibility of public threats.

3 Expectations: The Credibility of Public Versus Private Threats

Audience cost theory predicts that public threats should be more credible than private ones. As Schlesinger and Levy (2021, p.2) summarize, “[G]iven the importance of costly signaling for bargaining leverage and the greater credibility of public threats than private

threats, external adversaries are more likely to comply with public threats than with private threats.” Public threats can generate audience costs and thus can work as a tying-hands signal (Fearon, 1994, 1997). On the other hand, it is widely believed that private threats are less credible because they can be considered a cheap-talk. This logic of the credibility of public threats often applies to military alliances, explaining why alliances are written down (Morrow, 2000). Tarar and Leventoglu (2009) offer a game-theoretical model showing that even under a complete information setting, public commitments can be used for bargaining leverage.³

Nevertheless, a growing literature questions the superiority of public over private threats. For instance, according to Yarhi-Milo (2013), private communications can serve as a costly signal. Since the content of private commitments can be disclosed by the opponent or leaked by other actors, they also can generate potential audience costs. Moreover, private threats may stake a country’s reputation. Given that the violation of international commitments hurts reputation and leads to significant international consequences (Crescenzi, 2018; Kurizaki, 2007; Gibler, 2008; Guisinger and Smith, 2002; Sartori, 2005), a target state may perceive private threats as credible. Kurizaki (2007) argues that private diplomacy can be efficient because public threats increase audience costs for a target state and thus it is too costly for the target to back down.⁴⁵

Some recent works go further, arguing that private threats are more credible than public ones. According to Katagiri and Min (2019), for example, since public threats target multiple audiences, it is difficult for an adversary to interpret the intent or motive of the threats correctly. However, private threats can be sent directly to a targeted actor, so the receiver should accurately evaluate the meaning and implication of the threats. Thus, I can formulate

³But to note, the model of Tarar and Leventoglu (2009) also provides a rationale for private communication. They find that, while only one side makes public commitments that side prevails in a crisis and avoids a war, there is a higher likelihood of war when both sides issue public commitments.

⁴Similarly, Trager (2017) argues that private communication behind closed doors often influences the inferences of diplomats and leaders on adversaries’ intentions.

⁵On the implication of domestic audience costs on the target side, see also Kurizaki and Whang (2015) and Zarpli (2022).

the two competing hypotheses as follows:

H1a: Public threats are more likely to be credible than private threats.

H1b: Public threats are less likely to be credible than private threats.

It is also possible that the credibility of public threats is conditional. One such factor is the ability to follow through on the commitment. Specifically, through her observational studies, McManus (2017) argues that public threats of a political leader are more credible when a country is militarily stronger, the domestic audiences have a stronger hawkish preference, and s/he is more secure in office. While military capability probably makes more credible both public and private threats, hawkishness and security in office should make a difference between the two. Since hawks are more likely to punish a leader's backing down despite its initial commitment (Kertzer and Brutger, 2016), public threats issued in front of a domestic audience can be viewed as more credible. For example, in her case study of the 1999 Embassy Bombing and the 2001 EP-3 Incident, Weiss (2013) finds that the Chinese Communist Party strategically allowed hawkish nationalist protests when it wanted to signal China's strong resolve to resist in international crises.

In terms of leader popularity, theories on domestic audience costs suggest that leaders who are vulnerable to removal are more capable to generate audience costs (Fearon, 1994; Gelpi and Griesdorf, 2001; Partell and Palmer, 1999; Schultz, 1999; Weeks, 2008). When a leader is domestically unpopular, the risk of losing office due to a failure to honor public commitments is large, resulting in larger audience costs. Private threats, on the other hand, should not be conditioned by these two factors because their existence is unknown to the audience. Several case studies support this argument. For example, in his latest study proposing "mediated audience costs," Cebul (2023) finds that the domestic instability of Jordanian King Hussein after the 1966 Sumu Incident helped him to signal his resolve to retaliate against Israeli aggression when Hussein issued a public threat to abandon his moderate policy toward Israel. Through communication with the United States, Israel recognized domestic audience

costs, resulting in its restraint towards Jordan. In the discussion section, Cebul suggests that “One intuition worth exploring is that opponents may perceive popular leaders as less vulnerable than unpopular ones to domestic punishment for empty threats” (p.15). While McManus finds that statements of resolve are more effective when the leader is domestically more popular, which, she claims, constitutes counterevidence for audience cost theory, given the difficulty in eliminating selection effects with observational data, this expectation should require more scrutiny. So we can generate two hypotheses below:

H2: Compared to private threats, public threats are more credible when domestic audiences have a hawkish preference.

H3: Compared to private threats, public threats are more credible when a leader is unpopular domestically.

It is important to test H2 and H3 because public threats can be credible through other mechanisms than domestic audience costs. If the mechanism underlying the increase in credibility from making public threats was not the possibility of domestic punishment, then we would not find heterogeneous effects based on hawkishness and popularity. Thus, the confirmation of H2 and H3 indicates that people perceive public threats as credible *because of* domestic audience costs.

4 Research Design

It is difficult to test audience cost-related hypotheses because of selection problems (Kurizaki and Whang, 2015; Schultz, 2001*b*). In this context, the issue is that policymakers choose whether and how to issue verbal threats not at random but strategically. For instance, supposing that domestic audience costs are larger for public threats, strongly resolved states should tend to select public rather than private threats. In addition, decision-makers often calculate the credibility of threats in a noisy environment. Thus, vignette-based survey

experiments usually used in the audience cost literature (e.g., Tomz, 2007; Levendusky and Horowitz, 2012) may not be suitable. To address these problems, I employ a conjoint experiment. Conjoint experiments have many advantages over classic survey experiments (Hainmueller, Hopkins and Yamamoto, 2014). For one, since we can randomize attributes of countries other than the existence and type of threats, we can account for the said selection issues with relative ease. Moreover, conjoint experiments can manipulate many country-level and leader-level factors, which can increase the realism of the experiment and so yield more accurate treatment effect sizes.

For my conjoint experiment, I rely on the design of Kertzer, Renshon and Yarhi-Milo (2021). In their conjoint analysis to assess the resolve to fight in a dispute, Kertzer and his colleagues show a profile of a pair of Country A and B in a dispute and randomize the attributes of country-level and leader-level characteristics as well as their behavior. After the experimental manipulation, they ask which country is more likely to stand firm. They repeat this exercise eight times.

Importantly, they focus on costly signals, an important characteristic of current behavior, and show one of three conditions. A conjoint choice states, “In the current crisis, the country [has yet to make any statements or carry out any actions./has mobilized troops./has made a public threat that they will use force if the other country does not back down.]” While I keep most of their experimental design, I also make several revisions to their study for the purpose of my study. First, I include another condition of private threat: “In the current crisis, the country has made a threat through secret diplomatic channels that they will use force if the other country does not back down.” Second, respondents in the public or private threat treatments may assume that troops are mobilized so conditions for military mobilization will be separately treated. Third, public and private threat conditions will include domestic implications. In the former, a sentence is included saying that “[S]ince this threat has been made publicly, many of the public of the country know the existence and content of the threat,” while the latter reads, “[S]ince this threat has been made privately, none of the

public of the country knows the existence and content of the threat.” To test the conditional hypotheses (H2 and H3), I also randomize the hawkishness of domestic elites and the public as well as a leader’s popularity and estimate an interaction effect of these factors and public threats. Details of the experimental design are shown in the Appendix.

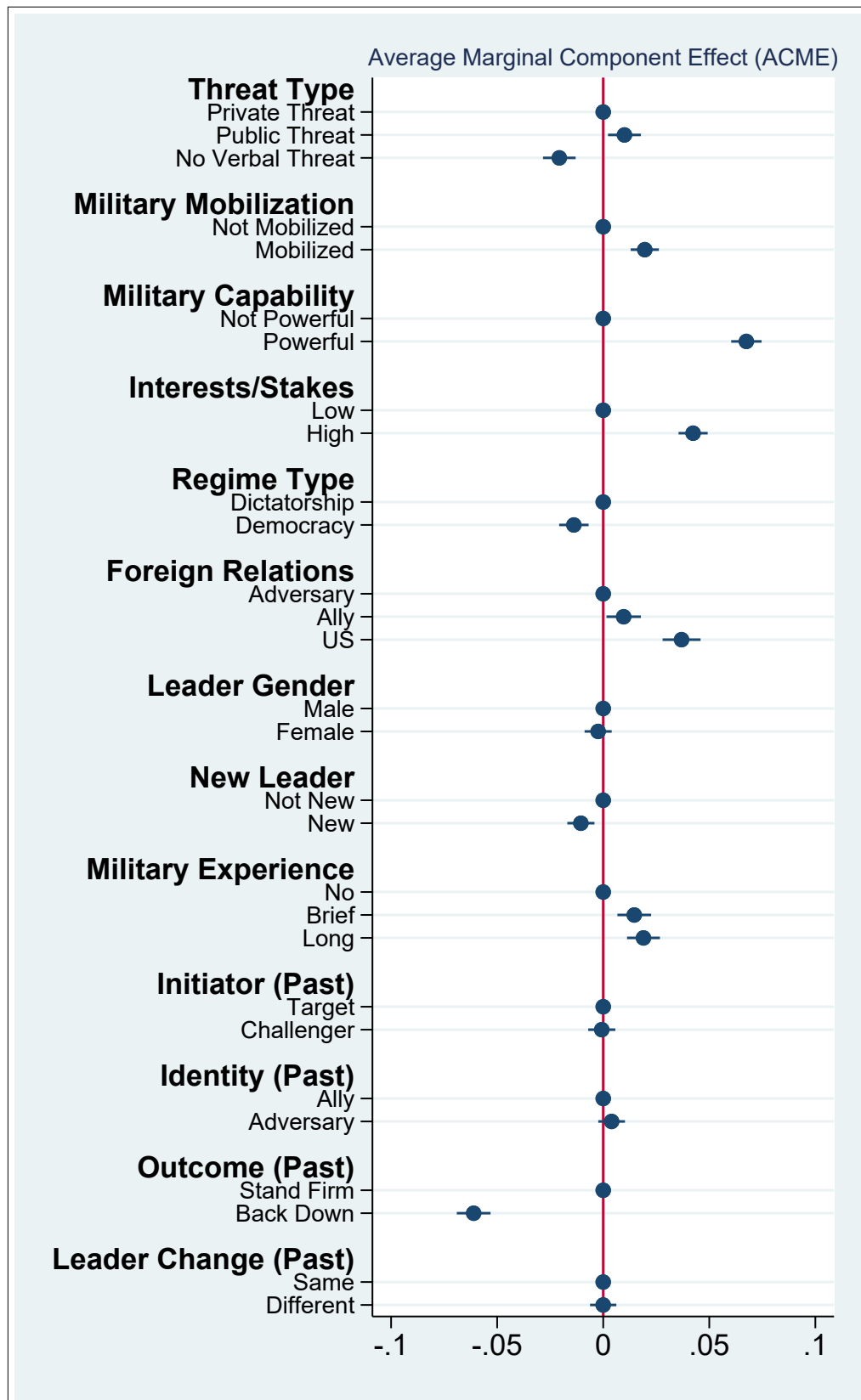
5 Results

I fielded this experiment to U.S. citizens recruited via a participant recruitment, payment, and management crowdsourcing platform increasingly used for studies in political science, Prolific (e.g. Diamond, 2020; Tappin and Hewitt, 2021). Peer et al. (2017) show that Prolific subjects are more diverse and provide higher quality answers than those of other platforms. 1203 subjects answered this survey in February 2023. Since I can get 16 observations of a perceived percentage of each country’s standing firm per 1 subject, there are 19,248 observations in total.⁶ Figure 1 reports the average marginal component effect (AMCE) of each attribute. The confidence intervals displayed in the figure are 95% confidence intervals. First, comparing no verbal threat, both private and public threats increase the perceived percentage of standing firm by 2.1% and 3.1%, respectively. Thus, we can conclude that verbal threats serve as a costly signal, whichever the type is. In the comparison of public versus private threats, which is our interest in quality, the percentage point slightly increases from private to public threats by 1.0%, and it is statistically significant ($p=0.011$), though the substantive effect is small. The result indicates that public threats are more, though only slightly, effective than private ones.

This finding is consistent with H1a but not H1b. In line with traditional views of audience costs, the publicity of threats is translated into a bargaining advantage. The result also supports the view of Yarhi-Milo (2013) to some extent because evidence suggests that private

⁶I conducted a pilot experiment at a large public university in the U.S. from September to November 2022. The result indicated that the difference between public and private threats is small at best. Assuming that the standardized slope is 0.02, power is 0.8, and $\alpha = 0.05$, my power analysis suggested that the estimated sample size is 19,617, which justifies my decision to recruit around 1,200 subjects.

Figure 1: Predicting Perceptions of Resolve



threats are better than no verbal threat. On the other hand, it is contradictory to the proponents of the effectiveness of private communication such as Katagiri and Min (2019).

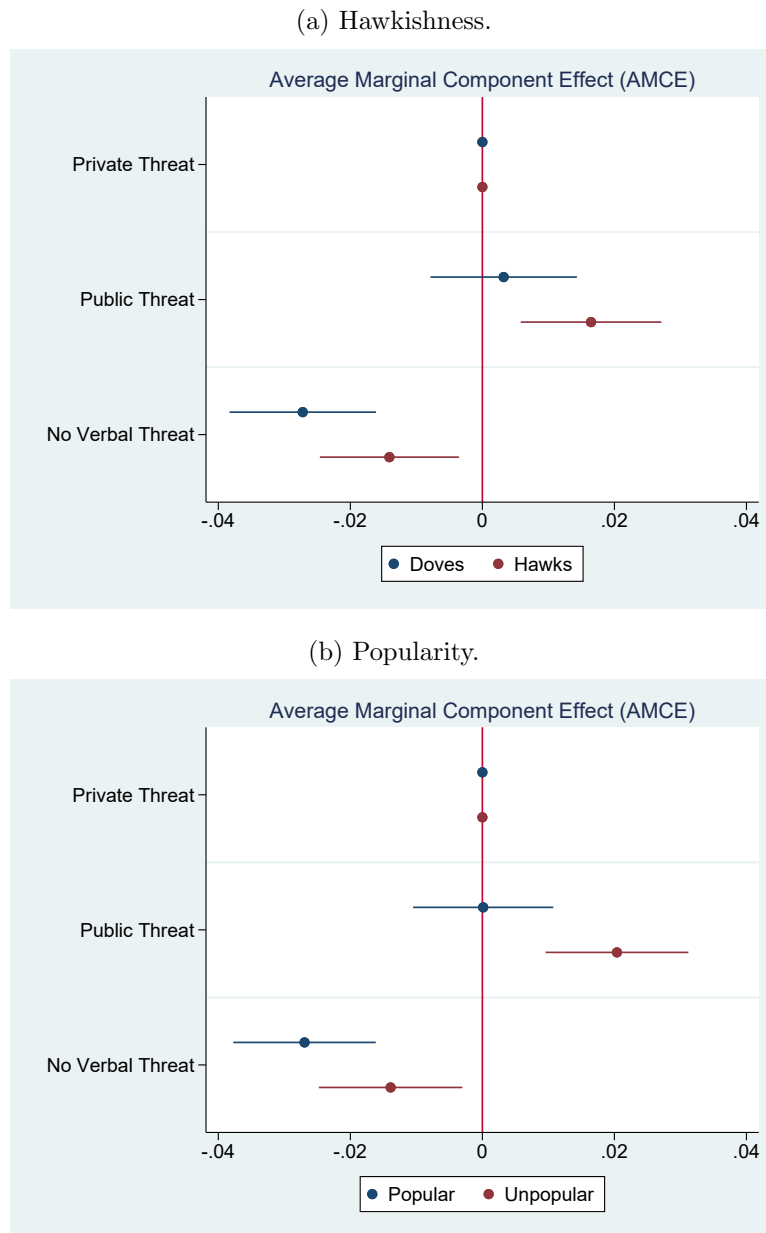
Turning to the other variables, the results are almost identical to the original study by Kertzer, Renshon and Yarhi-Milo (2021). They show that people perceive that a country is more likely to stand firm when (1) a country mobilizes troops, (2) it is militarily powerful, (3) interests/stakes are high, (4) the regime is a dictatorship, (5) the country is the U.S. or its ally, (6) a leader has a military experience, and (6) it backed down in the previous crisis. It suggests that the current experiment successfully replicates their findings.

Figure 2 reports the tests for the heterogenous effect of public threats. Again, 95% confidence intervals are shown in the figures. Overall, I find support for H2 and H3. The interaction terms of public threats and the domestic hawkishness or unpopularity of the leader are statistically significant, suggesting that these factors do change the credibility of public threats. The results demonstrate that public threats increase the perceived percentage of a country's standing firm, but only when domestic audiences are hawkish, though the statistical significance is only marginal ($p=0.086$). Likewise, threats issued by an unpopular leader lead to a bargaining advantage, but not by a leader with popularity ($p=0.009$). The latter result is contradictory to the finding of McManus (2017) but consistent with the recent study suggesting that domestic instability generates large audience costs (Cebul, 2023).

5.1 Discussion

The findings of this study have a clear contrast to Katagiri and Min: My conjoint experiment suggests the advantage of public threats, while they find the opposite. What causes these divergent results? One potential reason is how these two studies treat the content of threats. In this experiment, I explicitly control for the content of the threat. Thus, the private and public threat is identical, except for whether it is made in public or not. On the other hand, Katagiri and Min find that empirically (at least during the Berlin Crisis) the content of private threats differ from public threats, which explains why the former were more effective

Figure 2: Testing the Conditional Effects of Public Threats.



than the latter. Thus, if in the real world, private and public threats had the exact same content, then Katagiri and Min would have found evidence that public threats are more effective. On the other hand, if we take the difference in content into account, this finding may not hold.

Also, the divergence of the findings may stem from the empirical strategy. Since this study explicitly focuses on audience costs, the author chooses experiments to address potential

selection problems (Schultz, 2001*a*; Tomz, 2007). On the other hand, the interest of Katagiri and Min is broader than just audience cost theory, which can justify their decision to assess the credibility of public and private signals observationally. Therefore, the difference in the result of the two studies poses a typical dilemma between experimental and observational studies; while my study provides causally identified evidence for the efficacy of public threats, unlike Katagiri and Min, its external validity is limited.

6 Conclusion

The findings of this experiment are threefold. First, both public and private threats work as a credible signal. Second, compared to private threats, public threats are more likely to be perceived as credible, albeit with the small effect size. Third, the heterogeneous effect of public threats by domestic hawkishness and unpopularity is supported, suggesting that public threats are credible because of domestic audience costs.

One of the limitations of this study is its reliance on a sample of ordinary citizens. In international crises, those who calculate the credibility of threats and make decisions are the elite, not the mass. Though I use a mass sample in order to obtain a large sample size (Kertzer and Renshon, 2022, pp.542-543), some scholars emphasize the difference between elites and non-elites regarding decision-making in international relations (e.g., Mintz, Redd and Vedlitzky, 2006). Since the elite may evaluate threats differently from the public because of their knowledge and experience, the former may discern the different implications of public versus private threats. Nonetheless, we have several reasons for optimism on external validity. First, a recent study shows that the public-elite gap is overstated (Kertzer, 2022). Second, the study by Kertzer, Renshon and Yarhi-Milo (2021), which my experimental design is based on, compares results for members of the US public to an elite sample of Israeli Knesset members and finds they are quite similar.

In addition, even if public calculations of credibility differ from policymakers' calculations,

the findings of this study are still important. For one thing, it is because public views still matter. If the public believes an adversary is more (less) resolved, then they should be more (less) willing to back down, reducing (increasing) the domestic political constraints leaders face to backing down. Consequently, public views are intrinsically relevant, even if they are not externally valid to policymakers. Also, considering the knowledge and expertise of elites who should be more likely to understand the logic and implication of audience costs, I believe that the current study using a mass sample is a conservative test for the effect of public threats.

Another potential limitation is the relatively small effect size. It is true that the 1% point difference between public and private threats is smaller than the differences caused by other variables such as military capability and interests. Thus, one may argue that the distinction between the two types of threats may be negligible. However, we should keep in mind that military capability and interests are not easily manipulable by policy-makers. In their study on the deterrence effect of military alliances, for instance, Johnson and Leeds (2011) point out that military alliances are policy-relevant because their formation is more manipulable than power and regime type. Given that decision-makers can manipulate the type of threats relatively easily, the differences in the effects found here are significant. This research note also identifies the conditions where public threats can be more effective. Compared to private threats, public threats increase the perceived percentage of standing firm by 1.6% when domestic audiences are hawkish and by 2.0% when a leader is unpopular but there is no meaningful effect of public threats with dovish domestic audiences or a popular leader. These 1.6% or 2.0% point differences are comparable to or larger than the effect size of many other factors in Figure 1 such as military mobilization (2.0%), democracy (1.3%), U.S. ally (1.0%), new leader (1.1%), and military experience (1.4% for brief, 1.8% for long). Thus, the conditional effect of public threats is substantively large.

This study has many implications for future studies. Theoretically, while my study suggests that the domestic audience cost mechanism leads to the effectiveness of public

threats, it is not the only source for threat credibility. One possibility is international audience costs (or more commonly, reputation costs) (Kydd and McManus, 2017; Luo, 2021; Sartori, 2005). Both public and private threats can increase reputation costs, which in turn can be translated into its credibility. It is intriguing to see future work that would examine how international audiences affect the effectiveness of public and private threats.

The further assessment of the mechanisms of when and how private threats are more credible is another fruitful avenue. Though the finding indicates that private threats still enhance credibility relative to making no threat at all, that may be because it puts the country's reputation on the line with that foreign country (e.g., Sartori, 2005), because foreign governments or the media can leak the information of private threats (Yarhi-Milo, 2013), the content of messages is different (Katagiri and Min, 2019), or for other reasons. Because it is beyond the scope of this study to unpack the causal mechanisms of the credibility of private threats, future research should identify what conditions increase their efficacy.

Relatedly, the difference between publicity and secrecy can not only apply to verbal threats but also to military action. Though my experiment as well as Kertzer et al's do not differentiate overt and covert military action, there are similar debates to public versus private threats over which can signal resolve in international crises. Conventional wisdom is that overt operation is superior because of its ability to generate sunk and tying-hands costs (Fearon, 1994; Slantchev, 2005). On the other hand, Carson and Yarhi-Milo (2017) argue that policy-makers do use covert policy tools for a signaling purpose and can increase its threat credibility by increasing sunk costs, crisis escalation risks, and domestic political risks. Scholars could theoretically and empirically explore whether and under what conditions overt or covert military action can send a credible signal of resolve.

Also, the credibility of threats is not the only dimension of how public and private threats affect crisis bargaining. One of the reasons for the efficiency of private communication is that public demands also can increase the audience costs of the target (Kurizaki, 2007; Zarpli, 2022). This mechanism is underinvestigated, especially in an experimental setting. Also,

whether and how the clarity and ambiguity of threats affect crisis bargaining is controversial (e.g., Altman, 2021; Quek and Johnston, 2018; Weiss and Dafoe, 2019). Future research should incorporate these aspects and evaluate the effectiveness of public and private threats comprehensively.

Another interesting direction for future studies is the examination of motivations to go public or private. While I use experiments to eliminate this very kind of selection issue, when a leader chooses public versus private threats is an interesting research question in its own right. For example, Baum (2004) suggests leaders choose private communication rather than going public to avoid domestic audience costs when national interests in a crisis are moderate and they are not confident of the success of a foreign policy. Future studies should explore the relationship between audience costs and the choice of threat type theoretically and empirically.

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Appendix

Conjoint Instrument Screen from Kertzer et al.(2021)

In this portion of the study, we will present you with information about a series of eight foreign policy disputes between different countries.

Countries often get into disputes over contested territories. These disputes receive considerable attention because of the risk they can escalate to the use of force. Thus, the kinds of disputes described here are ones that have occurred many times, and will likely occur again.

In each screen, we will present you with a pair of countries involved in a territorial dispute, tell you a bit about each of them, and ask you to make predictions about what you think will happen. There are no right or wrong answers, we're simply interested in the kinds of predictions you make.

Sample Profiles

Table 1: Public and Private Threats and Conditions (Original)

| <i>Variable of Interest</i> | | |
|-----------------------------|------------------------------|---|
| Current Behavior | <i>Verbal Threats</i> | In the current crisis, the country... |
| | No Threat | (1)...has yet to make any statements (2)...has made a threat through secret diplomatic channels that they will use force if the other country does not back down. Since this threat has been made privately, none of the public of the country knows the existence and content of the threat |
| | Private | (3)... has made a public threat that they will use force if the other country does not back down. Since this threat has been made publicly, many of the public of the country know the existence and content of the threat |
| | Public | |
| | <i>Military Mobilization</i> | The country... (1) ...has not mobilized troops (2) ...has mobilized troops |
| <i>Conditions</i> | | |
| Country-Level | <i>Hawkishness</i> | The domestic public and elites... (1)...prefer military solutions (2)...prefer peaceful solutions |
| Leader-Level | <i>Popularity</i> | The leader... (1)...is popular domestically (2)...is unpopular domestically |

Table 2: Other Variables from Kertzer et al.(2021)

| Characteristics | | |
|-----------------|---|---|
| Country-Level | <p><i>Military Capability</i></p> <p><i>Interests/stakes</i></p> <p><i>Regime type</i></p> <p><i>Foreign relations</i></p> | <p>The country...</p> <p>(1)...has a very powerful military</p> <p>(2)...does not have a very powerful military</p> <p>Experts describe the country's stakes in the dispute as...</p> <p>(1)...high</p> <p>(2)...low</p> <p>The country is...</p> <p>(1)...a democracy</p> <p>(2)...a dictatorship</p> <p>The country is...</p> <p>(1)...the United States</p> <p>(2)...an ally of the United States</p> <p>(3)...an adversary of the United States</p> |
| Leader-Level | <p><i>Time in office</i></p> <p><i>Gender</i></p> <p><i>Military Experience</i></p> | <p>The leader...</p> <p>(1)...recently took office</p> <p>(2)...has been in power for many years</p> <p>(1) He</p> <p>(2) She</p> <p>(1)...does not have experience in the military</p> <p>(2)... has served in the military briefly</p> <p>(3)...had a long career in the military</p> |
| Past behavior | <p><i>Initiator</i></p> <p><i>Identity of other state</i></p> <p><i>Outcome of previous dispute</i></p> <p><i>Leadership change</i></p> | <p>(1) it was challenged</p> <p>(2) it initiated the crisis</p> <p>(1) ally of the United States</p> <p>(2) adversary of the United States</p> <p>(1) the country ultimately stood firm</p> <p>(2) the country ultimately backed down</p> <p>At the time, the country was...</p> <p>(1) ... led by a different leader than the one in the current dispute</p> <p>(2) ... led by the same leader as the one in the current dispute</p> |

Table 3: Sample Conjoint Choice

| | Country A | Country B |
|---|---|---|
| Government | The country is a democracy. | The country is a dictatorship. |
| Military Capability | The country has a very powerful military. | The country has a very powerful military. |
| Previous behavior in international disputes | The last time this country was involved in an international dispute, it initiated the crisis by issuing a public threat to use force against an adversary of the United States, but ultimately backed down. At the time, the country was led by a different leader than the one in the current dispute. | The last time this country was involved in an international dispute, it initiated the crisis by issuing a public threat to use force against an adversary of the United States, and stood firm throughout the crisis. At the time, the country was led by a different leader than the one in the current dispute. |
| Current behavior | In the current crisis, the country has made a threat through secret diplomatic channels that they will use force if the other country does not back down. Since this threat has been made privately, none of the public of the country knows the existence and content of the threat. The country has mobilized troops. | In the current crisis, the country has made a public threat that they will use force if the other country does not back down. Since this threat has been made publicly, many of the public of the country know the existence and content of the threat. The country has mobilized troops. |
| Leader background | The leader recently took office; he has served in the military briefly. The leader is popular domestically. | The leader recently took office; she had a long career in the military. The leader is popular domestically. |
| Foreign relations | The country is an adversary of the United States. | The country is an ally of the United States. |
| Domestic politics | The domestic public and elites prefer military solutions. | The domestic public and elites prefer peaceful solutions. |
| Popularity | The leader is popular domestically. | The leader is popular domestically. |

Restrictions imposed on the combination of attribute levels

For this experiment, I did not impose any restrictions on the combination of attribute levels that may appear in the conjoint. This means that there are some combinations of attributes that would be schema-inconsistent. For example, if the identity of the relevant country in the scenario is the United States and the US can be described as a “dictatorship” and/or “not hav[ing] a very powerful military,” then that would be unrealistic. If some of the scenarios presented to respondents is on its face unrealistic, then that could confuse survey respondents and/or make them less likely to take the experimental task seriously. However, a recent study shows that schema-inconsistency “does not lead scholars to draw substantively different inferences or identify diverging effects, either in magnitude or direction” (Brutger et al., 2022, p.11), I believe that this would not be a huge concern for the results obtained here.

Variable Codings (Demographic Variables)

Male 1 = Male; 0 = Female.

Age: 1 = 18-24 years; 2 = 25-34 years; 3 = 35-44 years; 4 = 45-54 years; 5 = 55-64 years; 6 = 65 years or older.

White: 1 = White, 0 = Otherwise.

Democrat: 1 = Democrat, 0 = Otherwise.

Ideology: 1 = Extremely Conservative, 2 = Conservative, 3 = Slightly Conservative, 4 = Moderate, Middle of the Road or Don't Know, 5 = Slightly Liberal, 6 = Liberal, 7 = Extremely Liberal.

Income: 1 = Less than \$25,000, 2 = \$25,000 - \$49,999, 3 = \$50,000 - \$74,999, 4 = \$75,000 - \$99,999, 5 = \$100,000 - \$124,999, 6 = \$125,000 - \$149,999, 7 = \$150,000 - \$174,999, 8 = \$175,000 - \$199,999, 9 = More than \$200,000.

Descriptive Statistics

Table 4: Descriptive Statistics

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|------------------|--------|----------|-----------|-----|-----|
| Rate | 19,248 | .5730341 | .2268612 | 0 | 1 |
| Choice | 19,248 | .5 | .500013 | 0 | 1 |
| Private Threat | 19,248 | .3334892 | .4714718 | 0 | 1 |
| Public Threat | 19,248 | .3354634 | .4721645 | 0 | 1 |
| No Verbal Threat | 19,248 | .3310474 | .4706023 | 0 | 1 |
| Male | 18,784 | .5076661 | .4999545 | 0 | 1 |
| Age | 19,248 | 2.963425 | 1.351242 | 1 | 6 |
| White | 19,104 | .7336683 | .4420513 | 0 | 1 |
| Ideology | 18,976 | 4.849916 | 1.730948 | 1 | 7 |
| Income | 18,816 | 3.245748 | 1.976955 | 1 | 9 |
| Democrat | 19,056 | .4911839 | .4999354 | 0 | 1 |

Balance Checks

Through a series of t-test, I find no pre-treatment variables where the difference in means show statistical significance in our sample. Thus, I conclude that the treatment of my interest is well-balanced.

Table 5: Difference in Means (with T-test P-values) between Covariate Mean for Respondents in Private Threat and...

| Covariants | Public Threat | No Verbal threat |
|------------|---------------|------------------|
| Male | 0.012 | -0.006 |
| Age | -0.014 | 0.002 |
| White | -0.008 | -0.008 |
| Ideology | 0.044 | 0.048 |
| Income | -0.017 | -0.030 |
| Democrat | 0.006 | 0.006 |

Inattentive Subjects

As robustness checks, I estimate several alternative models. First, to evaluate the impact of the respondents' attentiveness, I estimate the models excluding inattentive subjects who make a mistake twice or more of (1) they perceive that Country A (Country B) is more likely to stand firm but (2) give a higher percentage of standing firm of Country A (Country B). Figures 3 and 4 show the plots of the AMCE. The result is identical to that in the main text.

Figure 3: Excluding Inattentive Subjects

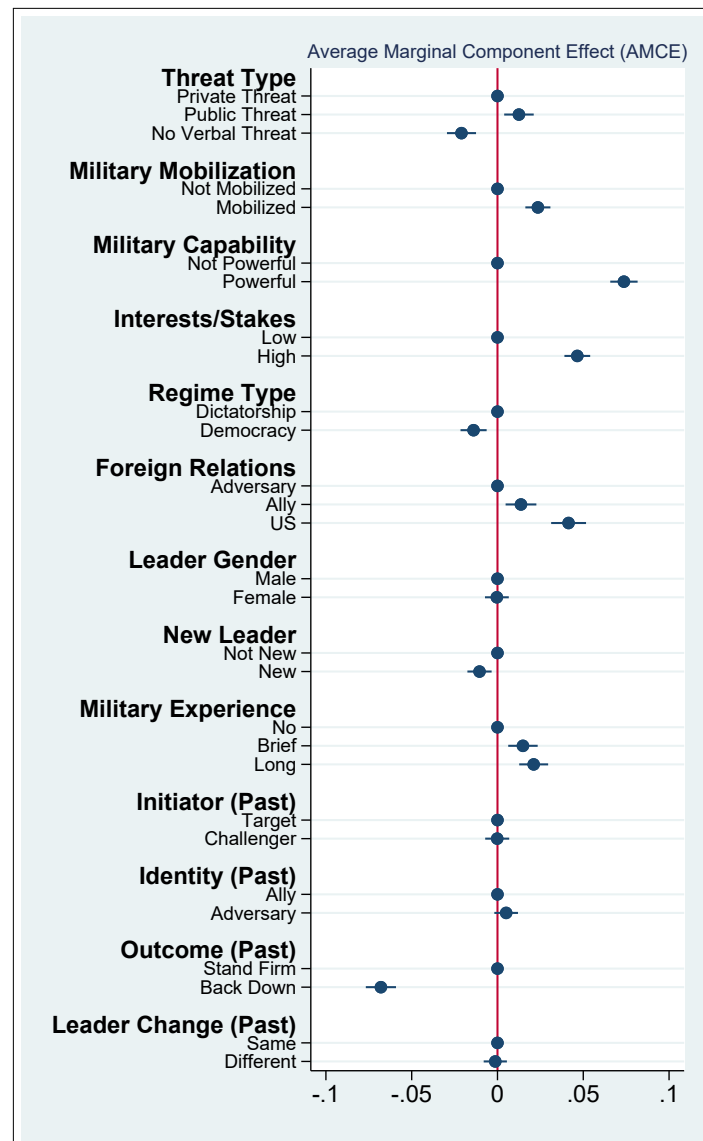
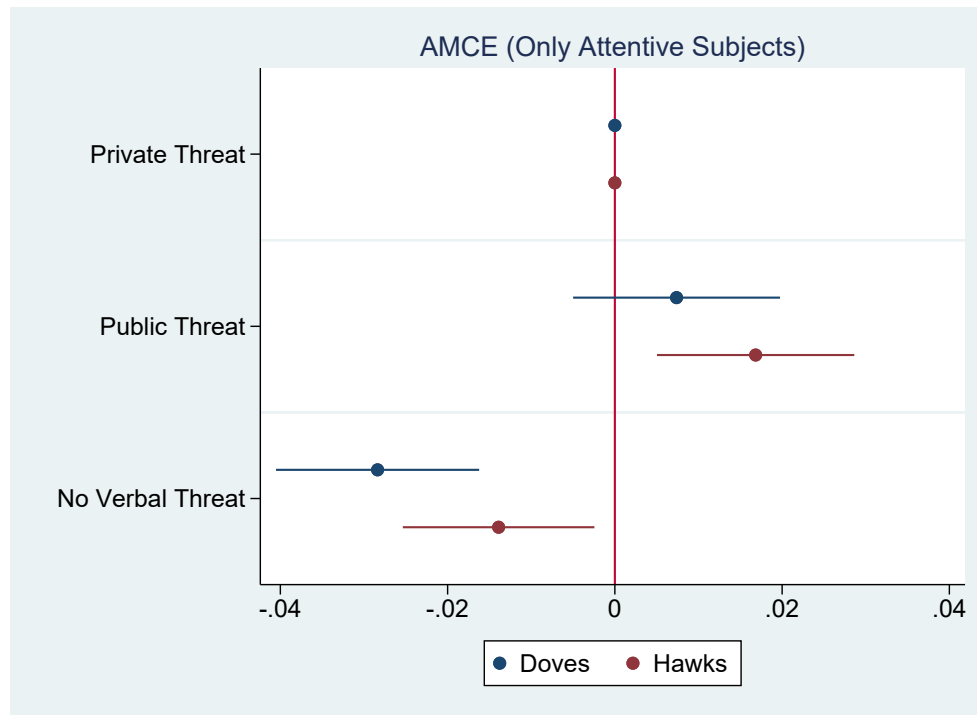
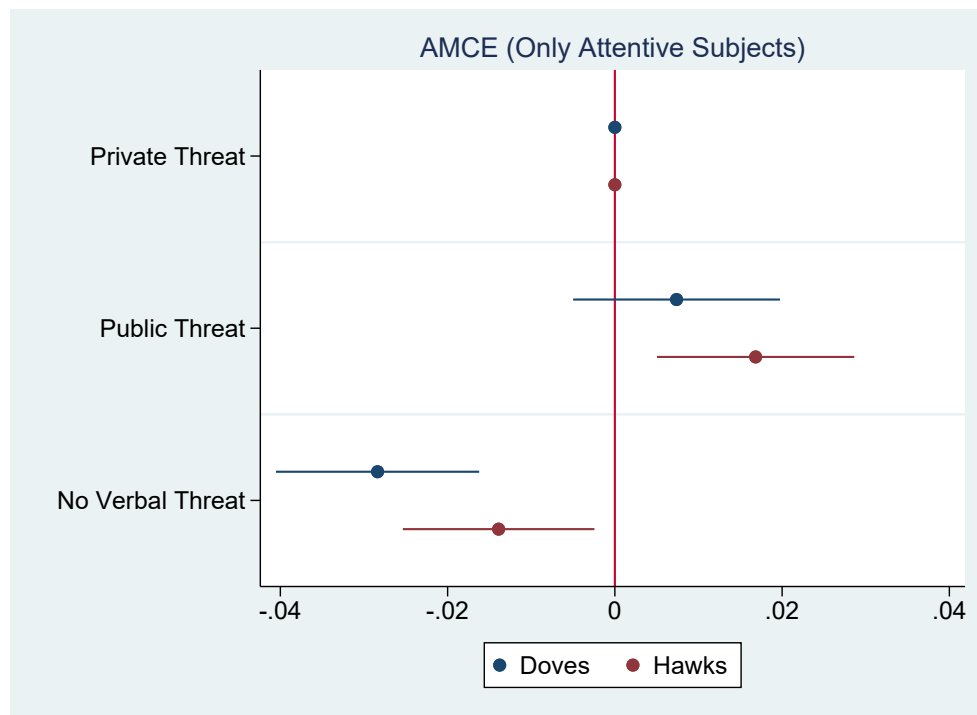


Figure 4: Testing the Conditional Effects of Public Threats (Only Attentive Subjects).

(a) Hawkishness.



(b) Popularity.



Logit Models

Figures 5 and 6, I report the coefficient plot of the logistic regression models using a binary choice of which country is more likely to stand firm as a dependent variable. The results in the main text still hold.

Figure 5: Coefficient Plot (Logit)

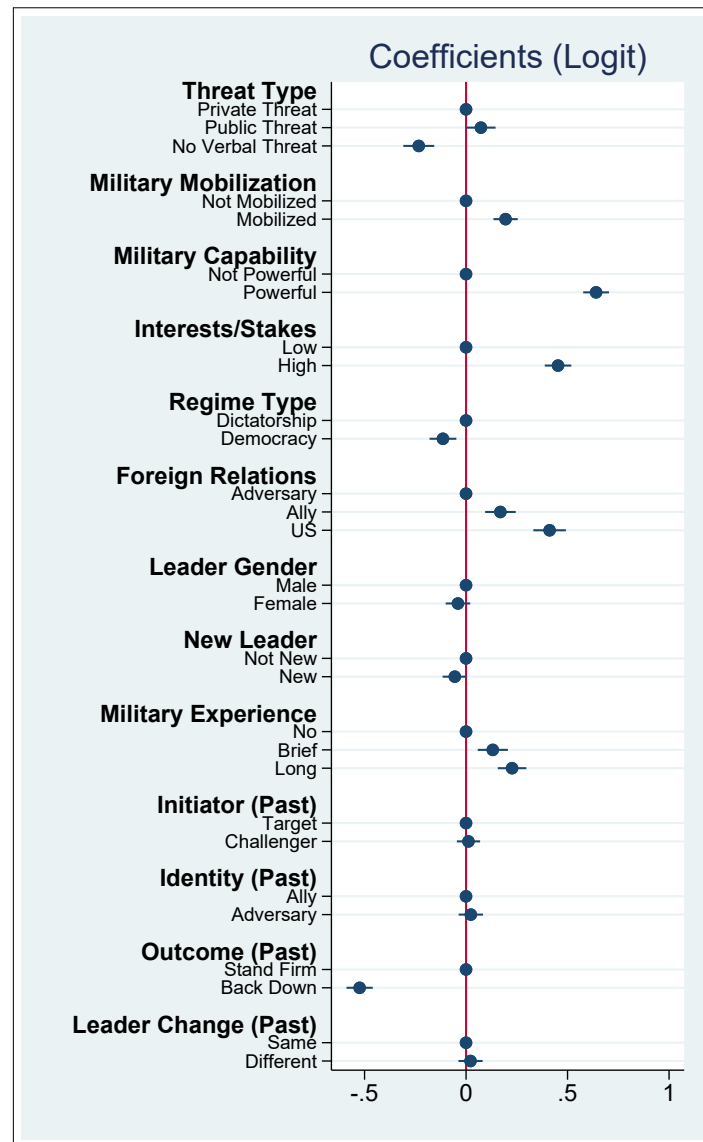
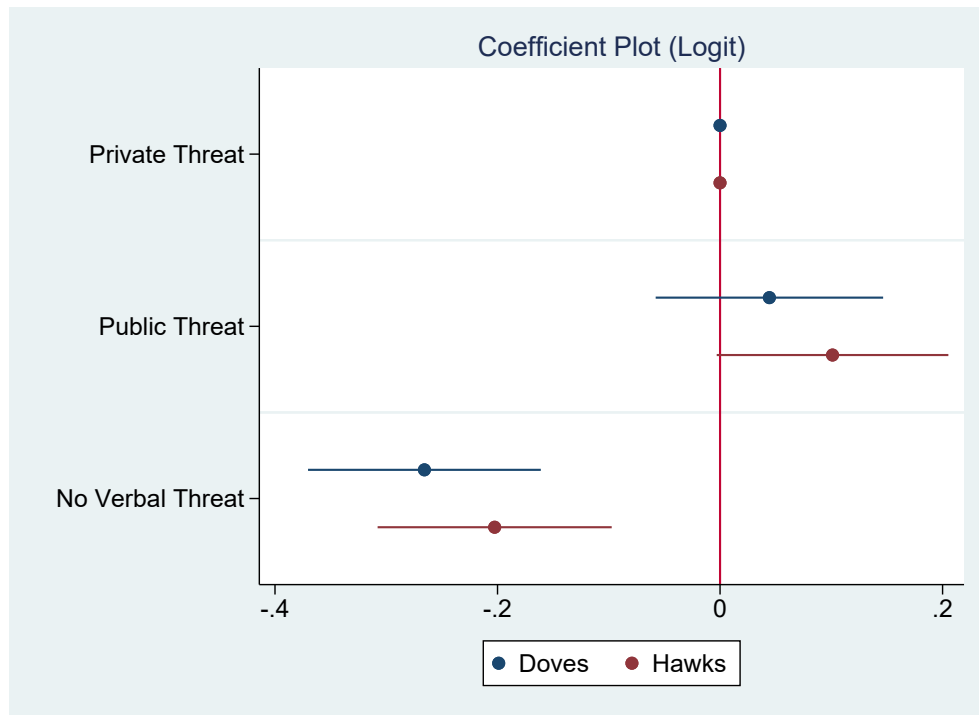


Figure 6: Testing the Conditional Effects of Public Threats (Logit).

(a) Hawkishness.



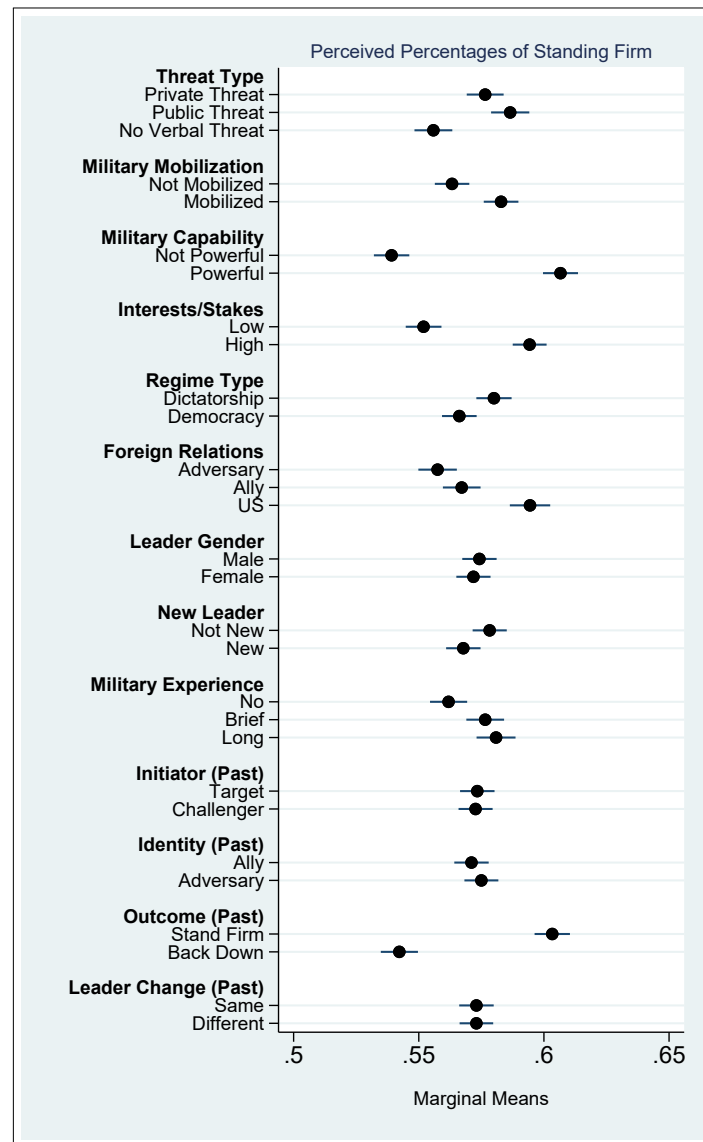
(b) Popularity.



Marginal Means

Leeper, Hobolt and Tilley (2020) propose to use marginal means as an alternative to ACME for a more appropriate reporting and interpretation of the results of a conjoint experiment. Figure 7 demonstrates that the findings reported in the main text are unchanged.

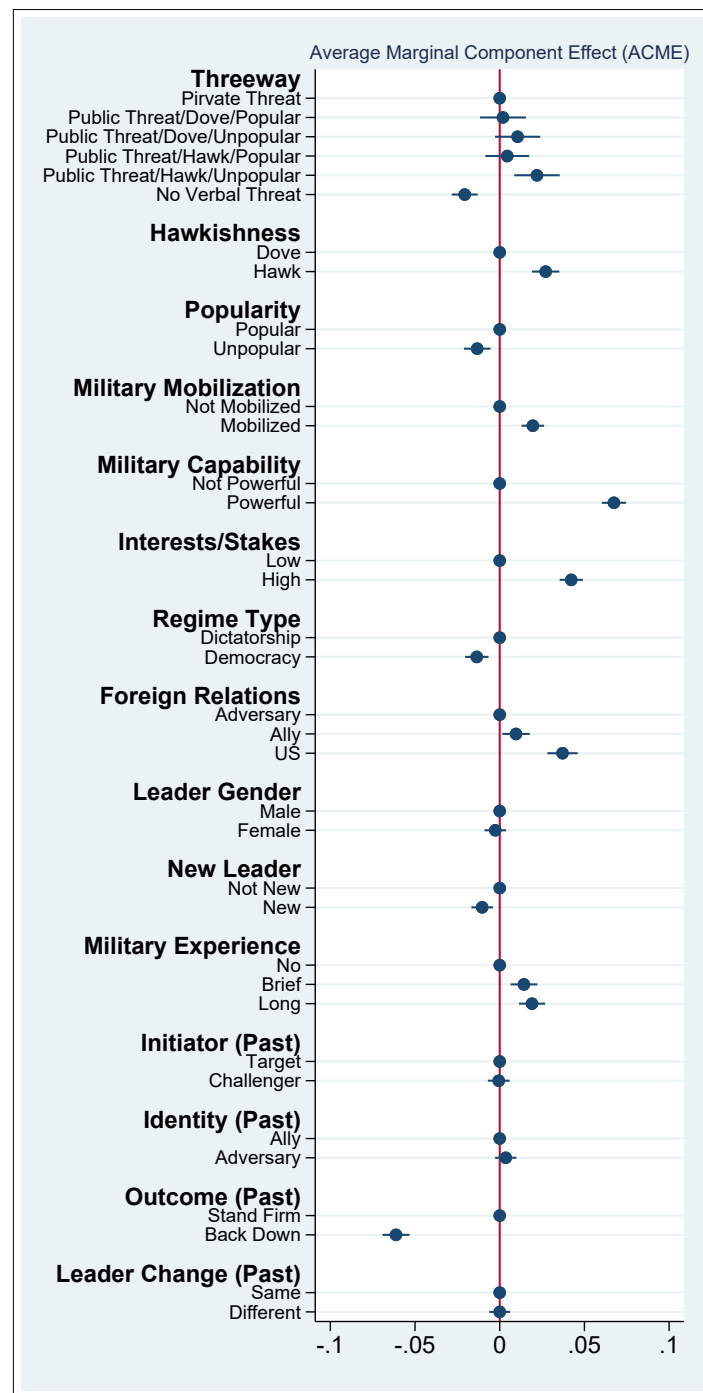
Figure 7: Marginal Means



The Interactive Effect of Public Threat, Hawkishness, and Popularity

Because presumably if their domestic audience is hawkish *and* a leader is unpopular, then it would be much riskier for a leader to make a public threat and back down compared to, for example, if a leader is unpopular but their domestic audience is dovish. To examine this possibility, I construct a new factor variable where 0=private threat, 1=public threat/dovish/popular, 2=public threat/hawkish/popular, 3=private threat/dovish/unpopular, 4=private threat/hawkish/unpopular, and 5=no verbal threat. Figure 8 shows that compared to private threats, public threats are perceived as more credible only when their domestic audiences are hawkish and a leader is unpopular. This result indicates a three-way interactive effect of the publicity of threats, hawkishness, and popularity ($p=0.001$), but because the sample size of each condition gets small, the evidence is only suggestive.

Figure 8: The Interactive Effect of the Public Threat, Hawkishness, and Popularity



The Interactive Effects of Other Factors

It is possible that the efficacy of public/private threats is conditioned by other factors than hawkishness or leader popularity. Here, I investigate five possibilities. The first is the heterogenous effect caused by a country's capability. If it is powerful, subjects may perceive that the country is likely to stand firm no matter what type of threats are issued. On the other hand, public threats add informational value when a country is not powerful. The result shown in Figure 9 is consistent with this view. The interaction term of public threats and capability is statistically significant ($p=0.020$). Public threats enhance the perceived likelihood of standing firm by 1.9% when the country is powerful but only by 0.1% when not powerful.

Second, regime type may condition the effect of public threats. A public threat may put a democratic leader's reputation on the line to a much greater extent than it would an autocratic leader. If this is the case, then that might explain why the substantive size of the difference between public and private threats is relatively small among the full sample, where half of the profiles shown to respondents will involve a dictatorship. However, as Figure 10 shows, there is no meaningful difference in the effect of public threats between democracies and dictatorships. The interaction term of public threats and regime type is not statistically significant ($p=0.377$).

Third, is the difference in credibility between public and private threats greater when the country making the threat has *not* mobilized troops compared to when they have? Since mobilizing troops is likely a very public signal that puts a leader's reputation on the line, it may be the case that also making a public threat does little to add to threat credibility since a leader's reputation was already on the chopping block. In other words, there may be diminishing marginal returns to making public signals. On the other hand, if a leader has not mobilized troops, then the informational value of making a public rather than private threat might be greater. Figure 11 indicates that the opposite thing is the case. The interaction term of public threats and military mobilization is statistically significant ($p=0.005$) but *positive*. When a leader mobilizes troops, public threats increase the perceived percentage of standing firm by 2.1% compared to private threats, but there is no discernible difference between the two types of threats when not mobilized.

Fourth, one of the significant findings in this study is the negative impact of backing down in a previous dispute. If standing firm in the past is such a strong signal that a country is resolved, it may be the case that making a public rather than private threat does not add much to threat credibility. Though public threats seem more effective with the past history of standing firm in Figure 12, the difference between standing firm and backing down is not statistically significant ($p=0.225$).

Lastly, is the difference in credibility between public and private threats greater when the leader is a woman rather than a man? Since the typical assumption is that female leaders are less capable and weaker in foreign affairs, making a private rather than public threat may be perceived as a particularly strong signal about a female leader's relative lack of resolve. However, as Figure 12 shows, the effect of private threats is not conditioned by female leaders ($p=0.495$).

Figure 9: The Interactive Effect of Public Threat and Capability

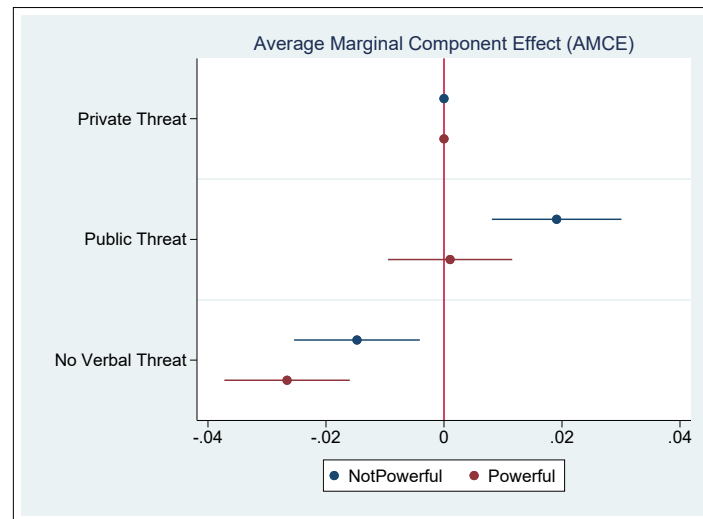


Figure 10: The Interactive Effect of Public Threat and Regime Type

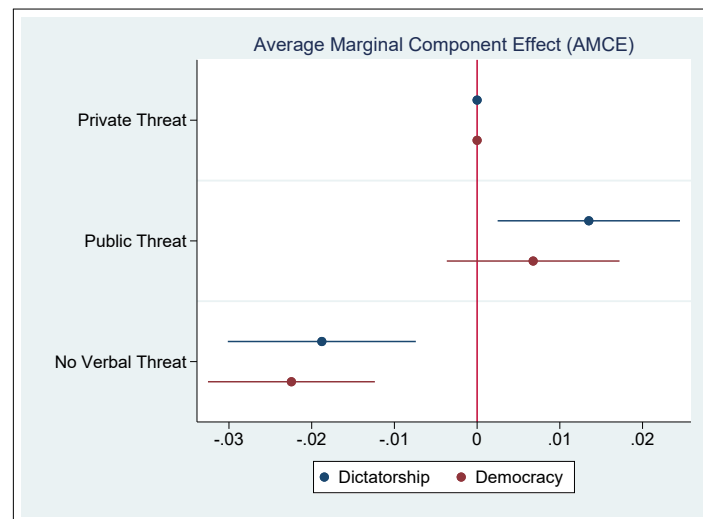


Figure 11: The Interactive Effect of Public Threat and Mobilization

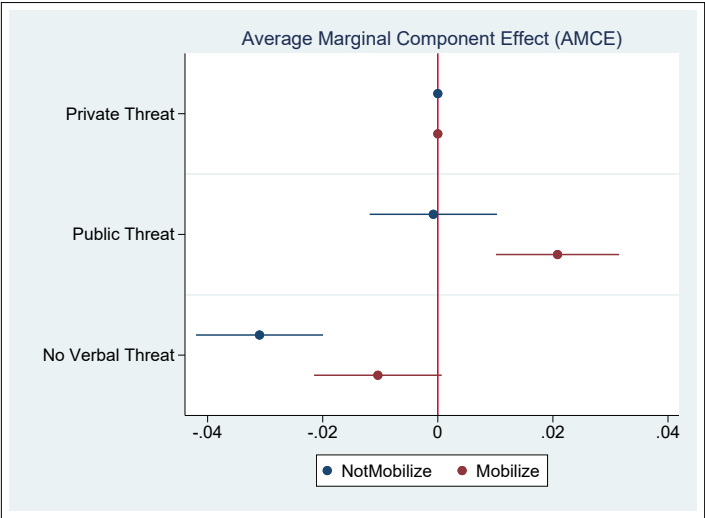


Figure 12: The Interactive Effect of Public Threat and Previous Backing Down

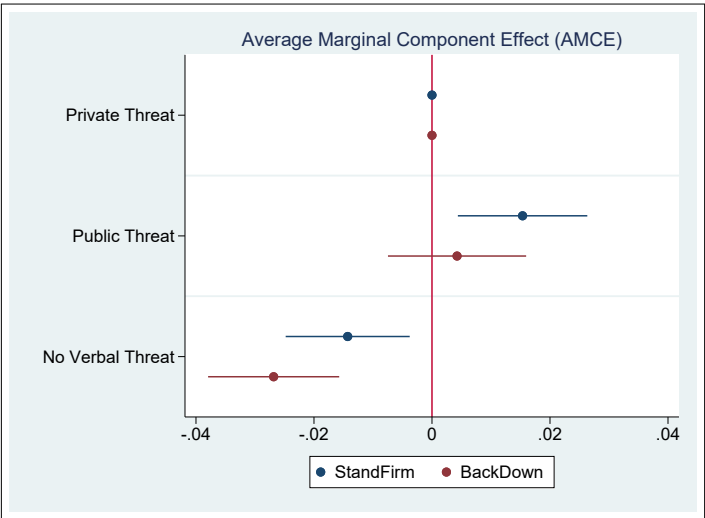
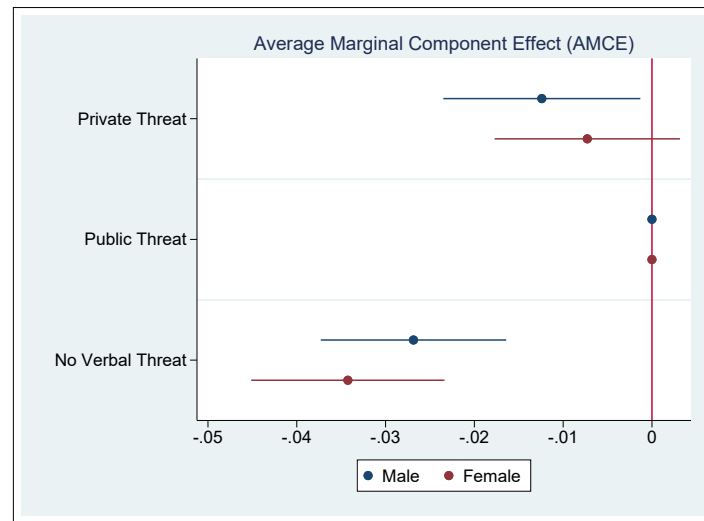


Figure 13: The Interactive Effect of Public Threat and Female Leader



Heterogeneous Effects of Respondent Characteristics

There can be a heterogeneous effect of public threats of demographic/attitudinal variables. I examine whether pre-treatment variables such as gender, age, race, ideology, income, and partisanship generate any heterogeneity. Since age and ideology are ordinal variables, I construct dichotomous variables. For age, the Young variable takes 1 if the respondents' age is 18-24 or 25-34 years, otherwise 0. For ideology, I create a variable named Liberal taking the value of 1 when subjects answer "Liberal or Extremely Liberal" for the ideology question, otherwise 0. As Figures 14 to 19 show, I do not find evidence that these pre-treatment variables condition the effect of public threats.

Figure 14: The Heterogenous Effects of Gender

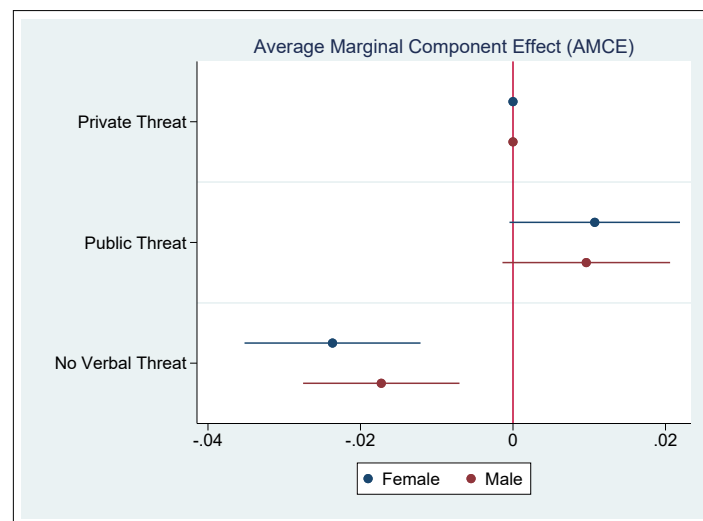


Figure 15: The Heterogenous Effects of Age

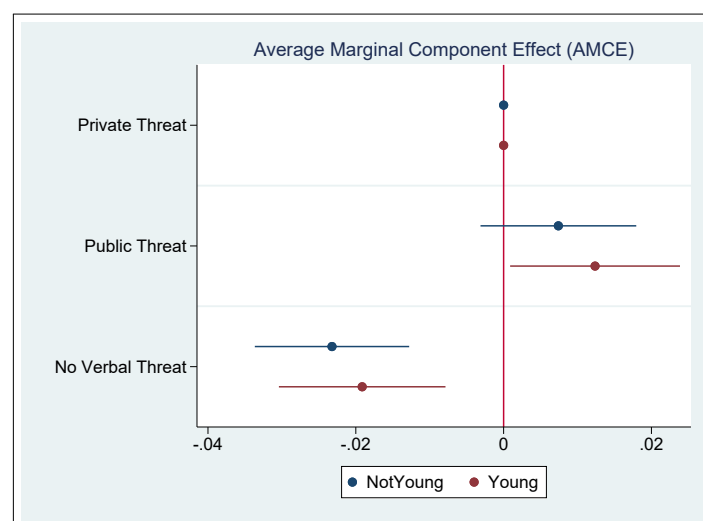


Figure 16: The Heterogenous Effects of Race

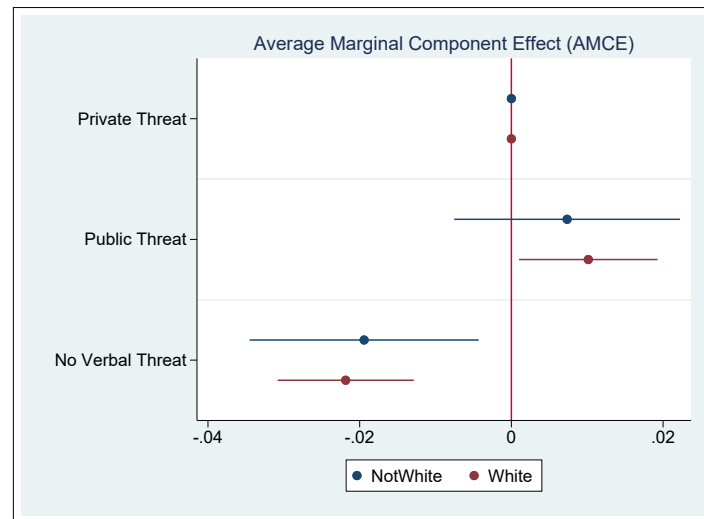


Figure 17: The Heterogenous Effects of Ideology

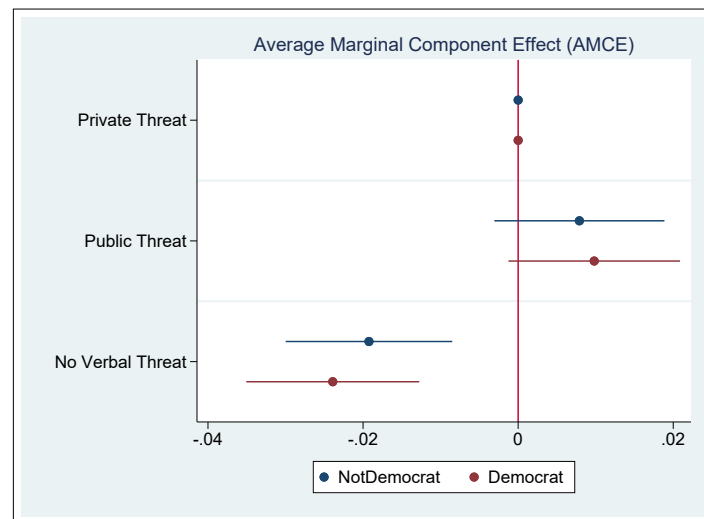


Figure 18: The Heterogenous Effects of Income

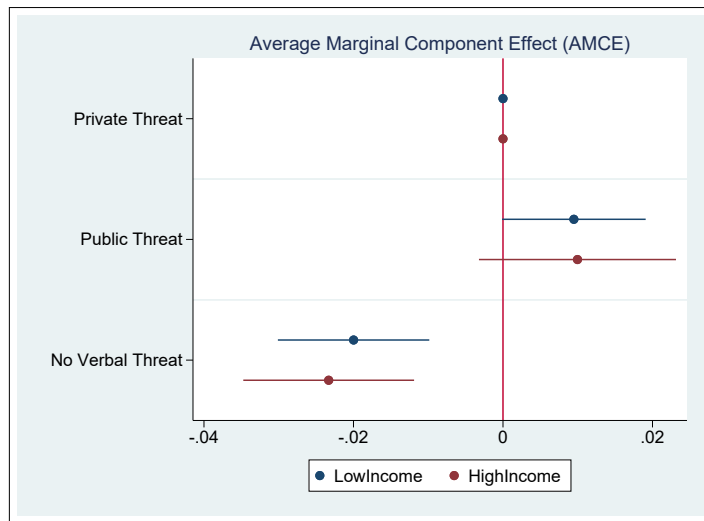
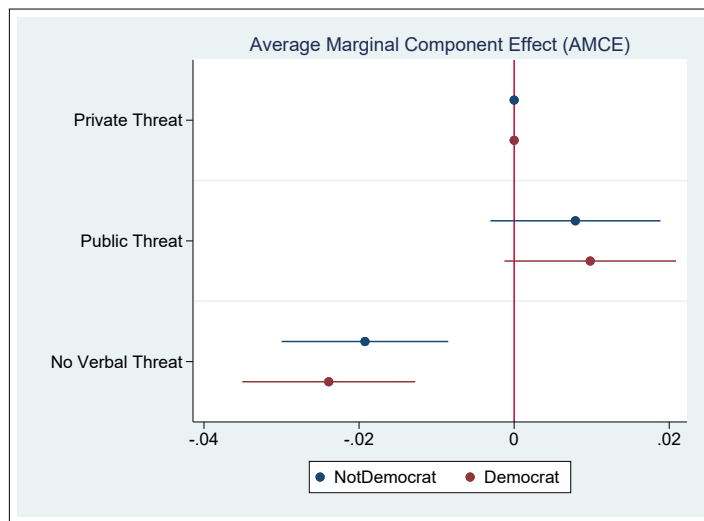


Figure 19: The Heterogenous Effects of Partisanship



Weighted Analyses

While gender is balanced, I recognize that my sample is not representative of the US population, so I also did a weighted analysis. For the weighted analysis, I used the `anesrake` package in R to do the iterative proportional fitting of the data on variables for gender, age, race, and income. The variables other than the type of threats and their interaction with hawkishness and popularity are not shown in the table for the sake of space. The weighted results reported in Table 6 confirm the results from the unweighted data, producing similar conclusions for the effects of public threats and the conditional effects of hawkishness and popularity.

Table 6: Weighted Regression Analysis

| Variable | Model 1 | | Model 2 | | Model 3 | |
|-------------------------|-------------|------------|-------------|------------|-------------|------------|
| | Coefficient | Std. Error | Coefficient | Std. Error | Coefficient | Std. Error |
| Intercept | 0.544 | 0.010 | 0.532 | 0.301 | | |
| Public Threat | 0.011 | 0.004 | | | | |
| Public Threat/Dove | | | 0.008 | 0.005 | | |
| Public Threat/Hawk | | | 0.013 | 0.005 | | |
| Hawk | | | 0.026 | 0.004 | | |
| Public Threat/Popular | | | | | 0.007 | 0.005 |
| Public Threat/Unpopular | | | | | 0.015 | 0.005 |
| Unpopular | | | | | -0.015 | 0.004 |
| No Verbal Threat | -0.018 | 0.004 | -0.018 | 0.004 | -0.018 | 0.004 |
| Male | -0.003 | 0.003 | -0.002 | 0.003 | -0.003 | 0.003 |
| White | -0.011 | 0.004 | -0.011 | 0.004 | -0.011 | 0.004 |
| Age | 0.006 | 0.001 | 0.005 | 0.001 | 0.006 | 0.001 |
| Income | -0.002 | 0.001 | -0.002 | 0.001 | -0.002 | 0.001 |
| Ideology | -0.005 | 0.001 | -0.005 | 0.001 | -0.005 | 0.001 |
| Democrat | 0.009 | 0.004 | 0.009 | 0.004 | 0.009 | 0.004 |
| N | 18064 | | 18064 | | 18064 | |
| R^2 | .06 | | .06 | | .06 | |