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Diversionary Politics and Territorial Disputes: Evidence from Turkish Airspace Incursions

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Abstract: Diversionary theories of interstate conflict suggest that domestic problems push leaders to initiate hostilities against foreign foes in order to garner support. However, the empirical support for this proposition is mixed as critics point out that leaders should not start conflicts which can be extremely costly for them, potentially even removing them from office. We propose that while leaders may not initiate new conflicts, they do tap into existing territorial disputes when facing internal disapproval. That is, they engage in material acts of foreign policy showing domestic audiences that they defend or emphasize their country's claim while being unlikely to result in full-scale armed confrontations. To test this claim, we use monthly data, covering the period 2013-2020, on leader approval and incursions into contested airspace from Turkey's longstanding territorial dispute with Greece. Results from ARMA and Vector Autoregression time-series models offer support for our expectation.

Key Words: Diversionary Conflict; interstate dispute; territorial conflict; Turkey

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1. Introduction

Amid domestic and international questions about China's handling of the Covid-19 outbreak, Chinese forces moved across the line of actual control into Indian-held territory in early summer 2020, escalating tensions in the countries' longstanding border dispute (Singh 2020a). Facing domestic discontent and economic problems, the Argentinian government sent its troops to occupy the British-governed Falklands/Malvinas islands in 1982 (Levy and Vakili 1992) and the South Korean president visited Dokdo/Takeshima, a small group of islets also claimed by Japan, in 2012 after being criticised for plans to sign a military agreement with the former colonizer (Wiegand and Choi 2017:236). One way to understand these actions is to view them as examples of the diversionary use of force. Diversionary theories of interstate conflict suggest that state leaders initiate hostilities against foreign foes to divert domestic audiences' attention from internal political issues and garner support.

Numerous studies thus investigate whether countries are more likely to initiate military disputes when their leaders face domestic problems (DeRouen 1995; Meernik and Waterman 1996; Fordham 1998; Gowa 1998; DeRouen and Peake 2002; Mitchell and Thyne 2010; Nicholls, Huth, and Appel 2010; Tir 2010; Davies 2016), which states and leaders are more likely to do so (Fordham 1998; Mitchell and Prins 2004; Pickering and Kisangani 2005, 2010; Mitchell and Thyne 2010; Keller and Foster 2012; Foster and Keller 2014; Powell 2014; Haynes 2016), and what types of countries are more likely to be targeted by such actions as well as how targets behave in face of this threat (Mitchell and Prins 2004; Fordham 2005; Jung 2014a, 2014b). Additionally, some argue that leaders especially use diversionary acts when threatened by unrest within their ruling coalition and hence design them to garner support not from the whole country but instead within this coalition (Morgan and Bickers 1992; Nicholls et al. 2010; Pickering and Kisangani 2010).

However, this literature is not without detractors who question whether leaders really "send young men and women to their deaths for the most invidious political motives" (Meernik and Waterman 1996:577), point to the potentially steep costs of interstate conflict both for countries and their leaders, and produce empirical evidence against the theory (Lian and Oneal 1993; Gowa 1998; Chiozza and Goemans 2003; Foster and Palmer 2006; Davies 2016). For instance, Kisangani and Pickering (2007) suggest that if anything, states may only seek to divert through low-scale military interventions with humanitarian or economic motives, but not via full-scale conflicts. In other words, these studies argue that the costs of war are so high that even domestically challenged leaders should not initiate military disputes to divert. Recent studies therefore focus instead on diversionary rhetoric, arguing that such speech acts allow leaders to

"activate ingroup identity […] [and] improve their ratings without incurring the substantial risks of militarized interstate disputes" (Carter 2020:165; see also Amarasinghe 2020). However, existing studies of foreign policymaking consider leader rhetoric to be ultimately little more than "cheap talk" and relevant only if it can bring about audience costs, i.e. if leaders incur costs when not following through on their words (Fearon 1994, 1995; Schultz 2001; Tomz 2007). Taken together, there is thus mixed evidence on whether leaders really initiate international military disputes to salvage their domestic political standing, given how costly wars can be for the politicians overseeing them. At the same time, there is also considerable doubt on whether they can simply use diversionary speech acts as a non-costly alternative. But as shown above, there are multiple examples of governments pursuing aggressive foreign policies if they face poor domestic approval. So how does diversion work if conflict initiation carries high costs and aggressive rhetoric may be seen as "cheap talk"?

We suggest that while leaders may not initiate new disputes to divert attention from domestic problems, they do use existing disputes and the nationalist sentiments connected to them to divert the public's eye towards these issues and garner support. We argue that leaders react to internal discontent by engaging in foreign policy acts that are more costly than pure rhetoric, less costly than opening up a new conflict, and shift attention to ongoing disputes on which public opinion is undivided and in line with government actions. Specifically, we suggest that *governments which face low approval ratings intensify incursions into disputed territory.* To rally their citizens' support, leaders can thus tap into nationalist sentiments built up around a territory's contested sovereignty and show that they take real action to defend and exercise their country's territorial claims. Importantly, doing so requires no full-scale militarized confrontation and these territorial incursions are hence often designed to avoid escalating a dispute into a full-scale armed conflict, given the costs an escalation would carry. Accordingly, the Chinese troops crossing into Indian-controlled territory did not use weapons other than batons when coming into contact with Indian forces, thus still following bilateral agreements aimed at halting military escalation, while their Indian foes carried firearms but nonetheless fought with their bare hands (Pandey 2020; Singh 2020b). And while Argentina's occupation of the Falklands/Malvinas resulted in a military conflict, this has often been interpreted as resulting from the Argentinian government underestimating the probability of a British military response (see e.g. Welch 1997). However, events such as the recent lethal Sino-Indian border clashes or the war over the Falklands/Malvinas indicate that even if domestic problems do not push leaders to initiate conflicts but instead only to engage in territorial incursions, such actions can nonetheless escalate a dispute into an armed confrontation and full-scale war.

To test the claim that governments respond to low approval ratings by increasing incursions into contested territory, we focus on the Greek-Turkish dispute regarding the sovereignty over ~900 islets in the Aegean Sea. This is an important case to investigate as it involves two NATO members, has been ongoing since at least the 1920s, previously at the brink of war, and is at risk of escalating again in the wake of gas discoveries in the Eastern Mediterranean. We use monthly data on leader approval and airspace violations to test our expectation. Results from ARMA and Vector Autoregression models support the claim that the Turkish government responds to low leader approval ratings by increasing the number of flights into disputed airspace.

2. Territorial incursions as diversionary action

As discussed above, diversionary theories of conflicts suggest that leaders are more likely to initiate interstate disputes – or use aggressive foreign policy rhetoric (Amarasinghe 2020; Carter 2020) – when they face domestic political problems. We depart from this idea in two ways by 1) focusing on existing territorial conflicts and 2) suggesting that leaders use these conflicts to tap into existing nationalist sentiments and increase domestic support via escalating territorial incursions. Regarding 1), we are hardly the first to connect diversionary politics and territorial conflict. Among these studies, most focus on the onset of militarized interstate disputes or crises and find that domestic political problems make territorial conflict more likely while also increasing the probability of conflict onset when a pair of states are rivals, have an ongoing disagreement about territory, or members of one ethnic group live in both countries (Mitchell and Prins 2004; Mitchell and Thyne 2010; Tir 2010; Jung 2014a; Haynes 2016; Wiegand 2018). Additionally, Wiegand (2018) also suggests that some forms of domestic unrest can also lead states embroiled in territorial conflict to seek peaceful conflict resolution. While these studies hence examine only the onset of militarized conflict or peaceful resolution attempts, they show that a focus on territorial conflicts is warranted given that these disputes "elicit greater emotional investment, mobilization, and societal bonding" among domestic audiences (Tir 2010:413).

In line with this characterization, other studies suggest that domestic audience members greatly value territory they perceive as historically "theirs", oppose compromise or peaceful settlements involving such areas even if this means incurring substantial economic costs, and instead support more aggressive foreign policies regarding the issue (Manekin, Grossman, and Mitts 2019; Fang and Li 2020). Importantly, Fang and Li's findings also indicate that these audience members oppose simply shelving a dispute and support costly actions such as military

activities (broadly defined) or economic sanctions, but not cheap talk in the form of increased publicity (2020:358). However, the problem with these actions is of course that they present potentially high costs to the leaders that instigate them and particularly military conflict or an economic downturn due to economic sanctions can severely affect leaders' chances for re-election and ability to stay in office (e.g. de Mesquita and Siverson 1995; Duch and Stevenson 2008). We thus argue that leaders instead pursue acts which are in line with public demands for strong and material actions but also less costly than war or sanctions. Existing studies suggest that citizens respond strongly to these "smaller acts" as comparatively minor incidents such as the South Korean president's visit to Dokdo/Takeshima or the country dispatching gunboats to the islets had a strong positive effect on leader approval in South Korea (Hwang, Cho, and Wiegand 2018) while the former event as well as Chinese activists' landing on islands contested between China and Japan negatively affected Japanese citizens' views of both countries (Igarashi 2018). These results indicate that domestic audiences reward material foreign policy acts which defend or emphasize their country's claim to disputed territory, even if those acts involve less costs and risks than a full-scale military confrontation.

In turn, we argue that when facing low approval ratings, leaders increasingly resort to such lower-cost material acts of foreign policy against territorial rivals. Anecdotally, both the Korean president's visit to Dokdo/Takeshima and the Chinese incursions into Indian-held territory are in line with this expectation as both were material acts signalling a claim to territory while neither was designed to trigger a military conflict. And if such acts are reported upon in the domestic news media, we suggest that even airspace infringements can be used as diversionary tools, given that "incursions into national airspace also act to violate the sovereignty of that [target] state" and thus allow "powerful states to project their power and protect their interests at a distance" (Williams 2010:52). We show in the next section that airspace incursions are a relevant topic in the Turkish news media and hence expect that *lower leader approval ratings lead to a higher number of airspace infringements*.

3. The Greek-Turkish territorial dispute

Disagreement regarding the delimitation of territorial waters and the sovereignty rights over several islands is at the core of the territorial dispute between Greece and Turkey (Güner 2004; Bayar and Kotelis 2014). Whereas Greece is a signatory to the United Nations Convention on the Law of the Sea, which allows states to extend their territorial waters out to twelve miles, Turkey has not signed the agreement and maintains that territorial waters only reach out six miles from land (Güner 2004). Turkish vessels and airplanes thus regularly enter areas which

Turkey understands to be internationally accessible or under Turkish sovereignty whereas Greece views them as part of its territory. Particularly airspace incursions have been a common feature of the dispute as Greek authorities reported 3,317 such incidents[1] in 2017 alone (Ifantis 2018:98). Greece responds by deploying aircraft of their own to intercept but not attack the Turkish planes as well as diplomatically by using its EU membership to "involve other countries into the game and expand its front against Turkey" and thus internationalize the dispute (Soldatos 2016; Ifantis 2018; Aslan 2020).

The dispute remains a salient issue for both countries (Gürsoy 2018; Ifantis 2018) and, by continuation, in their domestic public opinion and the news media. The media has played a particularly active role in the escalation of the 1996 Imia/Kardak crisis (Bayar and Kotelis 2014) while domestic electoral pressures have pushed leaders on both sides to adopt an aggressive foreign policy (Güner 2004; You 2016; Karakasis 2019). Turkish citizens also generally place an emphasis on their country's foreign policy and regional standing while many of them view Greece as a threat and oppose a rapprochement (Aydın 2018:368; Aydın, Çelikpala, Guvenc, Hawks, Zaim, and Tigli 2020:66, 69). Consequently, Turkish news media frequently reports on airspace incursions, ensuring that the public learns about them[2]. Particularly the ruling Justice and Develoment Party (AKP) under president Erdoğan has resorted to an increasingly aggressive foreign policy[3] and revisionist rhetoric on the dispute (see e.g. Ifantis 2018; Karakasis 2019). This appears to be motivated in part by the discovery of Gas reserves in the eastern Mediterranean but also domestic pressures as the party is increasingly challenged electorally and had to accept the ultranationalist Nationalist Movement Party (MHP) as junior coalition partner to stay in power (Ulgen 2018). Given the AKP's domestic position, diversionary behaviour by the Turkish leadership thus appears likely. The salience of the territorial dispute makes Greece a particularly attractive target, especially as the MHP, one key audience for diversionary actions (Morgan and Bickers 1992; Nicholls et al. 2010), holds possibly even more aggressive policy views on this issue than the AKP (see e.g. Middle East Monitor 2020). Additionally, the Turkish government is fighting a bloody intervention in Syria and also facing resurgent PKK activity while public opinion on its' handling of these conflicts is mixed at best (Aydın et al. 2020). Incursions into Greek airspace thus offer the Turkish government a comparatively cheap way to shore up its support which is

[1] There are also reports on some airspace incursions by the Greek air force. Unfortunately, we have been unable to locate systematic data on these and hence cannot include them in our analysis.

[2] Examples include (Çamlıbel 2009; T24 2013; Ahval 2020; Daily Sabah 2020).

[3] This appears to mirror its voters' preferences as AKP supporters are e.g. more likely to support Turkish interventions in Syria (Getmansky, Sınmazdemir, and Zeitzoff 2019).

not only likely to result in less own casualties than intensifying military actions against the PKK or in Syria but may also focus attention away from these more contentious conflicts. Greece is also democratic and home to a small Turkish-speaking ethnic minority (Ifantis 2018:94–95), additionally making it an attractive target for Turkish diversionary action (Jung 2014b; Haynes 2016).

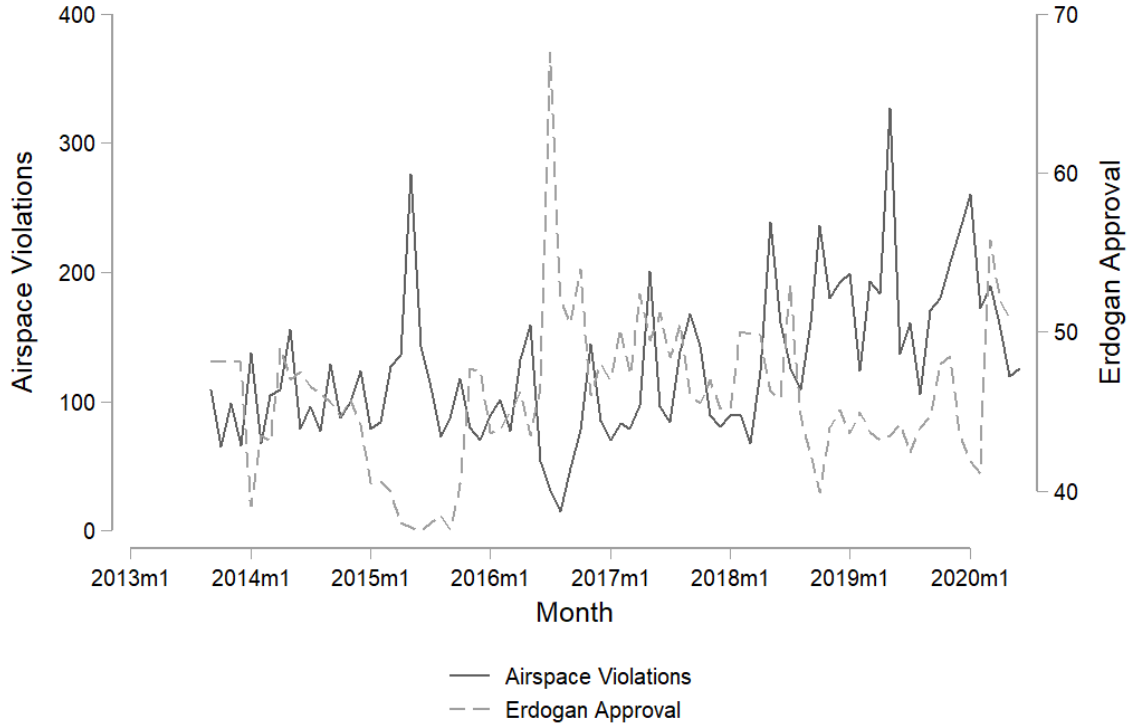
However, several countries face similar situations, e.g. Azerbaijan, China, Croatia, Slovenia, and South Korea. The results of the following analysis, while restricted to Turkish behaviour towards Greece, should thus also inform our knowledge on diversionary acts within other territorial conflicts.

4. Research design

To examine our hypothesis, we employ data on Turkish incursions into Greek-claimed airspace and the public's approval of the longstanding main figure in Turkey's government, Recep Tayyip Erdoğan. The Airspace contestations data was originally collected by the Greek military and we obtain a monthly time-series covering the period January 2009-June 2020 from the website of the Hellenic National Defence General Staff (2020). The approval data is collected from survey reports by the Turkish public opinion company Metropoll (2020) who began to collect approval ratings on a (quasi-)monthly basis in autumn 2013[4]. By focusing on the period September 2013-June 2020, we can thus study variations in airspace violations and Recep Tayyip Erdoğan's approval ratings at a fine-grained, monthly temporal level. As mentioned above, this period has experienced renewed tensions between Greece and Turkey and this shows in airspace violations as their yearly numbers in 2017-19 were the highest of the period 1984-2019 (see Soldatos 2016). Figure one graphs the monthly development of airspace infringements and Erdoğan's approval ratings. The pattern exhibited there is in line with the negative relationship between approval ratings and airspace violations hypothesized above.

[4] No Metropoll surveys exist for October-November 2013, July-September 2014, and July 2015. We linearly interpolate these gaps.

Figure 1: Approval Ratings and Airspace Incursions



In a next step, we test our expectation more formally by employing time-series regression models with ARMA disturbances (see e.g. Box-Steffensmeier, Freeman, Hitt, and Pevehouse 2014). For this, we log-transform the monthly counts of airspace infringements. Augmented Dickey-Fuller and Phillips-Perron tests reject the null hypothesis that a unit root is present in the monthly time-series. To select appropriate autoregressive (AR) and moving-averages (MA) terms, we use partial autocorrelation plots as well as a comparison of the quality of different models which vary on their ARMA structure. Based on this process we ultimately choose those models which minimize both Akaike's and Schwarz's Information Criteria. This process leads us to select models which only include an AR(1) term. Given that there is clear evidence for seasonality in the monthly time-series as the Month of May exhibits particularly high airspace infringement numbers[5], we also include a dummy indicating May in all models.

In addition to these terms which account for temporal dynamics as well as our independent variable of theoretical interest, we include a number of additional variables in our models to control for potential confounders that may correlate with both the approval ratings of the Turkish leader and the number of Turkish excursions into Greek airspace. First, we include term-fixed effects to account for idiosyncratic differences between the different governments headed by Recep Tayyip Erdoğan; this also controls for factors such as the most recent

[5] Time-series diagnostics are presented in the appendix.

government including the ultranationalist MHP. Next, approval ratings may be particularly salient if there are upcoming elections; at the same time, elections may also serve as an independent motivation to increase the number of airspace incursions. We thus control for whether there are any national Turkish elections in the month following an observation[6]. As discussed above, the gas dispute in the eastern Mediterranean has renewed tensions between Greece and Turkey and because this dispute may also affect Recep Tayyip Erdoğan's approval ratings, we include a binary item which is one for the period after the dispute's onset in October 2018. Similarly, we control for the coup attempt in July 2016 as possibly the most important political event in Turkey's recent history. Given that some previous studies of diversionary conflict have emphasized the effect of economic variables instead of leader approval itself (DeRouen 1995; e.g. Carter 2020), we further control for Turkish citizen's perceptions of the country's economy. For this, we again resort to Metropoll (2020) survey data and use a variable that measures the share of respondents who believe that the economy will improve in the upcoming year. To measure real instead of perceived economic conditions, we further include Turkey's yearly GDP per capita, this variable is obtained from the World Bank (2020) and log-transformed. Finally, we control for both Greek and Turkish yearly defence spending as arms racing may lead to dispute intensification but may also affect leader approval due to social spending being reduced, these variables are sourced from SIPRI (2020) and also log-transformed. Table one presents descriptive statistics for all variables detailed here.

Table 1: Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
ln Airspace Violations	82	4.744	.479	2.77	5.793
Approval_{m-1}	81	45.899	4.708	37.5	67.6
$\text{Election Turkey}_{m+1}$	82	.061	.241	0	1
Coup Attempt	82	.012	.110	0	1
Gas Dispute	82	.244	.432	0	1
$\text{Econ. perceptions}_{m-1}$	65	33.538	5.859	23.5	45.9
$\text{ln MilEx Turkey}_{y-1}$	82	9.569	.204	9.355	9.943
$\text{ln MilEx Greece}_{y-1}$	82	8.571	.059	8.493	8.658
$\text{ln GDP pc Turkey}_{y-1}$	76	9.877	.065	9.736	9.960

[6] This dummy takes the value one if there are national elections or a referendum in the next month.

5. Results

We present our empirical results in table two. Model one includes only $approval_{m-1}$, the independent variable of main theoretical interest, and term-fixed effects in addition to the AR(1) and *may* terms while model two adds the dummy variables indicating pre-election months and the gas dispute. Model three then adds the variable measuring Turkish citizens' perceptions of the economy while model four instead includes GDP per capita as well as Greek and Turkish defence spending. $Econ.\ perceptions_{m-1}$ is only available from 2015 onwards, leading to reduced temporal coverage of the timeseries and hence our sample size. We thus omit this variable from the most complete specification, model four.

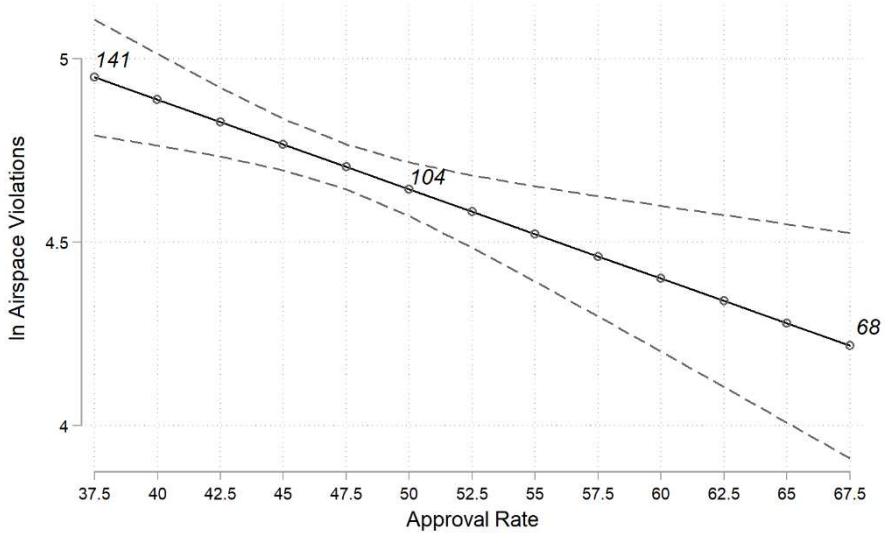
Table 2: Approval Ratings and Airspace Violations

Dependent Variable: ln Airspace Violations	(1)	(2)	(3)	(4)
$Approval_{m-1}$	-0.0242***	-0.0283***	-0.0330***	-0.0319***
	(0.00754)	(0.00679)	(0.00805)	(0.00737)
Election $Turkey_{m+1}$		0.144	0.158	0.129
		(0.270)	(0.269)	(0.285)
Coup Attempt		-0.610**	-0.537*	-0.639
		(0.308)	(0.286)	(0.391)
Gas Dispute		0.0779	0.129	-0.153
		(0.243)	(0.211)	(0.313)
Econ. $perceptions_{m-1}$			0.0162	
			(0.0118)	
ln MilEx $Turkey_{y-1}$				1.264
				(1.112)
ln MilEx $Greece_{y-1}$				-1.042
				(2.448)
ln GDP pc $Turkey_{y-1}$				-0.103
				(2.142)
May	0.581***	0.560***	0.555***	0.558***
	(0.115)	(0.125)	(0.121)	(0.140)
AR(1)	0.392***	0.279**	0.405***	0.238
	(0.133)	(0.140)	(0.157)	(0.157)
Constant	5.552***	5.753***	6.001***	3.961
	(0.370)	(0.333)	(0.536)	(21.11)
σ	0.307***	0.299***	0.295***	0.292***
	(0.0278)	(0.0252)	(0.0304)	(0.0247)
Observations	81	81	65	81
Log Likelihood	-19.32	-17.06	-12.88	-15.22
Term FE	Yes	Yes	Yes	Yes
Start	2013m10	2013m10	2015m2	2013m10
End	2020m6	2020m6	2020m6	2020m6

Note: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

The results in models one-four are in line with our hypothesis as $approval_{m-1}$ exhibits a coefficient that is consistently negative and statistically distinguishable from zero at the 99%-level. Since the dependent variable in these models is the log-transformed number of airspace violations while the unit of $approval_{m-1}$ is percent, we can interpret its coefficient as the percent change in airspace incursions for a one-percent increase in approval. Based on model four, a one-percent increase in public approval for Recep Tayyip Erdogan leads to a 0.0319% decrease in airspace violations. In contrast, the control variables do not assert a statically significant effect on airspace incursions. To examine the substantive effect of approval ratings on airspace violations in more detail, we present a plot of the predicted number of Turkish incursions into Greek-claimed airspace over the range observed approval values in figure two. The figure underlines that approval rate has a substantive, if moderate, effect on airspace violations as it shows that model four predicts 141 such incursions if Erdogan's approval was 37.5% in the previous month whereas this number decreases to almost 100 if 50% of respondents approved of his leadership.

Figure 2: The Effect of Approval Ratings on Airspace Incursions

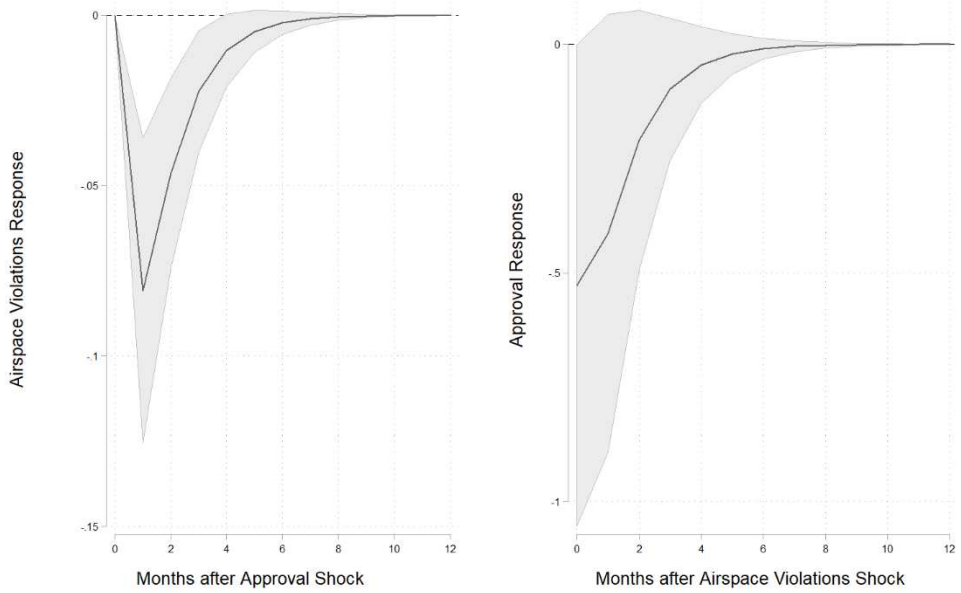


Note: Predicted Value of ln Airspace Violations across different values of Approval Rate, based on model four. Italicized numbers indicate corresponding non-logged number of violations. Dotted lines indicate 90%-Confidence Intervals.

Next, we test the robustness of our results to several alternative specifications. Most importantly, we follow earlier studies (e.g. DeRouen and Peake 2002; Pickering and Kisangani 2010) by using Vector Autoregression (VAR) to model the effect of approval ratings on airspace violations and vice versa as an endogenous relationship. This allows us to examine whether approval drives airspace violations and/or the other way around. For identification

purposes, it is necessary to restrict the contemporaneous effect of one of the endogenous variables to zero (Enders 2015). Approval data take time to collect with the Metropoll survey data only being collected towards the end of the month, meaning that they only become available after some time has passed. In contrast, reporting on airspace violations is more imminent as they are mentioned in the news and on social media. We thus allow airspace violations to have a contemporaneous effect on approval ratings while only past approval values can affect airspace violations[7]. Following standard practice, we present Impulse Response Function plots in figure three, showing how one endogenous variable is affected by a shock in the other endogenous variable, as well as results from Granger Causality test to interpret the VAR results instead of relying on regression coefficients.

Figure 3: The Effect of Approval Ratings on Airspace Incursions – VAR results



Note: Impulse Reaction Functions. Grey areas indicate 90%-Confidence Intervals.

In line with our expectations, figure three indicates that positive shocks to approval ratings result in less airspace violations. In contrast, positive shocks to the number airspace incursions are found to have no statistically significant effect on leader approval. Accordingly, Granger causality tests suggest that approval ratings drive airspace violations but not the other way around. These results provide additional support to our expectation that low approval ratings lead to diversionary action. However, they also raise the question why this is the case if such diversionary acts do not result in higher approval. One possible answer is that these diversionary actions do not target a wider domestic audience but instead key players within the

[7] The VAR models include the control variables from model four and, based on information criteria, a lag order of one.

governmental coalition (Morgan and Bickers 1992; Nicholls et al. 2010). Turkish territorial incursions may thus be designed to garner support from ultranationalist elements within the AKP and MHP by showing that the government is not afraid to confront Greece over the contested territory, even if such a policy may not find support, and hence boost approval, among more centrist or opposition voters. We present further specifications examining the robustness of our results in the appendix but the result that lower approval ratings increase airspace incursions persists.

6. Conclusion

Diversionary foreign policies have been the topic of a large literature which, however, reports mixed findings on whether domestic problems result in interstate conflict. This paper adds to this debate by arguing that while leaders may be hesitant to start an outright war to boost their approval, they will pursue smaller-scale aggressive actions within existing disputes to gain domestic support. Results from tests using monthly data on leader approval and airspace violations in the territorial dispute between Greece and Turkey offer support for this argument: low approval ratings for Turkey's leader result in more Turkish incursions into contested airspace.

This result most directly contributes to the literature on diversionary conflict. First, we introduce Turkey as a new case for quantitatively testing the theory whereas most applications focus on the United States. Second, we add to a nascent literature studying diversionary acts below the crisis or militarized dispute level. Third and most importantly, we show that when facing domestic disapproval, leaders resort to material acts of aggressive foreign policy which are less costly than a new conflict but also more than cheap talk to increase support. This is an important result as such aggressive acts, the intensification of an existing territorial dispute in the case of Turkey, can lead to actual armed conflict further down the line. Our research thus also provides insights on the escalatory processes leading up to armed confrontations between neighbours such as those on the Indian-Chinese border in early summer 2020.

This study suggests several avenues of further research. First, future research should investigate whether territorial incursions or provocations are used in a similar, diversionary manner in cases other than Turkey. Second, they should examine whether domestic problems generally give rise to aggressive foreign policy behaviours below armed conflict or whether this requires the previous existence of a dispute whose salience leaders can tap into. And third, our research produced the surprising finding that airspace incursions do not actually succeed in boosting support from the Turkish public. As such, future research should further examine to what extent

such diversionary policies target the general public or more specific, strategically important audiences such as coalition partners.

References

AHVAL. (2020) Turkish Violations of Greek Airspace, Territorial Waters Surged in 2019. *Ahval*. Available at: https://ahvalnews.com/turkey-greece/turkish-violations-greek-airspace-territorial-waters-surged-2019?language_content_entity=en. (Accessed September 14, 2020).

AMARASINGHE, ASHANI. (2020) Diverting Domestic Turmoil. *SSRN Electronic Journal*. Available at: https://www.ssrn.com/abstract=3565824. (Accessed June 22, 2020).

ASLAN, DILARA. (2020) Regional Concerns, Playing EU against Turkey behind Greece's Growing Hostile Approach. *Daily Sabah*. Available at: https://www.dailysabah.com/politics/news-analysis/regional-concerns-playing-eu-against-turkey-behind-greeces-growing-hostile-approach. (Accessed July 6, 2020).

AYDIN, MUSTAFA. (2018) Foreign Policy, 1923–2018. In *The Routledge Handbook of Turkish Politics*, edited by Alpaslan Özerdem and Matthew Whiting. London and New York: Routledge.

AYDIN, MUSTAFA, MITAT ÇELIKPALA, MURAT GUVENC, BANU BAYBARS HAWKS, OSMAN ZAIM, and SABRI DENIZ TIGLI. (2020) *Quantitative Research Report on Social-Political Trends in Turkey – 2019*. Istanbul: Kadir Has University & Akademetre.

BAYAR, MURAT, and ANDREAS KOTELIS. (2014) Democratic Peace or Hegemonic Stability? The Imia/Kardak Case. *Turkish Studies* 15: 242–257.

BOX-STEFFENSMEIER, JANET M., JOHN R. FREEMAN, MATTHEW P. HITT, and JON C. W. PEVEHOUSE. (2014) *Time Series Analysis for the Social Sciences*. Cambridge: Cambridge University Press. Available at: http://ebooks.cambridge.org/ref/id/CBO9781139025287. (Accessed June 25, 2020).

ÇAMLIBEL, CANSU. (2009) Taking the Fight out of Dogfights. *Hürriyet*. Available at: https://www.hurriyet.com.tr/gundem/taking-the-fight-out-of-dogfights-10912002. (Accessed June 25, 2020).

CARTER, ERIN BAGGOTT. (2020) Diversionary Cheap Talk: Economic Conditions and US Foreign Policy Rhetoric, 1945-2010. *International Interactions* 46: 163–198.

CHIOZZA, GIACOMO, and H. E. GOEMANS. (2003) Peace through Insecurity: Tenure and International Conflict. *Journal of Conflict Resolution* 47: 443–467.

DAILY SABAH. (2020) Turkish Air Forces Intercept 6 F-16 Greek Fighters over Mediterranean Sea. *Daily Sabah*. Available at: https://www.dailysabah.com/politics/turkish-air-forces-intercept-6-f-16-greek-fighters-over-mediterranean-sea/news?gallery_image=undefined. (Accessed September 14, 2020).

DAVIES, GRAEME A. M. (2016) Policy Selection in the Face of Political Instability: Do States Divert, Repress, or Make Concessions? *Journal of Conflict Resolution* 60: 118–142.

DEROUEN, KARL, and JEFFREY PEAKE. (2002) The Dynamics of Diversion: The Domestic Implications of Presidential Use of Force. *International Interactions* 28: 191–211.

DEROUEN, KARL R. (1995) The Indirect Link: Politics, the Economy, and the Use of Force. *Journal of Conflict Resolution* 39: 671–695.

DUCH, RAYMOND M., and RANDOLPH T. STEVENSON. (2008) *The Economic Vote*. Cambridge: Cambridge University Press.

ENDERS, WALTER. (2015) *Applied Econometric Time Series*. Fourth edition. Hoboken, NJ: Wiley.

FANG, SONGYING, and XIAOJUN LI. (2020) Historical Ownership and Territorial Disputes. *Journal of Politics* 82: 345–360.

FEARON, JAMES D. (1994) Domestic Political Audiences and the Escalation of International Disputes. *American Political Science Review* 88: 577–592.

FEARON, JAMES D. (1995) Rationalist Explanations for War. *International Organization* 49: 379–414.

FORDHAM, BENJAMIN. (1998) Partisanship, Macroeconomic Policy, and U.S. Uses of Force, 1949-1994. *Journal of Conflict Resolution* 42: 418–439.

FORDHAM, BENJAMIN O. (2005) Strategic Conflict Avoidance and the Diversionary Use of Force. *Journal of Politics* 67: 132–153.

FOSTER, DENNIS M., and JONATHAN W. KELLER. (2014) Leaders' Cognitive Complexity, Distrust, and the Diversionary Use of Force. *Foreign Policy Analysis* 10: 205–223.

FOSTER, DENNIS M., and GLENN PALMER. (2006) Presidents, Public Opinion, and Diversionary Behavior: The Role of Partisan Support Reconsidered. *Foreign Policy Analysis* 2: 269–288.

GETMANSKY, ANNA, TOLGA SINMAZDEMIR, and THOMAS ZEITZOFF. (2019) The Allure of Distant War Drums: Refugees, Geography, and Foreign Policy Preferences in Turkey. *Political Geography* 74: 102036.

GOWA, JOANNE. (1998) Politics at the Water's Edge: Parties, Voters, and the Use of Force Abroad. *International Organization* 52: 307–324.

GÜNER, SERDAR Ş. (2004) Aegean Territorial Waters Conflict: An Evolutionary Narrative. *Conflict Management and Peace Science* 21: 297–312.

GÜRSOY, YAPRAK. (2018) Turkey. In *The Handbook of European Defence Policies and Armed Forces*, edited by Hugo Meijer and Marco Wyss. Oxford: Oxford University Press.

HAYNES, KYLE. (2016) Diversity and Diversion: How Ethnic Composition Affects Diversionary Conflict. *International Studies Quarterly* 60: 258–271.

HELLENIC NATIONAL DEFENCE GENERAL STAFF. (2020) Violations of National Airspace – Infringements of Air Traffic Regulations ICAO. *Hellenic National Defence General Staff*. Available at: https://geetha.mil.gr/en/violations/violations-of-national-airspace-infringements-of-air-traffic-regulations-icao/. (Accessed June 22, 2020).

HWANG, WONJAE, WONBIN CHO, and KRISTA WIEGAND. (2018) Do Korean-Japanese Historical Disputes Generate Rally Effects? *The Journal of Asian Studies* 77: 693–711.

IFANTIS, KOSTAS. (2018) Greece's Strategy and Perceptions towards Turkey: The End of Consensus and the Return of History? *Uluslararası İlişkiler* 15: 93–106.

IGARASHI, AKIRA. (2018) Territorial Conflicts and Japanese Attitudes Towards East Asian Countries: Natural Experiments with Foreigners' Landings on Disputed Islands. *Political Psychology* 39: 977–992.

JUNG, SUNG CHUL. (2014a) Foreign Targets and Diversionary Conflict. *International Studies Quarterly* 58: 566–578.

JUNG, SUNG CHUL. (2014b) Searching for Non-Aggressive Targets: Which States Attract Diversionary Actions? *Journal of Peace Research* 51: 755–766.

KARAKASIS, VASILEIOS P. (2019) The 2017 Incidents in the Aegean and Turkish Foreign Policy: Using Q-Methodology to Examine Greek Viewpoints. *Southeast European and Black Sea Studies* 19: 451–472.

KELLER, JONATHAN W., and DENNIS M. FOSTER. (2012) Presidential Leadership Style and the Political Use of Force. *Political Psychology* 33: 581–598.

KISANGANI, EMIZET F., and JEFFREY PICKERING. (2007) Diverting with Benevolent Military Force: Reducing Risks and Rising above Strategic Behavior. *International Studies Quarterly* 51: 277–299.

LEVY, JACK, and LILY I. VAKILI. (1992) Diversionary Action by Authoritarian Regimes: Argentina in the Falklands/Malvinas Case. In *The Internationalization of Communal Strife*, edited by Manus I. Midlarsky. London: Routledge.

LIAN, BRADLEY, and JOHN R. ONEAL. (1993) Presidents, the Use of Military Force, and Public Opinion. *Journal of Conflict Resolution* 37: 277–300.

MANEKIN, DEVORAH, GUY GROSSMAN, and TAMAR MITTS. (2019) Contested Ground: Disentangling Material and Symbolic Attachment to Disputed Territory. *Political Science Research and Methods* 7: 679–697.

MEERNIK, JAMES, and PETER WATERMAN. (1996) The Myth of the Diversionary Use of Force by American Presidents. *Political Research Quarterly* 49: 573–590.

DE MESQUITA, BRUCE BUENO, and RANDOLPH M. SIVERSON. (1995) War and the Survival of Political Leaders: A Comparative Study of Regime Types and Political Accountability. *American Political Science Review* 89: 841–855.

METROPOLL. (2020) Türkiye'nin Nabzı - Mayıs 2020. Available at: http://www.metropoll.com.tr/arastirmalar/turkiyenin-nabzi-17/1853. (Accessed June 20, 2020).

MIDDLE EAST MONITOR. (2020) Turkey: War with Greece "Just a Matter of Time." *Middle East Monitor*. Available at: https://www.middleeastmonitor.com/20200905-turkey-war-with-greece-just-a-matter-of-time/. (Accessed September 14, 2020).

MITCHELL, SARA MCLAUGHLIN, and BRANDON C. PRINS. (2004) Rivalry and Diversionary Uses of Force. *Journal of Conflict Resolution* 48: 937–961.

MITCHELL, SARA MCLAUGHLIN, and CLAYTON L. THYNE. (2010) Contentious Issues as Opportunities for Diversionary Behavior. *Conflict Management and Peace Science* 27: 461–485.

MORGAN, T. CLIFTON, and KENNETH N. BICKERS. (1992) Domestic Discontent and the External Use of Force. *Journal of Conflict Resolution* 36: 25–52.

NICHOLLS, NATSUKO H., PAUL K. HUTH, and BENJAMIN J. APPEL. (2010) When Is Domestic Political Unrest Related to International Conflict? Diversionary Theory and Japanese Foreign Policy, 1890-1941. *International Studies Quarterly* 54: 915–937.

PANDEY, GEETA. (2020) India and China Exchange Protests over Clashes. *BBC News*. Available at: https://www.bbc.com/news/world-asia-53073338. (Accessed June 22, 2020).

PICKERING, JEFFREY, and EMIZET F. KISANGANI. (2005) Democracy and Diversionary Military Intervention: Reassessing Regime Type and the Diversionary Hypothesis. *International Studies Quarterly* 49: 23–44.

PICKERING, JEFFREY, and EMIZET F. KISANGANI. (2010) Diversionary Despots? Comparing Autocracies' Propensities to Use and to Benefit from Military Force. *American Journal of Political Science* 54: 477–493.

POWELL, JONATHAN M. (2014) Regime Vulnerability and the Diversionary Threat of Force. *Journal of Conflict Resolution* 58: 169–196.

SCHULTZ, KENNETH A. (2001) Looking for Audience Costs. *Journal of Conflict Resolution* 45: 32–60.

SINGH, SUSHANT. (2020a) Experts Explain: What Triggered China's Line of Actual Control (LAC) Moves? *The Indian Express*. Available at: https://indianexpress.com/article/explained/china-india-line-of-actual-control-ladakh-6427647/. (Accessed June 22, 2020).

SINGH, SUSHANT. (2020b) Explained: If Soldiers on LAC Were Carrying Arms, Why Did They Not Open Fire? *The Indian Express*. Available at: https://indianexpress.com/article/explained/explained-if-soldiers-on-lac-were-carrying-arms-why-did-they-not-open-fire-6467324/. (Accessed June 22, 2020).

SIPRI. (2020) SIPRI Military Expenditure Database. *Stockholm nternational Peace Research Institute*. Available at: https://www.sipri.org/databases/milex. (Accessed July 2, 2020).

SOLDATOS, SPYRIDON A. (2016) 7 *Turkish Air Force Violations of Greek National Airspace in the Aegean*. Nicosia: Cyprus Center for European and International Affairs.

T24. (2013) Yunan uçağından hava sahası ihlali. *T24*. Available at: https://t24.com.tr/haber/yunan-ucagindan-hava-sahasi-ihlali,233400. (Accessed September 14, 2020).

TIR, JAROSLAV. (2010) Territorial Diversion: Diversionary Theory of War and Territorial Conflict. *Journal of Politics* 72: 413–425.

TOMZ, MICHAEL. (2007) Domestic Audience Costs in International Relations: An Experimental Approach. *International Organization* 61: 821–840.

ULGEN, SINAN. (2018) Get Ready for a More Aggressive Turkey. *Foreign Policy*. Available at: https://foreignpolicy.com/2018/07/02/turkeys-foreign-policy-is-about-to-take-a-turn-to-the-right/. (Accessed June 25, 2020).

WELCH, DAVID A. (1997) Remember the Falklands? Missed Lessons of a Misunderstood War. *International Journal* 52: 483–507.

WIEGAND, KRISTA E. (2018) Territorial Dispute Strategies as Diversionary Behavior. *Journal of Territorial and Maritime Studies* 5: 42–63.

WIEGAND, KRISTA E., and AJIN CHOI. (2017) Nationalism, Public Opinion, and Dispute Resolution: The Dokdo/Takeshima Dispute. *Journal of Asian Pacific Communication* 27: 232–245.

WILLIAMS, ALISON J. (2010) A Crisis in Aerial Sovereignty? Considering the Implications of Recent Military Violations of National Airspace. *Area* 42: 51–59.

WORLD BANK. (2020) GDP per Capita (Constant LCU) - Turkey. *World Bank*. Available at: https://data.worldbank.org/indicator/NY.GDP.PCAP.KN?locations=TR. (Accessed July 2, 2020).

YOU, CHAEKWANG. (2016) Explaining the Maintenance Process of International Rivalries. *Korean Journal of International Studies* 14: 131.

Diversionary Politics and Territorial Disputes: Evidence from Turkish Airspace Incursions

In this appendix, we provide further descriptive statistics, supplementary tests, and a series of additional analyses that complement and further support the main article's findings. These include the following sections:

A.1. Diagnostics for the ARMA models.
A.2. Diagnostics for the VAR models.
A.3. Results table for the main VAR specification.
A.4. Additional ARMA specifications: No data interpolation
A.5. Additional ARMA specifications: Testing the coup attempt as a structural break
A.6. Additional ARMA specifications: Controlling for further political events.
A.7. Autoregressive Poisson specifications
A.8. Additional VAR specifications: Lag order four and alternative temporal ordering

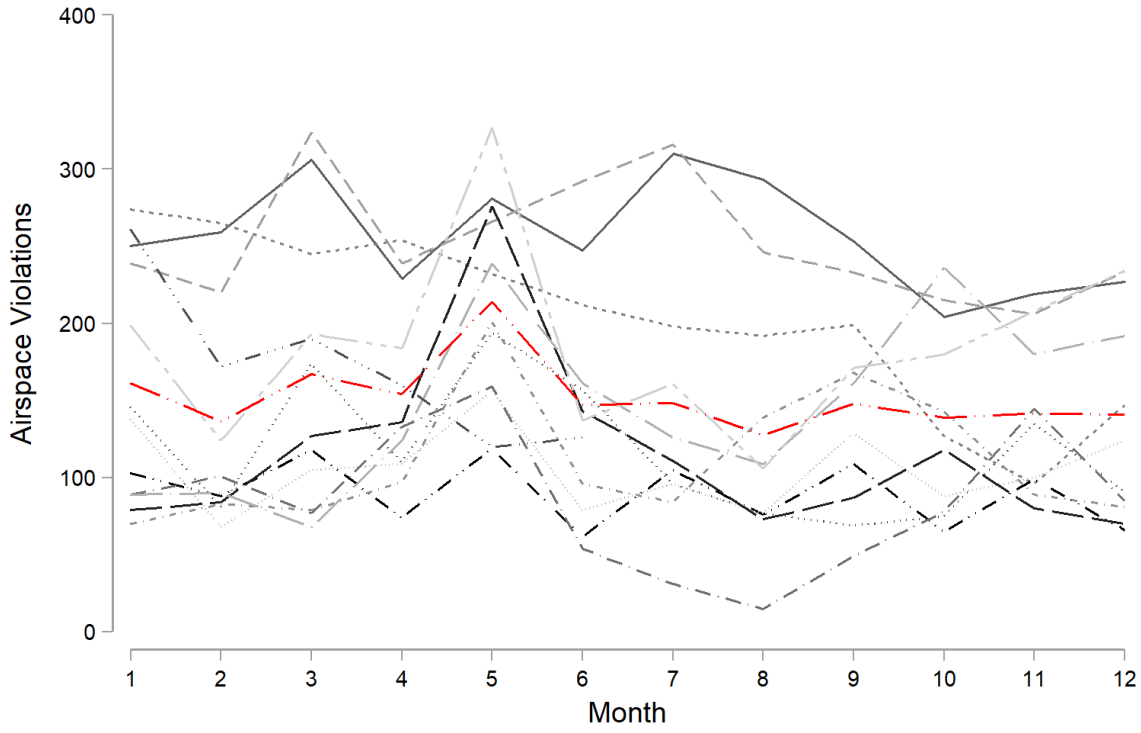
A.1 Diagnostics for the ARMA models

In specifying the ARMA models, we checked for the stationarity of and seasonality within the Airspace Violations timer-series. We used augmented Dickey-Fuller (ADF) and Phillips-Perron tests for the former which both test the null hypothesis that a time-series contains a unit root, i.e. is nonstationary. Table A1 presents the results of these tests for *ln Airspace Violations*; both tests reject this Null on the 99.9% significance level, indicating that the timeseries is stationary. Figure A1 overlays plots the number of airspace violations across months while overlaying data from different years. The grey lines thus represent incursions in different years while the red line presents the average number of violations per month. Both the grey and red line suggest that the month of May experiences a much higher number of airspace incursions which leads us to account for this apparent seasonality by including a May dummy variable in all models.

Table A.1. Unit root tests for *ln Airspace Violations*

	Z(t)	**p-value**
ADF test	-4.507	0.0002
PP test	-4.414	0.0003

Figure A.1. ln Airspace Violations across months



Note: Grey lines indicate values from different years; red line represents average monthly values.

To select appropriate AR- and MA-terms for our models, we compared models with different ARMA structures based on their Akaike (AIC) and Schwarz's Bayesian Information Criteria (BIC), ultimately choosing the model which minimized both values, hence maximizing model fit. The models used for this procedure otherwise include the variables from main model two.

Table A.2. Model fit for different ARMA structures

	AIC	**BIC**
AR(1)	*54.12115*	*78.06564*
AR(2)	55.84641	82.18535
AR(3)	56.06396	84.79735
MA(1)	55.13786	79.08235
MA(2)	55.07386	81.4128
MA(3)	57.05011	85.7835
AR(1), MA(1)	55.99504	82.33398
AR(2), MA(1)	56.84663	85.58002
AR(3), MA(1)	58.05262	89.18046
AR(1), MA(2)	55.48407	84.21746
AR(1), MA(3)	57.18993	88.31777
AR(2), MA(2)	56.13227	84.86566
AR(2), MA(3)	57.48278	91.00507
AR(3), MA(2)	55.0861	86.21394
AR(3), MA(3)	61.24847	97.1652

Note: Italics indicate chosen model with lowest AIC and BIC.

This process lead us to arrive at including only an AR(1)-term in the ARMA models, table A2 presents the AIC and BIC values for all possible combinations involving AR(1)- to AR(3)- and MA(1)- to MA(3)-terms. To further ensure that our models are stationarity and hence interpretable, we check their eigenvalue stability condition. Table three indicates that the eigenvalues of the AR parameter lies within the unit circle in all four models, suggesting that stability condition is fulfilled and hence nonstationarity not an issue.

Table A.3. Eigenvalues of the AR parameters

	Model 1	**Model 2**	**Model 3**	**Model 3**
Eigenvalue	.391578	.279214	.405109	.2376535

A.2 Diagnostics for the VAR models

For the Vector Autoregression model, we conduct additional diagnostic tests. First, we need to ensure that the approval timeseries is also stationary and hence also use ADF and PP tests to check for a unit root in it. The results of these tests are presented in table A4 and reject the null hypothesis that the approval timeseries is nonstationary on the 95% significance level.

Table A.4. Unit root tests for *ln Airspace Violations*

	Z(t)	**p-value**
ADF test	-3.326	0.0138
PP test	-2.979	0.0369

As above, we use information criteria to assess the model fit of different VAR lag orders to ultimately select one which maximizes the fit. Table A5 thus presents the values these selection criteria obtain for VARs with lag orders ranging from one to four. In addition to AIC and BIC, it also reports the Hannan-Quinn Information Criterion (HQIC). The results indicate that BIC and HQIC favor one lag while, based on the AIC, we should choose four lags. We choose the former option for the main specification but also report the results of the alternative, four-lag specification below. We also check the stability condition for VAR; results are presented in table A6 and indicate that this is fulfilled again.

Table A.5. Model fit for different VAR lag orders

	AIC	**BIC**	**HQIC**
Lag order: 0	6.27879	6.52229	6.88757
Lag order: 1	5.96118	*6.25339*	*6.69172*
Lag order: 2	6.02075	6.36166	6.87305
Lag order: 3	5.93952	6.32913	6.91357
Lag order: 4	*5.92015*	6.35846	7.01595

Table A.6. Eigenvalues of the VAR

	1	**2**
Eigenvalue	.4594297	.113369

A.3 Results table for the main VAR specification

In the article, we only presented Impulse Reaction Function Plots and referred to Granger Causality tests to interpret the VAR. We hence here report both the full coefficient plot and the associated Granger Causality test results for this model in table A7. These results indicate that Granger Causality tests reject the null hypothesis that approval Granger-causes airspace violations but fail to do so for the opposite relationship.

Table A.7. VAR Coefficient table and Granger Causality Tests

Equation	(1) ln Airspace Violations	(1) Approval
ln Airspace Violations		1.811*
		(1.090)
ln Airspace Violations$_{m-1}$	0.190*	-0.725
	(0.0971)	(0.963)
Approval$_{m-1}$	-0.0284***	0.383***
	(0.00931)	(0.0923)
Election Turkey$_{m+1}$	0.154	-1.099
	(0.146)	(1.444)
Coup Attempt	-0.912***	21.24***
	(0.303)	(3.007)
Gas Dispute	-0.170	-0.855
	(0.206)	(2.042)
ln MilEx Turkey$_{y-1}$	0.757	1.501
	(0.802)	(7.951)
ln MilEx Greece$_{y-1}$	0.0229	31.61*
	(1.799)	(17.84)
ln GDP pc Turkey$_{y-1}$	-0.103	2.229
	(1.566)	(15.53)
May	0.556***	-0.647
	(0.124)	(1.231)
Constant	-1.366	-273.4*
	(15.06)	(149.4)
Granger Causality Wald test		
χ^2	9.326	.56694
Prob > χ^2	0.002	.451
Observations	80	
Term FE	Yes	
Log Likelihood	-211.9	
Start	2013m10	
End	2020m5	

Note: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

A.4 Additional ARMA specifications: No data interpolation

As discussed in the article, our approval data has three gaps in October-November 2013, July-September 2014, and July 2015 as Metropoll did not conduct surveys for these months. In the main specifications, we linearly interpolate these missing values and now show that the results remain unchanged if only the nonmissing observations are used. Table A8 thus reproduces the

results table from the paper but drops interpolated observations. The substantive result that leader approval decreases airspace incursions is unchanged.

Table A.8. ARMA results without interpolation

Dependent Variable: ln Airspace Violations	(2)	(3)	(4)	(5)
$Approval_{m-1}$	-0.0241***	-0.0287***	-0.0340***	-0.0329***
	(0.00785)	(0.00755)	(0.00806)	(0.00784)
Election $Turkey_{m+1}$		0.131	0.155	0.117
		(0.274)	(0.269)	(0.305)
Coup Attempt		-0.562**	-0.558*	-0.607*
		(0.286)	(0.294)	(0.363)
Gas Dispute		0.0821	0.122	-0.136
		(0.243)	(0.211)	(0.333)
Econ. $perceptions_{m-1}$			0.0151	
			(0.0120)	
ln MilEx $Turkey_{y-1}$				1.198
				(1.265)
ln MilEx $Greece_{y-1}$				-1.215
				(3.786)
ln GDP pc $Turkey_{y-1}$				0.607
				(3.220)
May	0.576***	0.556***	0.555***	0.556***
	(0.114)	(0.125)	(0.121)	(0.140)
AR(1)	0.420***	0.316**	0.389**	0.267
	(0.139)	(0.153)	(0.156)	(0.170)
Constant	5.621***	5.813***	6.085***	-0.823
	(0.393)	(0.372)	(0.562)	(26.54)
σ	0.306***	0.298***	0.294***	0.291***
	(0.0295)	(0.0266)	(0.0302)	(0.0257)
Observations	75	75	64	75
Term FE	Yes	Yes	Yes	Yes
Log Likelihood	-17.87	-15.91	-12.60	-13.99
Start	2013m10	2013m10	2015m2	2013m10
End	2020m6	2020m6	2020m6	2020m6

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

A.5 Additional ARMA specifications: Testing the coup attempt as a structural break

In the main specifications we already control for the incidence of the coup attempt in July 2016. However, this does not account for the event being a structural break point, i.e. the period after the coup attempt potentially being substantively different from that before. This is possible as Turkish civil-military relations underwent a change in the aftermath of the attempted coup d'état and the air force was significantly purged (Gürsoy 2018). In table A9, we thus include a dummy that takes the value 1 for the entire post-coup attempt period starting in July 2016 and also interact that dummy with $Approval_{m-1}$ to allow its slope to differ between across periods. The results of these specifications again indicate that lower approval leads to more airspace violations. However, the results in model 7 also suggest that this is only the case in the period

after coup attempt in July 2016. Notably, this period has seen a worsening of president Erdoğan's relations with the military, increased governmental repression against the political opposition as well as votes for the ruling AKP decreasing. In other words, the Turkish leadership may have become more sensitive to its approval ratings after the coup attempt as its position has become more precarious.

Table A.9. ARMA results with structural break

Dependent Variable: ln Airspace Violations	(6)	(7)
$Approval_{m-1}$	-0.0224***	0.0182
	(0.00746)	(0.0228)
Post-coup attempt	-0.184	2.008**
	(0.176)	(1.018)
$Approval_{m-1}$ x Post-coup attempt		-0.0492**
		(0.0228)
Election $Turkey_{m+1}$	0.135	0.179
	(0.292)	(0.222)
Gas Dispute	-0.152	-0.149
	(0.353)	(0.364)
ln MilEx $Turkey_{y-1}$	1.547	1.843
	(1.329)	(1.358)
ln MilEx $Greece_{y-1}$	-1.430	-2.886
	(2.879)	(2.902)
ln GDP pc $Turkey_{y-1}$	0.703	0.833
	(2.700)	(2.891)
May	0.525***	0.491***
	(0.133)	(0.116)
AR(1)	0.387***	0.419***
	(0.143)	(0.149)
Constant	-3.734	2.761
	(30.78)	(32.52)
σ	0.297***	0.288***
	(0.0276)	(0.0313)
Observations	81	81
Term FE	Yes	Yes
Log Likelihood	-16.59	-14.29
Start	2013m10	2013m10
End	2020m6	2020m6

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

A.6 Additional ARMA specifications: Controlling for further political events

The coup attempt and the gas dispute in the eastern Mediterranean are two key events in Turkey's recent political history. However, they are hardly the only political (types of) events that may affect both leader approval as well as airspace incursions. For instance, airspace violations may also be higher during NATO summits, when the Turkish governments internal challengers such as the PKK have carried out attacks or before Greek national elections. At the same time, they may be lower during diplomatic visits from one of the conflict parties to the

other, during Turkish military operations in Syria or when tension between the countries has momentarily decreased as a part of their "earthquake diplomacy" (Ganapati, Kelman, and Koukis 2010). Some scholars also suggest that the departure of Turkey's longstanding foreign minister, Ahmet Davutoğlu, in May 2016 marked a critical point for the country's foreign policymaking (Ataç 2019). And finally, as neighboring countries, Greece's and Turkey's economies are also interrelated to a large degree and one may expect that airspace violations decrease when trade is high.

Table A.10. ARMA results with additional political controls I

Dependent Variable: ln Airspace Violations	(8)	(9)	(10)	(11)
$Approval_{m-1}$	-0.0316***	-0.0318***	-0.0325***	-0.0293***
	(0.00742)	(0.00737)	(0.00727)	(0.00925)
Election $Turkey_{m+1}$	0.129	0.127	0.129	0.125
	(0.284)	(0.287)	(0.274)	(0.306)
Coup Attempt	-0.632*	-0.639	-0.650*	-0.573
	(0.382)	(0.391)	(0.392)	(0.378)
Gas Dispute	-0.148	-0.153	-0.155	-0.175
	(0.316)	(0.313)	(0.309)	(0.308)
ln MilEx $Turkey_{y-1}$	1.284	1.286	1.260	1.122
	(1.138)	(1.122)	(1.086)	(1.212)
ln MilEx $Greece_{y-1}$	-1.121	-1.071	-0.777	-0.136
	(2.532)	(2.479)	(2.388)	(3.041)
ln GDP pc $Turkey_{y-1}$	-0.146	-0.127	-0.238	0.844
	(2.190)	(2.151)	(2.084)	(2.821)
Election $Greece_{m+1}$	-0.0365			
	(0.134)			
Deadly earthquake		-0.0121		
		(0.215)		
Diplomatic visit			-0.264	
			(0.484)	
Post-Davutoğlu				-0.173
				(0.295)
May	0.555***	0.559***	0.556***	0.564***
	(0.143)	(0.141)	(0.139)	(0.142)
AR(1)	0.243	0.238	0.234	0.256
	(0.159)	(0.157)	(0.157)	(0.173)
Constant	4.860	4.233	3.096	-11.82
	(22.45)	(21.45)	(20.68)	(36.29)
σ	0.292***	0.292***	0.289***	0.291***
	(0.0247)	(0.0248)	(0.0238)	(0.0248)
Observations	81	81	81	81
Term FE	Yes	Yes	Yes	Yes
Log Likelihood	-15.18	-15.21	-14.37	-14.88
Start	2013m10	2013m10	2013m10	2013m10
End	2020m6	2020m6	2020m6	2020m6

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table A.11. ARMA results with additional political controls II

Dependent Variable: ln Airspace Violations	(12)	(13)	(14)	(15)	(16)
$Approval_{m-1}$	-0.0340***	-0.0268***	-0.0361***	-0.0366***	-0.0306***
	(0.00707)	(0.00952)	(0.0106)	(0.0110)	(0.00757)
Election $Turkey_{m+1}$	0.144	0.160	0.0254	0.0497	0.138
	(0.263)	(0.355)	(0.397)	(0.463)	(0.297)
Coup Attempt	-0.922*	-0.703*	-0.534	-0.541	-0.716
	(0.512)	(0.386)	(0.425)	(0.392)	(0.549)
Gas Dispute	-0.0970	-0.0978	-0.123	-0.138	0.0102
	(0.293)	(0.335)	(0.411)	(0.410)	(0.349)
ln MilEx $Turkey_{y-1}$	1.193	0.982	-0.390	-0.107	0.602
	(1.065)	(1.239)	(3.305)	(3.467)	(1.167)
ln MilEx $Greece_{y-1}$	-0.915	-0.683	3.962	3.656	-0.163
	(2.429)	(2.400)	(11.59)	(12.25)	(2.173)
ln GDP pc $Turkey_{y-1}$	0.279	0.890	2.428	3.128	0.844
	(2.219)	(2.291)	(6.503)	(7.059)	(2.416)
Nato summit	0.239				
	(0.215)				
Syria operation		-0.242			
		(0.154)			
Domestic $Battles_{m-1}$			-0.00105		
			(0.00244)		
Domestic $Battles_{m-1}$				0.000101	
(Kurdish opponent)				(0.00297)	
ln Trade $Volume_{y-1}$					0.401*
					(0.211)
May	0.528***	0.516***	0.553***	0.535***	0.612***
	(0.155)	(0.141)	(0.163)	(0.160)	(0.152)
AR(1)	0.208	0.250	0.306	0.339	0.179
	(0.155)	(0.168)	(0.222)	(0.235)	(0.163)
Constant	-0.0847	-6.400	-47.93	-55.01	-14.64
	(22.44)	(21.78)	(114.1)	(119.6)	(23.91)
σ	0.288***	0.285***	0.307***	0.308***	0.282***
	(0.0241)	(0.0238)	(0.0371)	(0.0369)	(0.0256)
Observations	81	81	53	53	80
Term FE	Yes	Yes	Yes	Yes	Yes
Log Likelihood	-14.02	-13.25	-12.62	-12.78	-12.35
Start	2013m10	2013m10	2016m2	2016m2	2013m10
End	2020m6	2020m6	2020m6	2020m6	2020m5

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

We thus present specifications that control for all these possible potential political confounders in tables A10 and A11. All additional controls here are self-coded except for the two domestic battles variables and ln Trade $Volume_{y-1}$; the former are taken from ACLED (Raleigh, Linke, Hegre, and Karlsen 2010) while the latter is constructed using monthly import and export values from the UN Comtrade Database (2020). However, our substantive result remains

unaltered as leader approval has a negative effect on airspace incursions in all these specifications.

A.7 Autoregressive Poisson specifications

In the main specifications, we log-transform our dependent variable, *airspace violations*, to analyze it via ARMA and VAR models. Here, we ensure that our results do not depend on this transformation and according model choice. We thus re-estimate the four main specifications from the article but leave the dependent variable untransformed and use autoregressive Poisson models (Brandt and Williams 2001). The results of these models are presented in table A12 and indicate that our substantive results do not depend on transforming the dependent variable or on model choice.

Table A.12. Autoregressive Poisson results

Dependent Variable: Airspace Violations	(17)	(18)	(19)	(20)
$Approval_{m1}$	-0.0181**	-0.0177**	-0.0235***	-0.0250***
	(0.00763)	(0.00750)	(0.00853)	(0.00909)
Election $Turkey_{m+1}$		0.211	0.242	0.221
		(0.134)	(0.158)	(0.138)
Coup Attempt		-1.069*	-1.079*	-1.109*
		(0.591)	(0.618)	(0.599)
Gas Dispute		0.0533	0.0890	-0.0166
		(0.142)	(0.150)	(0.180)
Econ. $perceptions_{m-1}$			0.0154	
			(0.00995)	
ln MilEx $Turkey_{y-1}$				-0.349
				(0.731)
ln MilEx $Greece_{y-1}$				2.309
				(1.969)
ln GDP pc $Turkey_{y-1}$				0.335
				(1.595)
May	0.560***	0.512***	0.503***	0.521***
	(0.0963)	(0.103)	(0.117)	(0.104)
AR(1)	0.271**	0.192	0.257*	0.159
	(0.117)	(0.120)	(0.133)	(0.124)
Constant	5.352***	5.321***	5.120***	-14.01
	(0.365)	(0.361)	(0.462)	(15.17)
Observations	80	80	64	80
R-squared	0.604	0.620	0.629	0.629
Term FE	Yes	Yes	Yes	Yes
Start	2013m11	2013m11	2015m3	2013m11
End	2020m6	2020m6	2020m6	2020m6

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

A.8 Additional VAR specifications: Lag order four and alternative temporal ordering

As discussed above, two of the three Information Criteria we used for selecting the lag order in the VAR models favor including a one-period lag, we do this in the VAR reported in the article and presented above. However, the AIC instead favors including lags up to order four.

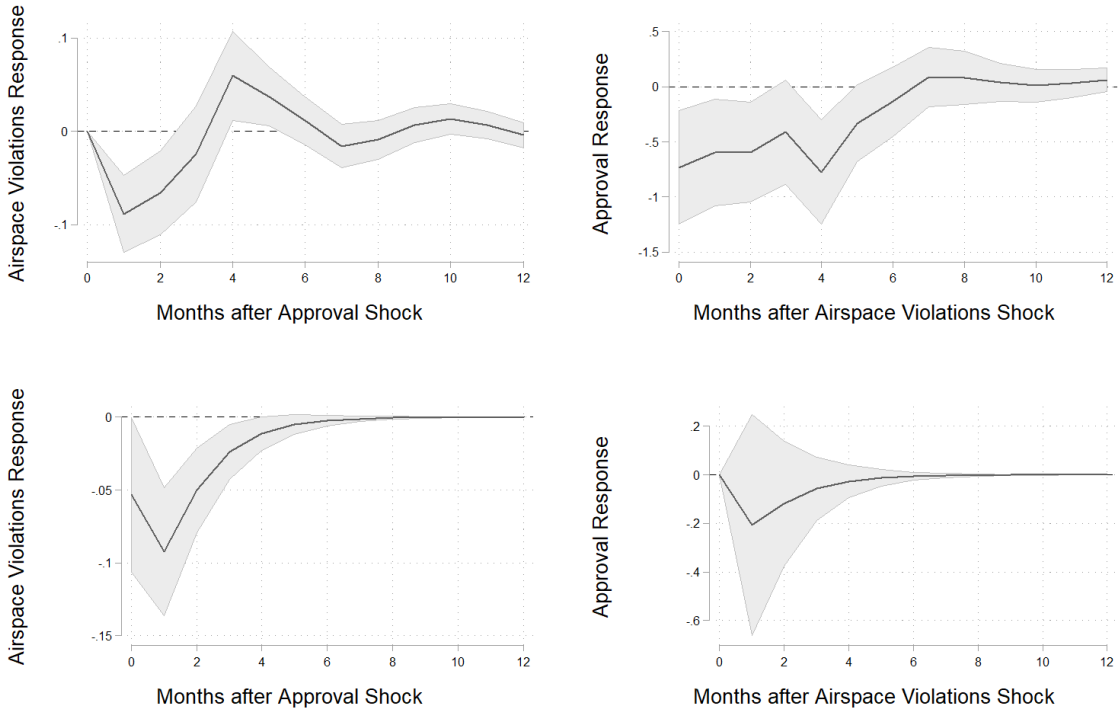
Table A.13. VAR Coefficient table and Granger Causality Tests

Equation	(21) ln Airspace Violations	(22) Approval	(23) ln Airspace Violations	(24) Approval
ln Airspace Violations		2.779**		
		(1.160)		
ln Airspace Violations$_{m-1}$	0.170	-1.355	0.190*	-0.725
	(0.104)	(1.094)	(0.0971)	(0.963)
ln Airspace Violations$_{m-2}$	-0.0219	-1.113		
	(0.102)	(1.072)		
ln Airspace Violations$_{m-3}$	-0.256**	-0.486		
	(0.105)	(1.108)		
ln Airspace Violations$_{m-4}$	0.0533	-2.614**		
	(0.0998)	(1.053)		
Approval			0.0184*	
			(0.0111)	
Approval$_{m-1}$	-0.0330***	0.326***	-0.0284***	0.383***
	(0.00894)	(0.0943)	(0.00931)	(0.0923)
Approval$_{m-2}$	-0.00821	0.0184		
	(0.00936)	(0.0988)		
Approval$_{m-3}$	0.00265	-0.0581		
	(0.0104)	(0.109)		
Approval$_{m-4}$	0.0177*	-0.0548		
	(0.00951)	(0.100)		
Election Turkey$_{m+1}$	0.183	-1.132	0.154	-1.099
	(0.134)	(1.412)	(0.146)	(1.444)
Coup Attempt	-0.747**	21.98***	-0.912***	21.24***
	(0.292)	(3.081)	(0.303)	(3.007)
Gas Dispute	-0.229	-2.332	-0.170	-0.855
	(0.222)	(2.345)	(0.206)	(2.042)
ln MilEx Turkey$_{y-1}$	1.529*	13.40	0.757	1.501
	(0.885)	(9.341)	(0.802)	(7.951)
ln MilEx Greece$_{y-1}$	-0.467	25.21	0.0229	31.61*
	(2.860)	(30.17)	(1.799)	(17.84)
ln GDP pc Turkey$_{y-1}$	-1.887	-15.54	-0.103	2.229
	(2.002)	(21.13)	(1.566)	(15.53)
May	0.575***	-0.771	0.556***	-0.647
	(0.118)	(1.247)	(0.124)	(1.231)
Constant	13.82	-127.3	-1.366	-273.4*
	(15.44)	(162.9)	(15.06)	(149.4)
Granger Causality test:				
χ^2	17.982	8.4992	9.326	.56694
Prob > χ^2	0.001	0.075	0.002	0.451
Observations	77		80	
Term FE	Yes		Yes	
Log Likelihood	-191.9		-211.9	
Start	2014m1		2013m10	
End	2020m5		2020m5	

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

To ensure that our results do not depend on the choice of lag order, we thus re-estimate the VAR model while including lags of up to four periods. In addition, we check whether the specified temporal order (allowing airspace violations to contemporaneously affect approval but not the other way around) affects our substantive results. We thus also re-estimate the main VAR specification while turning this temporal ordering around. These additional VAR results are presented in table A13 as well as figure A2. However, as can be seen best in figure A2, our results remain substantively in line with those of the main specification and the ARMA models. Positive approval shocks reduce airspace violations, granger-cause them. In contrast, the effect of positive shocks in airspace violations on approval depends on the lag order and the null hypothesis of no granger-causation cannot be rejected.

Figure A.2. VAR Impulse Reaction Functions



Note: Upper two plots pertain to model 20, the bottom two plots pertain to model 21. Grey areas indicate 90%-Confidence Intervals.

References

ATAÇ, C. AKÇA. (2019) Pax Ottomanica No More! The "Peace" Discourse in Turkish Foreign Policy in the Post-Davutoğlu Era and the Prolonged Syrian Crisis. *Digest of Middle East Studies* 28: 48–69.

BRANDT, PATRICK T., and JOHN T. WILLIAMS. (2001) A Linear Poisson Autoregressive Model: The Poisson AR(*p*) Model. *Political Analysis* 9: 164–184.

GANAPATI, N. EMEL, ILAN KELMAN, and THEODORE KOUKIS. (2010) Analysing Greek-Turkish Disaster-Related Cooperation: A Disaster Diplomacy Perspective. *Cooperation and Conflict* 45: 162–185.

GÜRSOY, YAPRAK. (2018) Turkey. In *The Handbook of European Defence Policies and Armed Forces*, edited by Hugo Meijer and Marco Wyss. Oxford: Oxford University Press.

RALEIGH, CLIONADH, ANDREW LINKE, HÅVARD HEGRE, and JOAKIM KARLSEN. (2010) Introducing ACLED: An Armed Conflict Location and Event Dataset: Special Data Feature. *Journal of Peace Research* 47: 651–660.

UN Comtrade. (2020) Available at: https://comtrade.un.org/. (Accessed September 14, 2020).