

## Signal received? Authoritarian elections and the salience of autocrats

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### ABSTRACT

A large literature on authoritarian elections suggests they allow autocrats to signal strength while also acting as focal points for opposition. These theories rest on the assumption that authoritarian elections attract the public's attention, but we know little about how attention shifts in these elections and toward whom. We expect that elections should increase the salience of both autocrats and their opponents, and we argue that opponents may gain nearly as much attention as autocrats despite restrictions inherent to these political systems. We confirm these patterns using Google Trends search data, which shows that opponents experience average boosts almost as large as those for autocrats. These increases are substantively large enough to indicate that opponents, who are typically starved of attention, attract similar public interest during election periods as autocrats do in non-electoral periods. The findings contribute to understanding how elections create opportunities but also risks for autocrats.

Elections are prevalent in authoritarian political systems, with many autocrats formally taking office through manipulated but participatory electoral processes (Hyde and Marinov 2012). While the outcomes of these contests are rarely in doubt, scholars theorize that authoritarian elections still provide important information. The magnitude of the autocrat's victory – and the level of fraud used to get there – can signal the ruler's strength and popularity, which may reinforce their political dominance (Harvey and Mukherjee 2020; Magaloni 2006; Rozenas 2016; Simpson 2013) or facilitate mobilization by the opposition (Fearon 2011; Little et al. 2015; Tucker 2007).<sup>1</sup> Arguments focusing on the signaling value of elections to the public rest on the assumption that authoritarian elections attract enough public interest that they receive the signal of autocratic strength. At present, however, there is little evidence about the extent to which the public's attention shifts during these elections, or toward whom.

How authoritarian elections draw attention to the competing candidates has implications for their influence on political outcomes in these regimes. From the signaling perspective, elections cannot signal strength to citizens unless those citizens pay attention and thus receive the signal.<sup>2</sup> At the same time, attention may not be a one-way street that uniformly benefits the autocrat. Given that opponents are often starved for attention in authoritarian regimes (Larreguy et al. 2018), increased attention to the election could also raise the salience of the opponents in

a way that threatens the autocrat. Indeed, as the Polish Communist Party's ill-fated 1989 campaign showed, the election not only made the Communist Party more salient, but also introduced the Polish citizenry to Lech Walesa (Kaminski 1999, 86–88). Chile's "No" campaign in 1988 similarly took advantage of the electoral focal point to bring greater awareness to their movement and ultimately unseat Pinochet. In the May 2013 Malaysia General Election, challenger Anwar Ibrahim received more public attention than ruling party candidate Najib Razak. As such, when assessing the signaling benefits of an election for the autocrat, these benefits should be benchmarked against attention gains for the opponent.

We argue that authoritarian elections should increase the amount of public attention directed at the autocrat and their electoral opponents. While autocrats may benefit from ubiquitous media coverage and personality cults that could mute the impact of elections, it is often the case that regimes pull out the stops to publicize elections. As such, we expect that elections will draw substantial public attention toward the autocrat, thereby acting as propaganda focal points for regime dominance. While this expectation is potentially intuitive, we also compare the rates of increases in attention for autocrats and their primary electoral opponents. These relative gains have important implications for understanding the risks and benefits of elections in authoritarian contexts, and it is also less obvious how these relative gains might play out. Here, we

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<sup>1</sup> It is important to note that not all signaling theories concern the public. Simpson (2013) discusses the signaling value of elections on bureaucrats and the military as well as the opposition. The citations included here, however, do suggest that elections impact public perceptions of regime strength.

<sup>2</sup> It is possible that elections could signal strength to bureaucrats and the military even if citizens do not pay attention.

compare the relative gains in attention for the autocrat to the gains for the opponent to see whether the gains for the autocrat outweigh the risk that elections might shine a light on the opposition. Finally, we theorize that opponents will gain more attention relative to the autocrat in more competitive elections. Insofar as these spikes in attention provide rare moments for opponents to build popularity with the public, this perspective highlights one channel through which elections, particularly more competitive ones, constitute a gamble for autocrats.

We evaluate these arguments with internet search data from Google Trends, which has increasingly been used by social scientists as a measure of topic salience (Gueorguiev and Schuler 2016; Mellon 2013; Scharnow; Vogelgesang, 2011; Scheitle 2011). With data from dozens of authoritarian regimes between 2004 and 2019, we show that searches for autocrats and their primary opponents spike significantly around elections. Importantly, while the increase for opponents is slightly lower than for autocrats, the increase represents a relatively larger percentage increase from the opponents' extremely low baseline levels of awareness. Furthermore, we find some tentative evidence that more competitive elections do generate greater gains for the opposition than less competitive elections.

These findings provide support for a key assumption in the literature about the role of authoritarian elections in signaling the autocrat's strength to the public (e.g. Magaloni 2006; Rozenas 2016; Luo and Rozenas 2018). Additionally, by demonstrating that the increased attention appears predominantly in the month of the election itself, the findings suggest one reason why *ex ante* election manipulation is less likely to spur opposition than *ex post* fraud (Fearon 2011). They also illustrate how elections offer focal points for anti-regime mobilization by concentrating the public's attention in a narrow period of time (Lucardi 2019; Tucker 2007). Finally, by indicating that elections drive large increases in public attention to the opposition, the paper shows that the signaling benefits generated by elections come with the risk of increased opposition prominence.

## 1. Elections and information in authoritarian politics

Autocrats are theorized to use elections for various purposes ranging from patronage distribution to learning about the public's preferences and strengthening legitimacy (Brancati 2014; Gandhi and Lust-Okar 2009; Williamson 2021). A central argument in this literature is that elections – and particularly executive elections for the autocrat themselves – signal the autocrat's strength (Brownlee 2011). How does an election do this? The most obvious component is a landslide victory. Where the candidate wins the election, particularly by overwhelming margins, voters presumably infer that the autocrat is powerful. The signaling benefits increase if there was less fraud or the fraud that occurred was costlier to perpetrate (Rozenas 2016; Harvey and Mukherjee 2020). Conversely, if the autocrat struggles to win even with rampant fraud or the fraud is particularly overt and egregious, the election can signal weakness and provide a focal point for oppositional mobilization (Tucker 2007). Either way, these outcomes imply that citizens pay attention to the autocrat on election day and immediately following the election.

However, signaling may not simply occur after the election. Indeed, during the campaign, citizens will likely be inundated with propaganda about the autocrat, which should bolster the autocrat's salience prior to the election. At the same time, autocrats, particularly insecure autocrats keen to prove their popularity, may concede to more open elections with more competitive opponents (Rozenas 2016). In these cases, the campaign could also allow the opponent to bolster their profiles, such that in the pre-electoral period, the opponent could signal their strength and competence. Indeed, Lech Walesa availed himself of the opportunity offered by the first ever election debate in 1988 to dramatically improve his image in the eyes of the Polish electorate (Kaminsky 1999).

While intuitive, how consistently are these signals received by the public? Little reliable data assesses the degree to which citizens pay

attention to authoritarian elections. Furthermore, there are reasons to think that few people in authoritarian regimes follow these elections or process their political implications. Apathy is often rampant in these settings, with many citizens convinced their votes will not count (De Miguel, Jamal, and Tessler 2015; Peisakhin et al. 2020). Furthermore, while turnout varies widely and can be quite high (Letsa 2020; Martinez I Coma and Morgenbesser 2020), these figures may be inflated by regimes claiming a popular mandate (Frantz 2018), and voters whose participation is induced through coercion or patronage may still fail to process information about the election. This does not imply that elections carry no information. Indeed, studies show how even heavily manipulated elections can provide clues regarding patterns of dissent and regime support (Herron 2011; Malesky and Schuler 2011). However, without empirical examination, it is possible that this information is of greater value to the regime than citizens. While the regime may interpret changes in electoral behavior as signs of weak support, citizens, who ultimately participate in the election, may pay little attention both during the election and once they have cast their ballots. Therefore, if authoritarian elections do not draw the public's attention, their signaling value may be minimal regardless of how informative they are for the autocrat.

Yet, autocrats often go to great lengths to publicize their elections by mobilizing supporters, blanketing the media, and urging citizens to take part (Frantz 2018; Hellmeier and Wedmann 2020). When combined with the regime's dominance of the information environment, these efforts suggest that authoritarian elections should significantly increase how much attention citizens give to the autocrat and their opponents, whether those citizens participate actively in the election or not. Furthermore, this regime-led emphasis on elections occurs in cases where the autocrat faces a plausible challenger, but also in highly repressive regimes where the opposition is weak, implying that increased attention to candidates should be observable in both hegemonic and competitive authoritarian regimes, which vary in the level of restrictions they place on the opposition (Brownlee 2011). These patterns would be consistent with the ability of elections to provide an effective signal of the autocrat's strength in a variety of political contexts.

With most autocrats capable of manipulating the media, limiting political activity, and in many cases controlling the timing of elections, campaigns in authoritarian elections are typically truncated affairs (Schedler 2002; Morgenbesser 2016, 148). Though there is certainly variation in election campaign periods in autocracies, autocrats have incentives to keep the visible part of campaigns short, since electoral manipulation often occurs prior to voting and is less likely to trigger backlash when it is obscured (Fearon 2011).<sup>3</sup> As such, we might expect increases in public attention to be concentrated heavily around the election date, rather than being drawn out for many months as in most democracies. Similarly, the electoral period should afford a brief window for opponents to campaign and advertise their message. Therefore, we might expect elections to lead to a short-term boost in the salience of the autocrat and opponent. This leads to the following hypothesis:

**H1.** *Autocrats and opponents will gain a spike in public attention immediately preceding and following an election.*

But these concentrated spikes in attention toward the autocrat and their opponents would also illustrate why elections can provide an important focal point for mobilization against the regime (Tucker 2007). Opposition parties in these political systems usually face stringent limitations on their ability to reach the public. However, even when elections occur in controlled settings, they typically provide some breathing room for these parties to increase their outreach efforts (Schedler 2013). A critical question, therefore, is whether opponents gain more or less

<sup>3</sup> In democracies, where incumbents control campaign regulations, a similar dynamic may also occur (McElwain 2008).

attention than autocrats during elections. Autocrats almost certainly start from a higher base level of salience because as sitting executives, they consistently receive extensive media coverage even outside of electoral periods (e.g. Jaros and Pan, 2018), and in some cases benefit from an ever-present regime-backed cult of personality campaign (Wedeen 1999). That said, elections could heighten the salience of the autocrat more than for opponents due to their ability to utilize the propaganda apparatus to a greater degree during the election period. This would imply greater gains for the autocrat.

From the opponents' perspective, they almost certainly start from a lower baseline level of salience, given restrictions on their ability to attract attention and the fact that they are not the sitting incumbent. The question is whether the restrictions on their ability to campaign or the focal quality of elections leads to higher or lower increases in salience relative to the autocrat. As the movie "No" about the 1988 plebiscite in Chile details, while opponents were only given a small amount of time on television to advertise their case, given the complete restrictions that existed before, attention to the opposition still exploded. This suggests that there are factors that could both depress the attention gains by opponents (restrictions on media coverage) relative to the autocrat and factors that could increase the attention gains (the novelty of the opposition campaign and low levels of baseline awareness) relative to the autocrat. Therefore, while we test the relative gains for the opponent compared to the autocrat, we make no clear prediction as to who will gain more.

With that said, it is important to note that similar gains in attention for autocrats and opponents could be on the whole more beneficial for the opponents. Because of the lower baseline level of awareness for the opponent, a similar level of increase in absolute attention equates to a greater increase in awareness in percentage terms. This could be substantively meaningful. The marginal benefit of a one-unit increase in attention for the autocrat from their already high level may be less than a one-unit gain for the opponent, who starts from a low level, given that the opponent may now be able to establish a base of support where none existed before. The autocrat, by contrast, is merely adding to an already large stock of attention. In our analysis, we discuss this in more detail.

Before proceeding to the analysis, we have one additional hypothesis. If autocrats have a consistent ability to manipulate the media, the competitiveness of the election may have a heterogeneous effect on the salience of the opponent vis-à-vis the autocrat. That is, the more competitive the election, the more information that may be available to the public regarding the opposition candidate. While competitiveness can certainly increase the informational benefit to the autocrat in the form of information about their popularity or the popularity of their policies (Miller 2015; Malesky and Schuler 2011), it may also increase the salience of the opposition relative to the autocrat:

**H2.** *The more competitive the election, the greater the increase in attention for the opponent relative to the autocrat immediately preceding and following an election.*

## 2. Data

To test these hypotheses and research questions, we rely on internet search data from Google Trends to evaluate how authoritarian elections increase the salience of autocrats and their opponents. Google Trends allows researchers to query trends for search terms and topics from 2004 until the present, with the data providing a time series of relative search frequencies, normalized from 0 to 100. The period with the highest number of searches receives a value of 100, such that a value of 50 in another month would indicate 50 percent of search popularity compared to the highest period. Because Google Trends provides a direct measure of information-seeking, scholars have increasingly turned to it as a research tool for measuring salience (Scheitle 2011). Studies suggest that it provides an effective measure of public interest in a topic (Mellon 2013; Weeks and Southwell 2010), including in authoritarian regimes

(Gueorguiev and Schuler 2016; Koehler-Derrick 2013; Schuler 2020).

While Google Trends is useful as a behavioral measure of public interest accessible even in sensitive authoritarian environments (Mellon 2013; Scheitle 2011; Chykina and Crabtree 2018), it also has limitations. First, it can be difficult to determine whether searches capture interest in the relevant topic or in another topic that uses a similar search term. This problem should be less relevant to our study because we are interested in the salience of specific, prominent people. Second, internet access remains low in many countries and internet users tend to be younger and wealthier (Mellon 2013). In our sample of countries, as shown in the SI, average internet penetration is low in the early 2000s but increases substantially over time. We take steps to address this issue in our analysis. Finally, it is difficult to know whether search data corresponds to support or opposition. While problematic for some studies, it is less concerning for our project as we are primarily interested in *salience* rather than support.

With this in mind, we compiled monthly, country-specific Google Trends data for autocrats who held elections with at least one opposition candidate between 2004 and 2019. To gather the data, we first determined whether a country held an election under authoritarian conditions. To do this, we relied on Varieties of Democracy to identify elections and on Polity to code regime type, excluding elections that occurred during country-months where the country was deemed to be a full democracy (Polity score >5). If the Polity score was above the threshold during the election-month in question, which could occur in cases of democratic backsliding, we exclude those elections. We did not include elections in single-party states, cases where the autocrat was not a candidate for either the presidency or the legislature, and cases where there was no opponent.

Once we determined that a country held elections under authoritarian conditions, we queried Google Trends for searches for the autocrat competing in the election and their primary opponent (or opponents if the autocrat faced different opponents in multiple elections) in a single search. We conducted the query for searches emanating from within the country over the 2004–2019 period, such that the Trends data will represent the relative amount of searches for the autocrat and the primary opponent (if one election) or opponents (if more than one election) compared to the highest search interest for the autocrat or opponent over that 15-year period. While this means that the searches while the autocrat is in power (or surrounding the election year) will be relative to potential surges in searches outside the period the autocrat is in power, because we are concerned with the changes between the autocrat and the opponent relative to each other and themselves before and after an election within an autocratic spell, this decision should not impact our results.

Regarding the autocrat, when the autocrat changes within a regime, we conduct searches for as many autocrats as that country has had. In our main dataset, we drop those months the autocrat is not in power. For example, in our main analysis the data will include searches for Maduro in Venezuela after Chavez's death in 2013 and include searches for Chavez prior to 2013. In our supplemental analysis, we rerun the analysis using one- and two-year windows around the election in which a given autocrat runs, meaning that in some cases there can be overlap in the country-months included. Using the Venezuela example, because there was an election in 2013 and 2012, our supplemental analysis would include one or two years before and after Chavez's 2012 election, with Chavez as the relevant autocrat in that election. It would also include a one or two-year window around the 2013 election, with Maduro as the relevant autocrat in that election.

When the opponent changes from election to election, we use the trends score for the opponent in the election closest to the month under consideration. For example, if an autocrat faced opponent A in January 2010 and opponent B in January 2014, the opponent trends score will be for opponent A until January 2012 and opponent B after that point. We defined the primary opponent by the opposition candidate winning the most votes in the nearest election. Although many elections featured

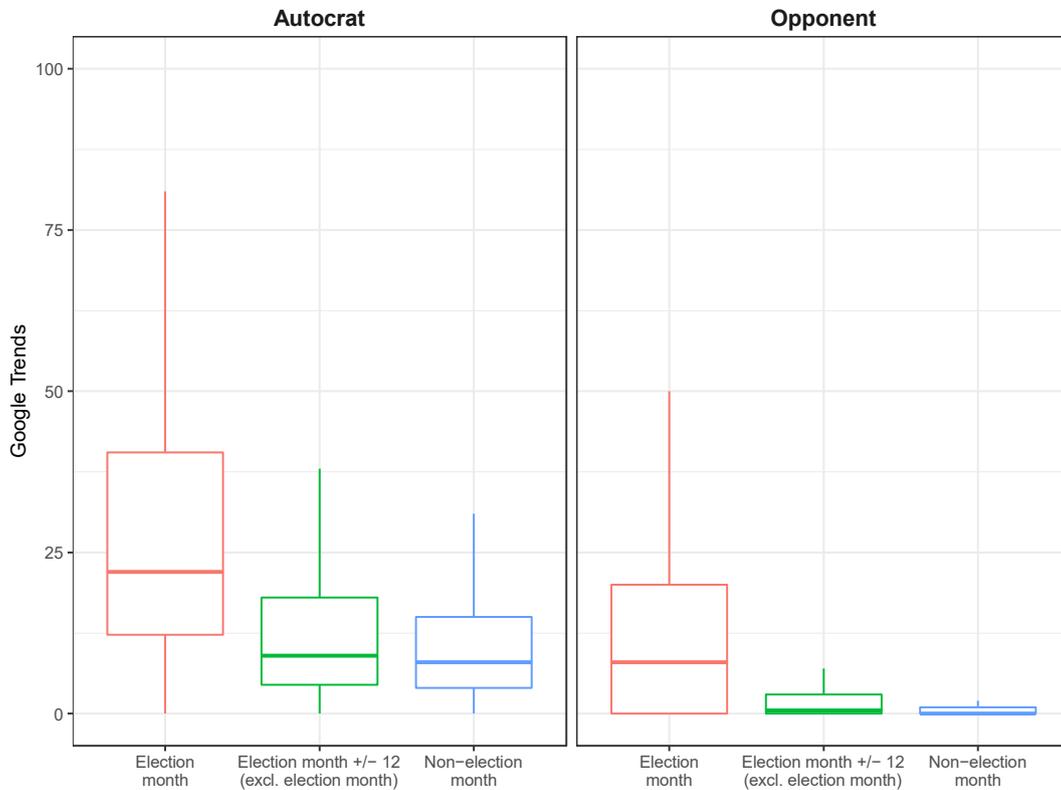


Fig. 1. Box plots of Google Trends values for the autocrat and the opponent in the election month, the 12 months before and after the election (excluding the election month), and non-election months.

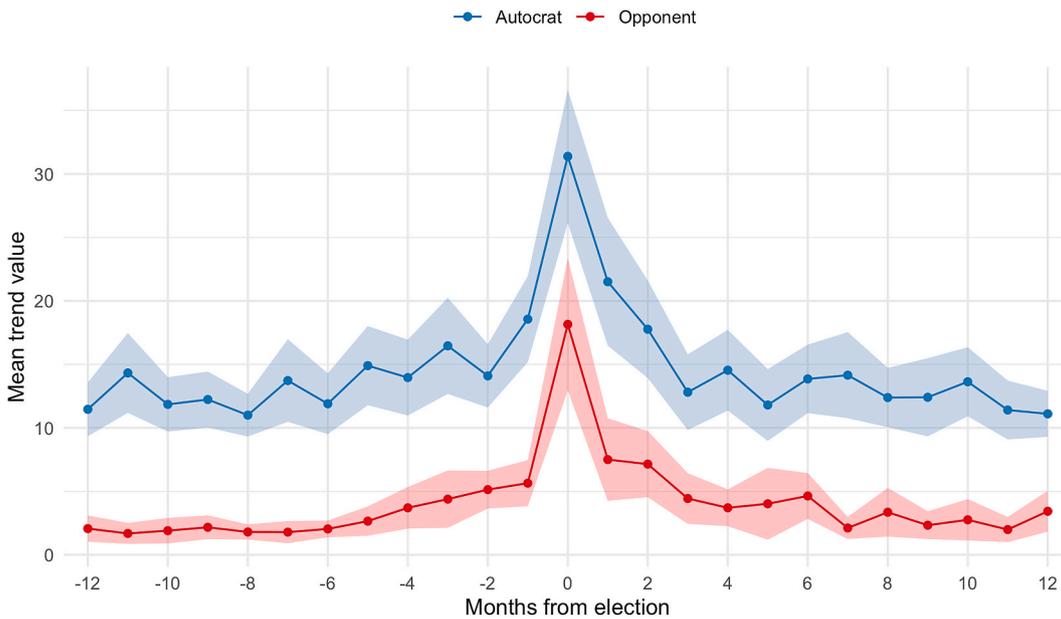


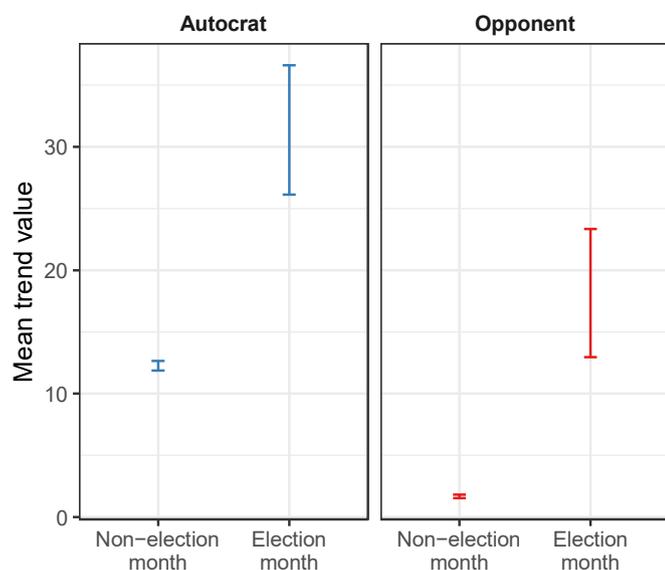
Fig. 2. Mean Google Trends values for autocrat and opponent in the 12 months before and after the election. Shaded areas are 95% confidence intervals.

more than one opponent, ultimately we included only the strongest opponent because theoretically, we are most concerned with the increase in visibility of the opponent with the greatest capability to represent a focal point of opposition.

We include any elections where the autocrat is a candidate either for the presidency or the legislature. This includes presidential elections, which is the predominant form of authoritarian government. However, we also include parliamentary elections in parliamentary regimes,

where the autocrat is implicitly elected, such as Cambodia, Malaysia, and Singapore.<sup>4</sup> In these cases, we searched for the name of the head of the ruling party competing to take the position of prime minister. Google

<sup>4</sup> The case of Russia's 2008 election, where Medvedev ran, despite Putin widely being considered the de facto autocrat presents a complicated case. In this case, because we deemed Putin to be the effective autocrat, we still considered Putin the autocrat in 2008 and included this election.



**Fig. 3.** Mean Google Trends values for autocrat and opponent in election and non-election months. Non-election months are coded as those months that do not fall within 12 months before or after an election. Vertical bars are 95% confidence intervals.

Trends offers an option to search for the topic when a name is entered, which ensures that the results include searches that use slight variations in spelling and how the name is inputted. We used this option. Furthermore, Google Trends allows an option to only query searches emanating from within the country in question. We also used this option, so that the searches are domestic. This process provided us with a dataset of 8123 months of trend data for 67 autocrats and 52 countries spanning 110 elections. Using our main specification, which includes only the months the autocrat is in power, Fig. 1 describes the distribution of Google Trends values for the autocrat and the opponent in the election month, the 12 months before and after the election (excluding the election month), and in non-election months (for country-specific descriptive graphs, see Figure S1 in the SI).

### 3. Results

Our initial evaluation compares the mean of the pooled trend values for the autocrat and the opponent with the highest vote total in the months around the election. These results, which are displayed in Fig. 2, reveal a significant increase in searches for autocrats that is concentrated in the month of the election and those just before and after. Fig. 3 shows a direct comparison of the search interest in the month of the election and in non-electoral months, defined as all months in the data that do not fall within 12 months before or after an election. In the month the election takes place, the search interest for autocrats increases by 19.1 points on average relative to non-election months (from 12.3 to 31.4), which represents a 155 percent increase in attention. These patterns indicate support for H1, whereby autocrats gain a spike in public attention immediately preceding and following an election.

As expected, the baseline search interest for opponents is significantly less than it is for autocrats in all time periods, as seen in Fig. 2.<sup>5</sup> Consistent with H1, however, average trends for the opponent also show a large increase around the time of the election. In terms of comparing gains for autocrats and their opponents, the absolute level of increase is

somewhat lower for the latter, with searches increasing 16.5 points (from 1.7 to 18.2) in the month of the election itself relative to non-electoral months. However, in substantive terms, this absolute increase in attention is nearly commensurate with that experienced by autocrats. Furthermore, in terms of percentage gains, the opponent gains far more relative to their baseline, with an increase in search interest of nearly 970 percent on average. In addition, this increased attention toward the opponent appears to extend for more months than it does for the autocrat, as shown in Fig. 2, which suggests that the public may be introduced to these opponents for the first time. These patterns imply that elections could generate a substantial risk of allowing opponents to gain a foothold in public consciousness.

We evaluate our hypotheses more formally using regression analysis. We regress the trend values on dummy variables for the election month and the six months before and after the election. We estimate this model for both the autocrat and their primary opponent. Our main ordinary least squares estimates use pooled variation across countries and over time. In addition, we report models with country fixed effects to account for time-invariant unobserved heterogeneity at the country level. Since some of the variables of interest – in particular, electoral competitiveness, as defined below – show little variation within countries over the period under analysis, we recommend caution in the interpretation of the fixed effects estimates. The main results are shown in Table 1, with the autocrat models in columns 1 and 2, and the opponent models in columns 3 and 4.

We find evidence of a spike in attention both for the autocrat and the opponent around the election, with the largest increase occurring in the month of the election. The pooled OLS estimate from model 1 indicates that the average search interest for the autocrat increases by 19.1 points from a baseline of 12.3 – an increase of 155 percent over baseline (see column 1). The country fixed effects estimate for the autocrat in column 2 is virtually identical. These estimates indicate strong support for H1. In comparison, search trends for the opponent increase 16.3 from a baseline of 1.8 (column 3), again with a nearly identical fixed effects estimate for the election month (column 4). This represents an increase on average of nearly 900 percent in the month of the election relative to non-electoral months. Given the closeness of the absolute gains, and the extremely low starting point for opponents, the results suggest that opponents qualitatively increase their levels of attention in a way that is arguably not the case for the autocrat.

In columns 5–8, we test our second hypothesis by interacting a dummy variable for the election quarter (from the month before to the month after the election) with a binary indicator of electoral competitiveness.<sup>6</sup> While results point in the predicted direction for model 8, which uses fixed effects, the results are inconsistent and not statistically significant. However, using robust regression models that account for potential outliers and heavy tails in our dependent variable, as we discuss below in the context of our robustness checks, does lead to greater support for H2.

In the SI, we report results from additional robustness checks (see Tables S1–S5). We estimate models with country and month-year fixed effects to account both for time-invariant unobserved heterogeneity and common shocks. Alternatively, we also use autocrat fixed effects. We control for internet penetration; government effort to censor print, broadcast, and internet media; coup occurrences; urbanization rate; total population; GDP growth; GDP per capita; and V-Dem polyarchy ratings. In addition, we limit the analysis to one- and two-year windows around each election to ensure that the estimates are not influenced by observations that are too distant from the election. We find consistently strong support for H1 using these specifications. Furthermore, our

<sup>5</sup> In this main analysis, we include only those regime-months when the autocrat is in power. Alternatively, we also aggregated the data by the period of two and a half years before and after the election, and the distribution looks quite similar (see Figure S4).

<sup>6</sup> We use V-Dem's categorical measure of free and fair elections to construct our binary variable of competitiveness. If elections were not at all free and fair ( $n = 18$ ), not really free and fair ( $n = 40$ ), or ambiguous ( $n = 42$ ), we coded them 0. If they were somewhat free ( $n = 25$ ) or free ( $n = 1$ ) we coded them as 1.

**Table 1**  
Regression analysis of Google Trends for autocrat and opponent.

	Autocrat		Opponent		Autocrat		Opponent	
	OLS	FE	OLS	FE	OLS	FE	OLS	FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Election month – 6	–0.401 (1.126)	–0.431 (1.011)	0.233 (0.320)	0.169 (0.305)				
Election month – 5	2.602* (1.393)	2.331* (1.275)	0.848 (0.540)	0.959* (0.515)				
Election month – 4	1.662 (1.334)	1.846 (1.369)	1.896** (0.746)	1.782** (0.726)				
Election month – 3	4.160** (1.889)	3.879** (1.804)	2.582** (1.165)	2.732** (1.079)				
Election month – 2	1.795 (1.155)	1.947* (1.146)	3.330*** (0.698)	3.217*** (0.672)				
Election month – 1	6.262*** (1.469)	5.974*** (1.436)	3.839*** (0.897)	3.963*** (0.845)				
Election month	19.086*** (2.492)	19.033*** (2.425)	16.349*** (2.651)	16.252*** (2.593)				
Election month + 1	9.211*** (2.348)	9.263*** (2.278)	5.697*** (1.816)	5.680*** (1.736)				
Election month + 2	5.346*** (1.712)	5.549*** (1.704)	5.253*** (1.475)	5.120*** (1.486)				
Election month + 3	0.522 (1.471)	0.914 (1.332)	2.636** (1.205)	2.584** (1.100)				
Election month + 4	2.417* (1.425)	2.638* (1.393)	2.081*** (0.700)	1.911** (0.723)				
Election month + 5	–0.471 (1.346)	–0.127 (1.088)	2.400* (1.320)	2.398* (1.249)				
Election month + 6	1.712 (1.198)	1.930 (1.174)	2.852*** (0.772)	2.603*** (0.779)				
Election quarter					12.192*** (1.549)	12.135*** (1.552)	9.270*** (1.608)	9.000*** (1.555)
Competitive election					0.382 (3.824)	2.953 (3.872)	0.849 (0.813)	–1.041 (0.919)
Election quarter × Competitive election					–1.713 (3.341)	–1.603 (3.166)	–0.233 (4.011)	0.548 (3.891)
Intercept	12.300*** (1.102)		1.803*** (0.329)		12.492*** (1.128)		1.976*** (0.399)	
Country Fixed Effects	No	Yes	No	Yes	No	Yes	No	Yes
Observations	8123	8123	7406	7406	8123	8123	7406	7406
Countries	52	52	52	52	52	52	52	52
R <sup>2</sup>	0.031	0.305	0.097	0.262	0.025	0.300	0.069	0.233

Table entries are ordinary least squares estimates with country fixed effects where indicated. Standard errors clustered by country in parentheses. \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ .

estimates on the relative gains between autocrats and opponents are stable in all these specifications.

We re-estimate all models using robust regression to account for the potential influence of outliers and heavy tails in the Google Trends data. Nonnormal errors and outliers may cause bias and inefficiency in ordinary least squares regression, often making it difficult to detect systematic relationships. Robust regression performs well under these distributional conditions by downweighting cases with large residuals (Fox 2015).<sup>7</sup> We find support for H1 in our robust regression estimates, as reported in the SI. Autocrats experience large increases in salience in a narrow span of time before and after elections. In terms of the relative gains between autocrats and opponents, while the level of gains for the opponent relative to the autocrat drops, they are still larger in percentage terms than for the autocrat. Finally, regarding H2, in contrast to our OLS and fixed effects estimates, our robust regression estimates show a large and statistically significant interaction between election quarter and competitive election, with opponents receiving a larger attention boost in more competitive elections. Also consistent with H2, we find no evidence in the robust regressions that the attention gain for

the autocrat is conditional on electoral competitiveness. However, the lack of consistency in the result across different specifications does perhaps suggest more caution in this particular finding.

#### 4. Conclusion

Our results show that public attention to autocrats and opponents spikes during electoral periods. Additionally, while the increases for autocrats are marginally higher than for opponents, opponents gain nearly as much as autocrats, and far more in percentage terms relative to their baseline. The findings confirm a key assumption underlying the strength signaling theory of authoritarian elections, which is that citizens pay more attention to the autocrat during elections. At the same time, we point to the risks autocrats face in generating this signal, which is that voters also pay attention to previously unknown opponents. Perhaps for this reason, even autocrats with seemingly high approval ratings, such as Vladimir Putin, may nonetheless feel the need to ban opponents with lower poll numbers for fear that the heightened attention of an election could lead a previously relatively unknown candidate to increase their public profile.

#### Data availability

Data will be made available on request.

<sup>7</sup> We use Huber’s  $M$ -estimator, where observations with small residuals receive a weight of 1 and the larger the residual, the smaller the weight, as given by the weight function  $\omega(z) = \begin{cases} 1, & |z| < k, \\ k/|z|, & |z| \geq k, \end{cases}$

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.electstud.2022.102441>.

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