

Economic Voting and Media Influence in a Competitive Authoritarian Setting: Evidence from Turkey

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Abstract

It is generally assumed that individuals take national economic performance into account while voting. But the question of how perceptions about the economy may be influenced by partisan media remains understudied. Analyzing survey data from Turkey with various robust analysis techniques we demonstrate that reliance on pro-government media as a news source makes voters' economic perceptions significantly more favorable, which in turn increases the likelihood of incumbent vote. In addition, we demonstrate that the audience of pro-government media are more likely to display “sociotropic overestimation”—thinking that the national economy has done better compared to their own household experience; and “counterfactual rationalization”—thinking, regardless of how they view actual economic performance, that it could be worse under alternative leadership. The results suggest that when the economy is manifestly deteriorating, authoritarian incumbents may try to use media influence to convince the electorate that the status quo is better than the alternatives.

Introduction

Economic voting studies are based on the premise that individuals evaluate how the economy is doing while deciding on whom to vote for in the elections. Those who have more favorable evaluations of the economy will tend to reward the incumbents by voting for them. A rich literature, mostly based on US and British data, demonstrates that measures of economic evaluation appear as strong predictors of voting behavior at the individual level. Micro-level results from surveys also receive support from macro-level studies that demonstrate that incumbent vote share follows voter confidence in the economy closely (and objective changes in the economy more remotely). As Lewis-Beck and Stegmeier (2000, p. 211) conclude a review of the field, “For all democratic nations that have received a reasonable amount of study, plausible economic indicators, objective or subjective, can be shown to account for much of the variance in government support.”

Recent scholarship has questioned the theoretical premise behind the individual-level results, reminding that the causal arrow between economic evaluation and party choice points both ways. Evans and Anderson (2006), for example, argue that partisans are likely to form evaluations of the state of the economy that are consistent with their previously held beliefs. Proponents of the “revisionist argument” on economic voting also conjecture that news media is a likely source of bias in the formation of economic evaluations (Wleizen et al., 1997; Evans and Anderson, 2006), but they do not test this argument. This is an important gap, in light of evidence indicating that incumbents may be influencing how the media frames economic news, especially in less-than-fully-democratic settings (Levitsky and Way, 2010; Rozenas and Stukal, forthcoming).

In this study, based on individual-level data collected in February 2018 from a representative sample of the Turkish voting age population and using a variety of robust analysis techniques, we can both confirm basic assumptions about the economic voting mechanism and generate new evidence regarding how exactly media interferes with this mechanism. Reliance on pro-government media as a news source makes voters’ economic

evaluations significantly more favorable, which in turn increases their likelihood of voting for the incumbent, controlling for past voting behavior. We demonstrate that viewing pro-government media makes respondents more likely to think that the national economy has done better than their own household, a situation that we call “sociotropic overestimation.” In addition, voters consider not only how the economy is faring under the incumbent, but also how it would possibly fare under alternative leadership. We demonstrate that, *regardless of how they view actual economic performance*, the audience of pro-government TV are more likely to think that it could be worse under alternative leadership— a situation that we call “counterfactual rationalization.” Our analysis therefore suggests one explanation for why voters, without fooling themselves about their own economic situation, may still keep voting for an incumbent performing badly: It is because government influence over news media makes the national economic costs of not re-electing the incumbent look higher than it probably is. The implication is that when the economy is manifestly deteriorating, authoritarian incumbents may try to use media influence to convince the electorate that the alternatives would be even worse.

Economic Voting, Partisanship and the Media: Existing Studies

To provide tests of the idea of economic voting, the literature conventionally relies on surveys asking individual respondents about how they think the economy has performed over the past year (retrospective evaluation) and how they expect it to perform during the next year (prospective evaluation). The respondents are also asked to evaluate the economy from the vantage point of their own household (pocketbook evaluation) as well as the national economy in general (sociotropic evaluation). The combination of these two pair of options provide a battery of four evaluation measures, which can then be used as predictors of the individual’s vote choice for the next election, controlled for social class and ideological position. The literature provides strong theoretical and

empirical grounds to think that retrospective sociotropic evaluations, especially, are significant drivers of the vote choice (Lewis-Beck et al., 2012).

Against an influential canon of economic voting studies, a revisionist line of thinking warns against putting too much faith in the traditional interpretations of existing findings (Wleizen, et al., 1997, Evans and Anderson, 2006). These warnings find microfoundations in behavioral psychology: People are inclined to minimize cognitive dissonance between various beliefs they hold. Therefore, some may develop feelings of sympathy for a certain leader or party for reasons that have nothing to do with the economy, and then they may derivatively come to believe that economic governance under that leader or party has been strong. People also like to take credit for good outcomes and avoid blame for bad ones. Therefore, those who already voted for the incumbents may come to believe that the economy has been going well (Palmer and Duch, 2001; Anderson et al., 2004, Lewis-Beck et al., 2008). In addition to highlighting partisan biases, scholars have questioned the normative implications of the economic voting hypothesis by pointing to discrepancies between objective economic data (such as GDP growth, unemployment or inflation) and voters' subjective beliefs about the economy (Anderson, 2007).

In this regard, the influence of news media in shaping the voters' perceptions of the economic situation is a frequently commented upon, yet understudied, dimension of economic voting. As Healy and Malhotra put it, "The pocketbook voter need only consult his bank account; the sociotropic voter can consult the news to assess the health of the economy" (2013: 286). The influence of news media can attenuate and reinforce already existing partisan biases in how voters evaluate the incumbent economic performance. The anti-incumbent bias of those voters traditionally associated with the opposition may be attenuated if they happen to be relying on a mostly pro-incumbent media outlet to hear the news. When it comes to those who traditionally vote for the incumbents—the

same kind of media outlet can help keep them in the pro-incumbent lines even at times of economic hardship.

In this article, we address the role of pro-incumbent media influence over economic evaluations based on individual-level data from a competitive authoritarian setting. Competitive authoritarian regimes are characterized by the presence of the basic institutions of electoral democracy and a meaningful degree of competition for power, together with a highly uneven competition field favoring the incumbent party/leader due to the use of illiberal governance practices (Levitsky and Way, 2010). These practices include the harassment of opposition activists, effective abolishment of street protests, and maybe most importantly, undue control over news media. In competitive authoritarian settings the incumbents can use media influence to bolster the voters' perceptions of the economy and reinforce their electoral appeal (Rozenas and Stukal, forthcoming).

It is fair to call Erdogan's Turkey a competitive authoritarian regime (Esen and Gümüşçü, 2016). Especially since the failed coup attempt of 2016, the government has taken authoritarian measures to curb the opposition, taking advantage of a state of emergency that lasted about two years. Nonetheless, a vibrant electoral scene is still present in Turkey. All major parties take elections seriously and vigorously prepare for them. Over several elections, roughly half of the electorate has consistently voted against Erdogan and his party AKP. Corresponding to the uneven yet vibrant electoral scene, there is rigorous scholarly debate over whether economic voting mechanisms work in Turkey (Carkoglu, 2012; Erdoğan, 2013; Başlevent and Kirmanoğlu, 2016; Kalaycıoğlu, 2017). On the one hand, in the early 2000s Erdogan's AKP was credited for putting Turkey on an economic growth path with low inflation levels that the country had not experienced since many decades. This historic achievement is generally regarded as a major reason for the party's enduring electoral appeal. On the other hand, there is the impression that a social-cultural divide between pious people, who tend to vote for AKP,

and secular people, who tend to vote opposition, is increasingly dominating Turkish politics, overshadowing the importance of the economy. The divide is being reflected in political polarization between those who support President Erdogan’s increasing concentration of power and those who oppose it. Nonetheless, the economy remains highly salient in official discourse; in fact, the argument that the country needs greater power concentration in order not to backtrack into economic instability is frequently put forward within the government circles. At the time of our survey in February 2018, the country was experiencing early warnings of imminent economic hardship—debt-financed, inflationary GDP growth accompanied by deterioration in exchange rate (Oyvatt, 2018), a situation that provided room for competing narratives offered by different media outlets.

Palmer and Duch (2001) provide experimental evidence that manipulation of media cues changes economic evaluations responses in surveys, but they do not provide a test of external validity with real media exposure. The case of Turkey would enable us to test hypotheses about the impact of partisan media on economic perceptions. This is thanks to the existence of competitive elections, media outlets that can be clearly identified as government-supported and having a pro-government bias in their news coverage, as well as media outlets who are allowed to articulate views associated with the opposition. Perhaps due to the absence of such clearly pro-government media in advanced democracies, the issue has not been studied within the standard framework of economic voting studies, despite the frequent commentary about the importance of the media (Wleizen et al., 1997, Evans and Anderson, 2006).

In the British context, for example, Sanders and Gavin (2004) examine whether the aggregate vote for the incumbent follows the aggregate monthly balance of news stories on BBC and ITV news programs. They are not interested in the variation between BBC and ITV because there is a high degree of correspondence between their coverage of economic views, and both can be trusted to provide “a news service that, in

the public interest, is free of party political bias” (p. 1251). Nadeau et al. (2000) similarly examine news coverage trends found in seven newspapers, using a measure of general economic coverage for all of them combined. Even though Sanders et al. (1993, p. 194) note about the British press that “confronted with the same objective economic circumstances, certain newspapers consistently contrived to interpret events in a manner broadly sympathetic to the government,” they do not utilize this variation as a predictor for economic evaluations or vote choice at the individual level.

For the USA, as Goidel et al. (2010, p. 762) note, there is “a fairly consistent body of literature connecting content analysis of economic news coverage with aggregate economic expectations, but more limited analyses—both in number and scope—capturing the individual dynamics by which economic news coverage influences individual economic evaluations.” Among the latter, Hetherington (1996) found that media consumption negatively shaped individual voters’ retrospective economic assessments, which were in turn significantly related to vote choice in the 1992 presidential election. However, because the *entire* US media had a negatively biased coverage of the economy under the incumbent president, the study did not examine the varying impact of different media sources. Other individual-level studies similarly focus on the aggregate or uniform effects of different media sources, rather than their variation (Weatherford, 1983; Mutz, 1992; Duch et al., 2000; Ansolabehere et al., 2011; Gerber et al., 2009; Hetsroni et al., 2012). Goidel et al. (2010) examine—in Louisiana only—the categorical difference between national news and local news belonging to the same corporation; the CBS group, and not between sources with different partisan biases. DellaVigna and Kaplan (2007) use variation in the availability of Fox News across towns to measure the effect of the channel’s news coverage on the town’s Republican vote share, but do not examine economic evaluations.

In sum, we are not aware of previous studies that examine the influence of partisan media on economic perceptions and vote choice based on individual-level data,

and Turkey provides a good case to study this question. That economic and political perceptions may be influenced by partisan news media is not a counter-intuitive expectation, but it is not obviously the case, either. People choose their favorite TV channel partly based on their already existing partisan orientations, hence, controlling for the latter, TV choice may be an insignificant or weak predictor of current perceptions. Also, when pro-government propaganda seen on TV is too over-the-top to pass as a neutral depiction of reality, it may become a futile or even counter-productive method of affecting the audience's attitudes.

In this study we demonstrate that the widely observed "sociotropic voter" can also be found in Turkey, and economic perceptions have a basis in objective changes experienced by individuals, but media makes a substantial difference in forming these perceptions. We argue that media does this by weakening the connections between an individual's personal experience, her perception of the national performance, and her view of the imagined alternatives. We demonstrate that in Erdogan's Turkey, pro-government media outlets lead their audience to think that the national economy has done better compared to their own individual experience; and that it could have performed worse under alternative leadership.

Media and Politics in Turkey

We focus on TV channels as the media of interest because in Turkey this is the only way most Turkish citizens access the news.³ Data on media consumption rely on the individual respondent's answer to the following question in our February 2018 survey: *Which TV channel do you prefer most to view the news?* Table 1 below lists the answers given by the respondents to the question, together with their ratio in the sample

³ A 2016 survey (KONDA 2016) revealed that only 13.3 percent of Turkish households purchase newspapers and 39 percent state they read newspapers. Furthermore 72 percent state that they hear the news first from the TV and 15 percent use no other news sources (radio, print newspapers, websites or online applications) other than TV.

expressed in Column I. Column II notes what percentage of the viewers of each channel, according to our sample, report to have voted for the incumbents AKP in the last national election of November 2015.

Table 1 Audience composition and political affiliations for TV news in Turkey

	Survey data		Affiliation information	
	I) Ratio in sample (%)	II) Viewers who voted AKP (%)	III) Time devoted to Erdogan or AKP (%)	IV) Ownership as of February 2018
Don't watch TV news	15.7	20.6	N/A	N/A
A Haber*	8	85.8	81.0	Turkuvaz Medya (Zirve Holding)
ATV*	14.7	77.7	81.8	Turkuvaz Medya (Zirve Holding)
CNN Türk	2.5	25	61.1	Doğan Yayın Holding
Fox TV	21.4	12.9	56.4	Fox International Channels
Haber Türk	1.2	44.8	65.3	Ciner Medya Grubu
Halk TV	1.7	2.4	N/A	Estetik Yayın A.Ş
Kanal 7*	1.4	85.3	81.3	Yeni Dünya Medya Grubu
Kanal D	7.4	36.3	61.7	Doğan Yayın Holding
NTV	2.2	41.8	76.9	Doğuş Holding
Show TV	4.1	52.6	67.2	Ciner Medya Grubu
Star TV	3.7	38.8	66.9	Doğuş Holding
TRT and TRT Haber*	11.1	72.6	91.2	State agency
Other channels	4.9	51.4	N/A	N/A
Total	100	44.3		

* Pro-government. Column III reports, based on official RTUK data, minutes devoted to AKP representatives in addition to President Erdoğan during the propaganda period before the 2017 referendum. See Supplementary Appendix A.1 for details.

Unlike the USA, there are no exclusive and competitive cable networks in Turkey and all major TV channels can be assumed to be available to be viewed by anyone with a TV. Starting with the establishment of private TV channels in the early 1990s, the viewership was conventionally considered to differ on the basis of income and education. With the growing hegemony of Erdoğan's AKP, however, TV channels have come to be identified with their relative political stance towards the government. While every media outlet in Turkey has to do business with anticipated government reactions in mind, not all do this happily or to an equal extent. We identify four TV channels as pro-

government media as of February 2018, based on existing literature and a simple content analysis.

Among these four, TRT is Turkey's public broadcasting institution. TRT was often the voice of the bureaucratic-military establishment during when the latter controlled the state, and currently it has an unmistakable pro-AKP and pro-Erdogan accent, amplified through its exclusively news-oriented outlet TRT Haber. Secondly, ATV is Turkey's most viewed private TV channel, originally founded by secularly oriented businessmen. It was sold in 2007 to the pro-AKP business conglomerate Çalık, and then in 2014 to another one—Zirve Holding. Both of these acquisitions were visibly connected to Erdogan's increasing influence over the mainstream media: Çalık's CEO was Berat Albayrak, currently Erdogan's son-in-law and Turkey's Minister of Finance and Treasury. Zirve Holding's media branch Turkuvaz is managed by Serhat Albayrak—Berat's brother; and the holding's flagship firm Kalyon has become one of the world's top ten infrastructure firms through government contracts under AKP governments.⁴ ATV still targets the higher-income, centrist segments of the viewership market with attractive gameshows and the like; however, its news coverage has become clearly pro-government especially in the highly polarized post-2014 period. The third channel we identify is A Haber, which is a news-only TV channel that is run under the same Zirve-Turkuvaz media group. The last channel is the moderately Islamist Kanal 7, which is best known for having Zahid Akman as its chief editor. Akman served as the head of the RTUK (the public institution for monitoring TV content for compliance with laws) under AKP until being involved in a major scandal involving alleged government corruption (for a primer to government-media relations in Turkey; see Freedom House, 2014; Buğra and Savaşkan, 2014).

⁴ See "Top 10 sponsors by investment and region, 1990-2017" in World Bank's Private Participation in Infrastructure Database, <https://ppi.worldbank.org/snapshots/rankings>.

While to close observers of Turkish politics the political affiliations of TV channels may be obvious, they should be best confirmed with systematic content analysis. We can do this thanks to an independent research conducted just before the last (prior to the survey date) major polarizing political event in the country, the referendum held in April 2017 on the transition from a semi-presidential to a fully presidential system. For the referendum, President Erdogan and his party AKP enthusiastically advocated an affirmative vote, while the other parties remained either ambivalent or opposed to the idea. Through content analysis, the research analyzed time devoted in news stories to covering the representatives of each party in addition to the President Erdogan himself (or his presidential advisors) during a 20-day period in March 2017.⁵ The Column III of Table 1 lists time devoted to AKP and President Erdogan as a share of total time for all parties in the parliament. The ratio surpasses 80 percent for all four TV channels we identify as “pro-government” and for no other channel. News coverage is not always in a positive light, so appearance in news may not mean endorsement. Alternative information about endorsements may be gleaned from decisions about live-broadcasting a speech by a politician or hosting them in live debates. Live coverage data (see Supplementary Appendix A.1) confirms the premise: The ratio of time devoted to AKP and President Erdogan is above 90 percent for all pro-government channels and for no other channel.

In short, there is ample reason to consider those who rely on TRT Haber, ATV, A Haber and Kanal 7 as their primary source of news as being exposed to pro-government media influence. We are interested in whether differential exposure to pro-government media is associated with differences in individuals’ evaluations of the economy and their vote decisions. Ideally, this question would be best investigated in an

⁵ The research was conducted by Ersin Öngel, a board member of RTUK, in cooperation with the NGO Demokrasi İçin Birlik, based on official RTUK data. Descriptive tables are available at <https://bianet.org/english/society/184769-allocation-of-broadcast-time-on-tv-53h-for-erdogan-17h-for-chp-33-min-for-hdp>. See Supplementary Appendix A.1 for details.

experimental setting where media exposure could be administered as a random treatment. In observational data provided by a survey, the subjects are self-selected into viewing certain media. In tackling this issue, our basic assumption is that a latent variable that could be called partisan orientation substantially drives TV choice, biases economic perceptions, and predicts vote choice for the next election. While it may not be possible to fully operationalize this latent orientation, we believe that vote choice reported for the *last* national election would be a good proxy for it, considering the rather sclerotic nature of vote blocs in contemporary Turkey. In other words, those who already voted for AKP in 2015 will be more likely to believe that the economy has been going well, watch pro-government TV channels that tell them the same, and vote again for AKP/Erdogan in 2018. For this reason, we control for past vote to test all our hypotheses. Furthermore, we utilize instrumental variables and other tests to demonstrate the robustness of the results.

Hypotheses

We set out by recognizing that past partisanship is an important source of bias in the formation of economic evaluations as well as future vote choice.

- H1: Individuals who voted for the incumbent in the last election will have greater likelihood to vote for the incumbent again, and also upwardly biased evaluations of the economy, compared to everybody else.

We hypothesize that media influence will have some direct effect on the vote choice.

- H2: Individuals will be affected by media propaganda in forming their vote decisions. Therefore, those who rely on pro-government TV channels as their source of news will be more likely to vote for the incumbent, controlled for past vote choice.

We accept the basic premise of the economic voting hypothesis. People will judge how the economy is doing and will reward the incumbents for a favorably judged economic record.

- H3: The more satisfied individuals are with the last year's national economic performance, the more likely they will be to vote for the incumbent, controlled for past vote choice.

Existing literature assumes that a deteriorating economy directly translates to a negative score for the incumbents' performance as viewed by the voters. Differently, we conjecture that individuals will evaluate the national economy not only based on whether it has improved in an absolute sense but also relative to the counterfactual case of how the economy could have done under a different party/leader during the same period. This is because, first, the national economy is affected by international developments that are not within the government's control. When global trends go badly, the incumbent may be rewarded for a good record in limiting the damage, even if the economy has deteriorated in an absolute sense (Duch and Stevenson, 2010; Kayser and Peres, 2012; Aytac, 2018). Secondly, the alternative to keeping the incumbents in place is not going back to where things were, but replacing them with the opposition. If the opposition is viewed as incompetent, the voters may consider the poor record of the incumbent as a relatively good one, compared to the imagined alternative. Therefore, evaluations of imagined alternatives favoring the incumbent will increase the likelihood to vote for the incumbent. We investigate these evaluations with the following question (*counterfactual evaluation*) in our survey: "How do you think the economy would fare if somebody other than Tayyip Erdogan came to power?" with answer options "it would be better" "it would be the same" "it would be worse" converted to an ordinal scale 1 to 3 (higher values favoring the incumbent).

- H4: Individuals will evaluate the national economy not only based on whether it has improved in an absolute sense but also relative to how the economy could

have done under a different party/leader. Therefore, evaluations of counterfactual alternatives favoring the incumbent will increase the likelihood to vote for the incumbent, controlled for past vote choice.

This new measure we are introducing would be important in understanding why people may keep voting for the incumbent despite apparent dissatisfaction with the economy, and how media may play a role in generating this behavior. In contemporary Turkey, for example, judging by mean scores for answers given in our survey, the majority thinks that the economy has gone down over the last year, at both national and pocketbook levels. However, the majority thinks that the national economy has done better than their own pocketbook, and a plurality also believes that the national economy would have been affected badly (instead of positively or neutrally) by a leader turnover—in other words, things could get worse than they already are. H4 tests whether these economic perceptions meaningfully relate to voting behavior. Our next hypotheses pertain to how the perceptions themselves are formed. We hypothesize that individuals' evaluations of both the actual state of the economy and its imagined alternatives are biased by the news media they rely on.

- H5: Those who rely on pro-government TV channels as their source of news will have upwardly biased (relative to everyone else) evaluations of economic performance, controlled for past vote choice.

While biased by partisanship and exposure to pro-government media, individuals' evaluation of government economic performance is also materially anchored on their own daily experience (Tilley et al., 2018; Becher and Donnelly, 2013; Nadeau et al., 2012). Those who have experienced recent increases in income, for example, should have more positive evaluations of how government policy affects the economy. We expect this association to vary in a particular way: The more remote the economic evaluation measure is from individual experience, the weaker should be the material anchor, and stronger should be media influence. To partially test this hypothesis we will use a

measure of real income growth from a “pseudo-panel” generated by sampling Turkey’s adult population monthly with a uniform methodology over a period of two years, as explained in detail in the data and analysis section.

- H6: Controlling for past vote, the association with real income growth should be stronger for pocketbook evaluations, and weaker for other measures of economic evaluation. Conversely, media influence over economic evaluations should be the weakest for pocketbook evaluations, stronger for sociotropic evaluations, and strongest for counterfactual evaluations.

As noted above, we already control for past partisanship in an effort to tackle questions of endogeneity. The last hypothesis we introduced gives us additional leverage on that front because we predict a particular pattern of variation for theoretically sound reasons. Had the association between pro-government media exposure and favorable evaluations been spurious or generated by reverse causation, we should not be seeing such variance between different kinds of evaluations. Furthermore, we develop two further tests of bias introduced by media. We set out from the assumption that, to judge how the national economy would perform under alternative political leadership, the citizens have to rely on their knowledge of how the economy actually performed recently. And to judge actual national economic performance, the citizens have to rely on their personal experience (Funk and Garcia-Monet 1997). Discrepancies between these judgments and their respective benchmarks can be explained by reliance on external sources of information such as news media. The discrepancies therefore should be greater for viewers of pro-government TV.

- H7: The positive difference between sociotropic and pocketbook evaluations will be greater for viewers of pro-government TV (the “sociotropic overestimation” bias).

- H8: Counterfactual evaluations will have a weaker association with retrospective evaluations for viewers of pro-government TV (the “counterfactual rationalization” bias).

In the first part that follows, we undertake estimates of the vote choice, and the role played by economic evaluations in it, testing H1 to H4. Next, we analyze the formation of economic evaluations, testing H5 to H8. Lastly, we employ instrumental variable approach to provide more robust evidence on the working of the economic voting mechanism.

Survey Data

Our survey was conducted in February 2018 with face-to-face interviews with 2687 respondents in a stratified selection of 154 neighborhoods and villages in 101 districts of 30 provinces in 12 socioeconomic regions of Turkey. Assuming a representative sample, it has a 1.7 margin of error with 95% confidence (Supplementary Appendix A.2 for details). In our analyses we cluster standard errors at the province level.

The outcome variable of interest is the survey respondent’s intended vote for the next national election. As national elections go, Turkey has been in a period of transition over the last few years. At the time of our survey Turkey was expecting to have parliamentary elections (where the vote is for a closed party list, proportional representation) as well as its first ever executive presidential election (where the vote is for individual leaders, with a possible run-off second round) conducted at the same time. An argument could be made for focusing on either vote as our outcome of interest. We asked the respondents about both: *Which party would you vote for if there was a Parliamentary election tomorrow?* and *Which leader would you vote for if there was a Presidential election tomorrow?* both coded 1 for the incumbent as against everyone else (including the undecided).

Viewers of four government-connected TV channels are coded 1 for pro-government media and everyone else 0. Respondents who claim not watching TV news disproportionately include ethnic minorities, who were probably uncomfortable with disclosing the TV channels they watch, since ethnically-oriented TV channels are controversial in Turkey. We therefore pool them with non-government TV viewers. (Moreover, if we code these two categories separately, the results remain unchanged).

The economic perception measures we utilize include the battery of four questions conventionally found in the literature. Our hypotheses about how the citizens evaluate actual performance pertain to retrospective measures but we also include prospective ones in our analyses to show how our findings compare with previous findings. We also introduce a new measure—the *counterfactual evaluation* of how the economy would perform if the incumbent was replaced. This measure could be preferred to have the same 5-level answer scale used for the conventional measures. However, after pretests of survey implementation we decided to simplify the answer scale for easier comprehension and so asked the respondents to choose from three responses, “1=it would improve,” “2=it would remain the same,” “3=it would deteriorate.”

The literature includes examples where the four conventional evaluations are inserted into regressions in alteration, simultaneously or as an index. In our estimations, we take an inductive approach and report findings from several strategies, including one with a factor index. The factor analysis between the four standard measures and the newly introduced one reveals that the latter relates to a dimension of voter perceptions that is not captured by existing economic evaluation measures. To generate a factor index, using the principal-component method, we therefore use the four standard measures. This variable is called as the *index* of economic perceptions.

Table 2 Factor analysis of economic evaluation measures

Measure	Wording	Loading	Uniqueness
Retrospective pocketbook	How well your household economy has been affected by the government’s policies over the last year?	0.811	0.343
Retrospective sociotropic	How well the national economy has been affected by the government’s policies over the last year?	0.840	0.294
Prospective pocketbook	How do you expect your household economy to be affected by the government’s policies during next year?	0.870	0.243
Prospective sociotropic	How do you expect the national economy to be affected by the government’s policies during next year?	0.870	0.242
Counterfactual	How do you think the economy would fare if someone other than Erdogan came to power?	0.502	0.748

Notes: Analysis is based on one factor that satisfies the “Kaiser criterion” (Eigenvalue of 3.13>1).

We expect all these measures to be predictors of the vote intention for the incumbent. We also expect them to be positively correlated with pro-government TV viewership.

For retrospective measures, we subtract the respondent’s pocketbook score from his sociotropic score, and thus arrive at *sociotropic overestimation* ranging from -2 to 4 (a greater range is possible but not observed in the sample). Greater the values, the more likely the respondent is to think that the national economy has done well despite her own household experience to the contrary, and we expect this value to be positively associated with pro-government TV viewership.

A last economic perception measure comes from the consideration that the measures we have used so far connote to a valence judgment about the performance of the government, raising the possibility that the respondents may tailor their answers on the basis of their wider view of the incumbent. An alternative strategy is asking an open-ended question about the economy that includes no cues of government responsibility and no benchmark associated with a “desirable” answer. So we asked the respondents: “Say you were paying 100 kuruş for an item a year ago, how much in average are you paying for it now?” The answers give us the respondents’ own perceptions about the price index—something that macro-level research found to be a good predictor of incumbent vote share in Turkish elections (Akarca and Tansel 2006).

Table 3: Summary statistics for economic perception measures

Variable	N	Mean	Std. Dev.	Min	Max
Retrospective pocketbook	2,641	2.421	0.933	1	5
Retrospective sociotropic	2,611	2.531	1.045	1	5
Prospective pocketbook	2,562	2.625	0.985	1	5
Prospective sociotropic	2,552	2.666	1.06	1	5
Index of econ evaluations	2529	0	0.953	-1.665	2.578
Counterfactual evaluation	2,491	2.179	0.801	1	3
Sociotropic overestimation	2,608	0.108	0.721	-2	4
Perceived price index	2,508	155.4	112	70	2750

We utilize a number of control variables. These include sex, curvilinear measures of age, 4 categories of education attainment (primary school or lower, secondary school, high school, university or higher), self-placement on a 1-5 scale of religiosity, self-placement on a 1-10 scale of left-right ideology, respondent location categorically in terms of rural, urban and metropolitan settlements. To account for the confessional and ethnic cleavages in Turkey, we distinguish between Sunni Muslims and everyone else; as well as Kurds and everyone else. To control for income level, following established OECD (2011) methodology, we divide household income by the square root of the number of people living in the household—to adjust for economies of scale in consumption. In our estimations, as common we will take the natural logarithm of this value to adjust for the high level of skewedness (and drop zero values). Lastly, we control for past vote. Those who voted for AKP in the last Parliamentary election of November 2015 are coded 1 and everyone else as 0—for up until now the Parliamentary election was the only election that directly mattered for the composition of the executive power. (We also replicated our analyses by inserting dummies for past vote for each major party in Turkey, main results remaining the same).

Among sample respondents who were at voting age and who claim to have voted in the November 2015 election, 51.3 percent report as having voted for AKP. This compares well with the actual share of AKP votes within all votes cast in that election: 48.8 percent. However, because our estimations use a large number of variables and we

utilize listwise deletion for missing values, it is inescapable that many observations will be lost. A test of randomness for deletion is in order. For this purpose, we take the model 6 from Table 4 that utilizes the smallest sample (N=1762) as a benchmark and test whether any variables differ significantly between utilized and deleted observations, since this could potentially bias our estimation results. It turns out that survey respondents that are dropped from the analysis due to missing answers are slightly older, disproportionately female and somewhat less educated. This could be cause of concern if other variables like media choice, economic perceptions and vote decisions also differed significantly between the samples, but none do. Hence, our effective sample should be considered to have high validity.

Estimating Vote Choice

We start our analysis with Table 4, estimating probit models of vote choice predicted by economic evaluation measures and pro-government media viewership in addition to demographic control variables, both for Parliamentary (Models 1-4) and Presidential elections (5-8). We start with models that do not include a measure of previous partisanship (models 1 and 5)—these estimations classify 84-85 percent of the observations correctly, compared to 39 and 43 percent for AKP and Erdogan, respectively, that we would obtain by chance if we did not have a predictive model. We then add past AKP vote as a control variable, which boosts correct classifications to about 89 percent. These models can be considered to predict *vote updating* for respondents whose previous vote we know. All in all, the only variables that consistently pass the significance test for both vote decisions regardless of model specification are left-right self-placement, having a university degree, pro-government media viewership, and certain measures of economic evaluation.

Table 4 Probit estimates of the incumbent vote

	Voting for AKP				Voting for Erdogan			
	1	2	3	4	5	6	7	8
<i>Controls</i>								
Female	0.148*	0.045	0.046	0.041	0.015	-0.099	-0.095	-0.081
	(0.081)	(0.099)	(0.096)	(0.097)	(0.085)	(0.098)	(0.098)	(0.090)
Age	0.027	-0.026	-0.027	-0.037*	0.037**	-0.015	-0.013	-0.020
	(0.017)	(0.019)	(0.019)	(0.019)	(0.016)	(0.018)	(0.017)	(0.016)
Age squared	-0.000*	0.000	0.000	0.000*	-0.000***	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Kurd	-0.023	0.022	0.017	-0.038	-0.098	-0.047	-0.043	-0.086
	(0.127)	(0.106)	(0.110)	(0.110)	(0.132)	(0.152)	(0.151)	(0.143)
Sunni	0.499*	0.311	0.321	0.171	0.718***	0.657**	0.657**	0.432
	(0.297)	(0.322)	(0.318)	(0.277)	(0.252)	(0.303)	(0.302)	(0.267)
Mid-school	0.087	0.010	0.019	0.029	0.216*	0.167	0.165	0.136
	(0.138)	(0.157)	(0.158)	(0.147)	(0.118)	(0.138)	(0.137)	(0.127)
High-school	-0.018	0.025	0.016	-0.003	-0.013	-0.015	-0.014	0.005
	(0.102)	(0.096)	(0.096)	(0.099)	(0.124)	(0.143)	(0.143)	(0.133)
University	-0.387***	-0.330**	-0.332**	-0.352**	-0.581***	-0.557***	-0.553***	-0.504***
	(0.142)	(0.150)	(0.145)	(0.142)	(0.152)	(0.175)	(0.174)	(0.163)
Log. income	-0.073	-0.057	-0.048	-0.057	0.071	0.124	0.115	0.088
	(0.066)	(0.080)	(0.078)	(0.072)	(0.075)	(0.085)	(0.084)	(0.079)
Religiosity	0.176**	0.101	0.100	0.123	0.174**	0.082	0.080	0.129*
	(0.079)	(0.084)	(0.085)	(0.085)	(0.071)	(0.079)	(0.079)	(0.074)
Urban	-0.068	-0.018	-0.014	0.035	0.101	0.234	0.231	0.257*
	(0.189)	(0.256)	(0.253)	(0.259)	(0.134)	(0.152)	(0.152)	(0.140)
Metropole	-0.094	-0.159	-0.165	-0.116	0.005	0.007	0.003	0.030
	(0.163)	(0.223)	(0.222)	(0.234)	(0.129)	(0.145)	(0.145)	(0.132)
Left-right	0.105***	0.061***	0.060***	0.082***	0.121***	0.077***	0.076***	0.112***
	(0.016)	(0.017)	(0.017)	(0.017)	(0.019)	(0.022)	(0.021)	(0.020)
Past AKP		1.708***	1.708***	1.837***		1.665***	1.660***	1.787***
		(0.113)	(0.112)	(0.114)		(0.104)	(0.103)	(0.096)
<i>Main Predictors</i>								
Pro-govt TV	0.786***	0.525***	0.522***	0.558***	0.650***	0.318***	0.322***	0.405***
	(0.087)	(0.098)	(0.099)	(0.095)	(0.088)	(0.104)	(0.104)	(0.097)
Retro. pock.	0.179***	0.175**			0.080	0.015		
	(0.061)	(0.068)			(0.068)	(0.078)		
Retro. socio.	0.200***	0.150***			0.232***	0.218***		
	(0.058)	(0.053)			(0.062)	(0.070)		
Pros. pock.	0.125**	0.092			0.201***	0.199**		
	(0.059)	(0.068)			(0.076)	(0.087)		
Pros. socio.	0.110	0.064			0.156**	0.086		
	(0.071)	(0.077)			(0.069)	(0.080)		

Table 4 (continued) Probit estimates of the incumbent vote

	Voting for AKP				Voting for Erdogan			
	1	2	3	4	5	6	7	8
Counterfac.	0.532***	0.344***	0.350***		0.792***	0.678***	0.680***	
	(0.071)	(0.073)	(0.074)		(0.062)	(0.071)	(0.071)	
Index econ			0.438***	0.487***			0.499***	0.565***
			(0.072)	(0.067)			(0.061)	(0.056)
constant	-5.187***	-3.361***	-2.199***	-1.310*	-7.181***	-5.744***	-4.371***	-2.805***
	(0.698)	(0.659)	(0.619)	(0.681)	(0.745)	(0.827)	(0.815)	(0.743)
N	1,828	1,789	1,789	1,864	1,799	1,762	1,762	1,836
McFad.'s R ²	0.444	0.581	0.580	0.572	0.506	0.626	0.625	0.582

Notes: Province-level clustered standard errors in parentheses. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Three findings deserve attention here. First, models 1 and 5 indicate that being more religious is associated with a higher probability to vote for both AKP and Erdogan. However, some measures of economic evaluation have stronger coefficients in comparison, and religiosity loses significance once we control for past vote. In other words, even though AKP's core following have disproportionately come from the ranks of the pious (which is accounted for by the past vote); perceptions of economic performance make a significant difference in convincing additional groups to *update* their vote and winning a majority.

The second finding is about how different measures of economic evaluation perform. When all measures are used together, it is the retrospective sociotropic and the counterfactual evaluations that are significant and strong predictors of the vote choice regardless of model specification, however, the counterfactual is the more robust one among the two.⁶ In alternative specifications we also ran models (see Supplementary Appendix B.1) that include a single economic measure, trying each of the alternative measures in turn. Each measure is individually significant and substantial, while greatest

⁶ When we keep these two only and drop other measures: the coefficients for the sociotropic swells considerably by absorbing their omitted influences on the outcome, however the coefficient of the "counterfactual" evaluation remains remarkably robust. Detailed results can be found in the Supplementary Appendix B.2.

effects come from the counterfactual.⁷ In short, Turkish voters in our sample seem to behave in accordance with the well-established retrospective sociotropic voter paradigm—they have greater probability to vote for the incumbents if they think that the national economy has fared well over the last year. However, the evaluation of what would happen to the economy if the incumbent was replaced (the “counterfactual” measure we are introducing in this article) proves to be an even stronger and more robust predictor of the vote choice than this commonly used measure of economic evaluation.

Thirdly, pro-government media viewership is a strong predictor of the vote choice (even when we control for past partisanship, which should be affecting how people choose the TV channel to follow for the news). Figure 1 shows how the probability to vote for the incumbent varies with different values of the standard economic perceptions index, while providing a comparison of pro-government TV viewers and everyone else.

⁷ Because different measures have different ordinal scales, we cannot directly compare the reported coefficients but we can compare the change in the dependent variable associated with one standard deviation unit change in each. According to Bayesian Information Criteria (BIC), models built on the new measure outperform alternative models especially for estimating the vote for Erdogan. The same information criteria also reveal that replacing the four standard measures with the factor index improves model performance. See Supplementary Appendix B.2.

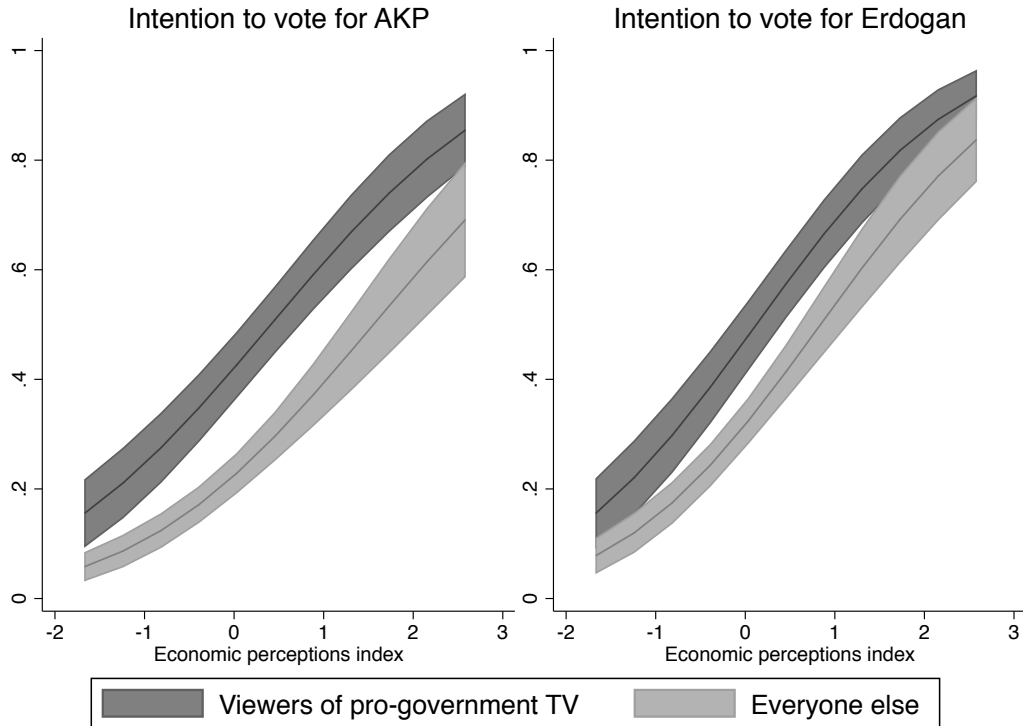


Figure 1: Predicted probability for incumbent vote, controlling for past vote (generated from models 4 and 8)

But how are the economic perceptions formed, and how are they influenced, in turn, by exposure to pro-government media? This is the issue we turn to next.

Formation of Economic Perceptions

A starting point for this exercise would be significance tests of the differences in economic perceptions between those who rely on pro-government TV channels for news and the rest. This is what we do in Table 5. In each case, we divide the sample between those who voted for the current incumbents in the last election and those who did not. As expected, pro-government media viewership is associated with significantly more favorable perceptions and lower perceived price levels across both partisanship groups.⁸ The last row introduces the variable *sociotropic overestimation*. The greater the values,

⁸ For the price level, we decided to exclude 13 outlying observations that pointed to at least 1000 percent price inflation. (Official annual rate for 2017 was 12 percent).

the more likely the respondent is to think that the national economy has done well despite his own experience to the contrary, which suggests influence by authoritative information sources like the media. Interestingly, differences between different media group viewers are significant only among non-past AKP voters for this variable.

Table 5 Test of significance for difference in economic evaluation scores across media viewership and past partisanship

		Pro-govt TV	Other or no TV	Difference	N
Retrospective pocketbook (1 to 5)	Past AKP voters	2.97	2.69	0.28***	1052
	Others	2.45	2.01	0.44***	1323
Retrospective sociotropic (1 to 5)	Past AKP voters	3.22	2.87	0.35***	1038
	Others	2.58	2.01	0.57***	1315
Counterfactual evaluation (1 to 3)	Past AKP voters	2.74	2.5	0.23***	1007
	Others	2.17	1.74	0.42***	1256
Prospective pocketbook (1 to 5)	Past AKP voters	3.23	2.93	0.31***	1018
	Others	2.69	2.16	0.54***	1298
Prospective sociotropic (1 to 5)	Past AKP voters	3.36	3.02	0.34***	1013
	Others	2.75	2.14	0.61***	1297
Perceived price index (%)	Past AKP voters	136	144	-8***	996
	Others	150	157	-7*	1270
Sociotropic overestimation (-2 to 4)	Past AKP voters	0.24	0.18	0.06	1037
	Others	0.13	0	0.13***	1313

Notes: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$ for one tailed differences

While pro-government media viewership is an important source of bias in the formation of economic perceptions, we also believe that the latter has a material basis in how citizens' real incomes change. We do not have panel data where we can trace changes in respondents' income levels. However, we can generate predicted income changes for each individual by exploiting a pseudo panel of Turkish voters surveyed monthly by the same research company (KONDA), based on the same sample selection and survey methodology over a period of two years (a database utilized in somewhat similar fashion by Marschall et al., 2016). This is a series of surveys from which we also obtain the February 2018 data examined so far. Now, our strategy is first pooling

reported household income for the entire pseudo panel, adjusting them for monthly inflation, regressing income on certain demographic characteristics, thus arriving at predicted real income for various demographic groups, and secondly, generating predicted real income *growth* for these groups for a given period of interest.⁹ We will then see whether economic perceptions in February 2018 had a meaningful relationship with this proxy measure of real income growth over the previous period.

For this purpose, first, for the given period (t), we predict the logarithms of incomes ($\log(y)$) of each group (i) by OLS regressions in the following form:

$$\widehat{\log(y)}_{it} = \beta_0 + \beta_1 region_{it} + \beta_2 edu_{it} + \beta_3 resid_{it} + \beta_4 gender_{it} + \beta_5 occup_{it} + \varepsilon_{it}$$

where *region* is the respondent's location in one of Turkey's seven geographical regions, *edu* is the level of education (primary school & no degree, middle school, high school, university), *resid* is the type of residential area (rural, urban, metropolitan), and *occup* is occupation (capitalist/white collar, worker/artisan/farmer, retired, housewife, student, unemployed). The Pearson correlation coefficient between our predicted group incomes and household incomes in February 2018 is 0.447.

Next, we take the logarithm of the predicted incomes of each group using natural logarithmic conversion. Last, we estimate the one-year growth in incomes of each group.

$$growth1_i = \frac{\hat{y}_{it} - \hat{y}_{it-1}}{\hat{y}_{it-1}}$$

⁹ As in the rest of the article we use household income adjusted for OECD's square root scale for predicting income growth rates of each group. Moreover, the household incomes (y) in OLS regressions for all months are adjusted for inflation using the Consumer Price Index for February 2018 as the base month. See Supplementary Appendix A.3.

Table 6 Estimates of respondents' economic evaluation scores

	Ordered probit						OLS
	Retro. pocket.	Retro. socio.	Counter. evaluat.	Prospec. pocket.	Prospec. socio.	Socio. overest.	Log of prices
<i>Highlighted controls (see Table 4 for full list)</i>							
Log. income	0.179*** (0.067)	0.072 (0.061)	0.061 (0.038)	0.119* (0.064)	0.029 (0.065)	-0.118** (0.050)	-0.052*** (0.017)
Past AKP	0.641*** (0.068)	0.697*** (0.066)	0.881*** (0.092)	0.643*** (0.084)	0.685*** (0.082)	0.180*** (0.066)	-0.081*** (0.016)
Left-right	0.084*** (0.011)	0.077*** (0.015)	0.115*** (0.016)	0.087*** (0.014)	0.087*** (0.013)	0.002 (0.014)	-0.012*** (0.004)
<i>Main predictors</i>							
Pro-govt. TV	0.334*** (0.056)	0.410*** (0.067)	0.482*** (0.097)	0.419*** (0.078)	0.398*** (0.066)	0.134** (0.068)	-0.041* (0.022)
Income growth	0.010** (0.004)	0.007** (0.003)	0.005 (0.006)	0.007** (0.004)	0.009** (0.004)	-0.004 (0.005)	0.001 (0.001)
Intercept	Multiple cut-offs						5.392*** (0.11)
N	1,918	1,903	1,845	1,831	1,876	1,901	1,858
McFad.'s R ²	0.115	0.126	0.193	0.166	0.125	0.016	0.069

Notes: Province-level clustered standard errors in parentheses. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

We thus generate simulated one-year individual income growth, to use as a proxy of real economic change experienced by the respondents.¹⁰ In Table 6, we show multivariate estimates of February 2018 economic perceptions, including this simulated growth proxy among the predictors in addition to the full set of controls utilized earlier for the estimation of the vote choice. The income growth rate turns out to be a significant determinant of the standard perception measures while failing to attain significance for the other measures. Controlled for the income growth proxy, pro-government media viewership is still associated with more favorable economic assessments, lower perceived price levels,¹¹ and higher likelihoods of sociotropic overestimation, confirming H5 and

¹⁰ To generate more accurate coefficients for this regression, we enlarge the income sample by using two-month periods as our interval. Hence, the predicted group incomes for our current period are estimated using pooled data from two monthly surveys for the January 2018- February 2018 period, and for the one-year lag we use data from two surveys for January 2017 and February 2017. See Supplementary Appendix A.3 for details.

¹¹ To undertake an OLS estimation of the perceived price levels, this time we include all available observations but take the natural logarithm of the values.

H7. When we separate past-AKP voters and everyone else (not shown), media effects are successfully replicated for both subsets on all variables, except for price levels—for which media effect attains statistical significance for the entire sample only.

In addition, there is a strong positive association between pro-government TV viewership and counterfactual evaluations, and it does not disappear when we include retrospective sociotropic evaluation among the control variables, as shown in Table 7 below. *Regardless of how they view actual economic performance*, the audience of pro-government TV are more likely to think that it could be worse under alternative leadership. Another way to articulate this phenomenon is that, while there is a theoretically expected positive association between the counterfactual and retrospective evaluations, the association is substantially weaker for the subset of pro-government TV viewers. In other words, while individuals tend to base their view of imagined alternatives on their own judgment of actual economic performance, viewers of pro-government TV do this to a lesser extent, as we predicted in H8.

Table 7: Counterfactual rationalization across media audience groups

Ordered probit analysis of counterfactual evaluations			
	Full sample	Viewers of pro-govt TV	Everyone else
<i>Highlighted controls (see Table 4 for full list)</i>			
Left-right	0.099*** (0.017)	0.099*** (0.033)	0.095*** (0.019)
Past AKP voter	0.738*** (0.082)	0.764*** (0.140)	0.697*** (0.098)
<i>Main predictors</i>			
Pro-govt. TV	0.392*** (0.098)		
Income growth	0.003 (0.006)	0.024*** (0.009)	-0.008 (0.006)
Retrospective sociotropic	0.304*** (0.048)	0.203*** (0.046)	0.363*** (0.062)
N	1,823	634	1,189

Notes: Province-level clustered standard errors in parentheses. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

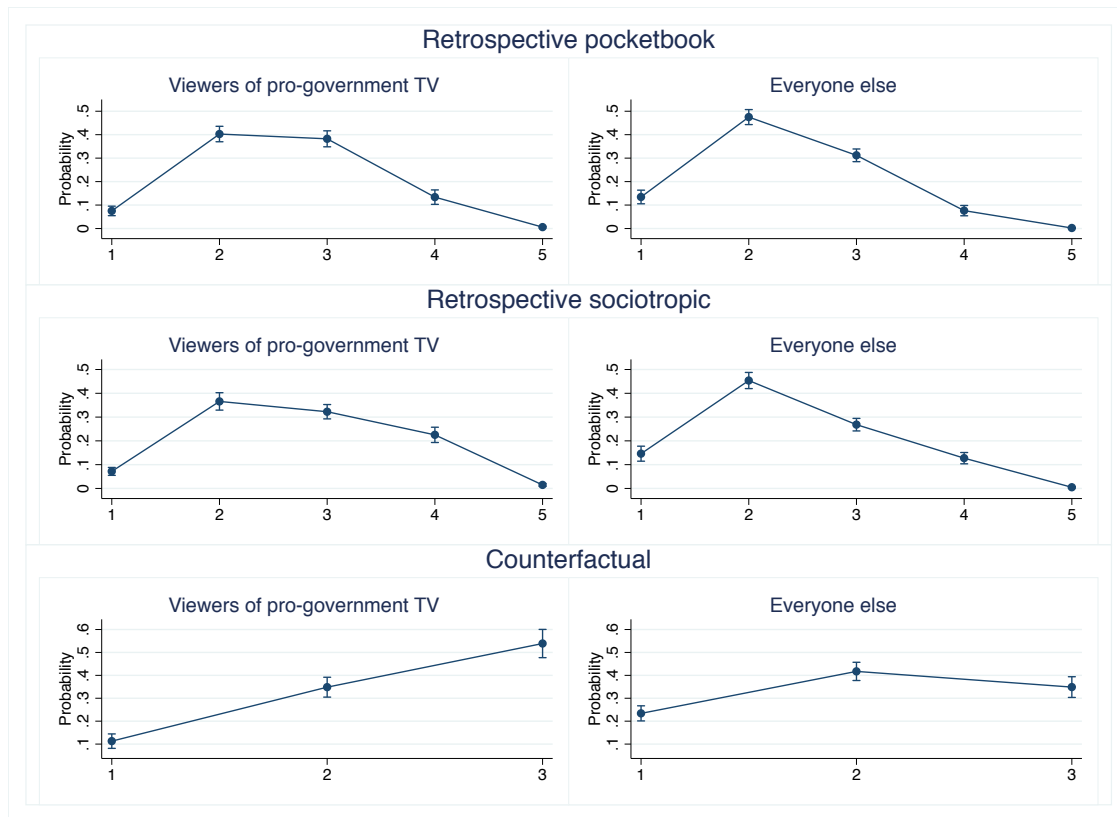


Figure 2: Predicted probabilities of economic evaluations, controlling for past vote and income growth proxy. The y-axis shows the predicted probability of observing each value (shown in the x-axis) of the economic perception measure named, based on the regression analyses found in Table 6.

Moving on, in H6 we predicted that the effect of pro-government media exposure on political views will be stronger the more remote the question is to the individual's actual daily experience. The effect should be smaller for the pocketbook, which people can directly experience, and larger for the national economy, for which people would have to rely more on what they learn from the media. The effect should be the largest when it comes to considering what would happen to the national economy if the incumbent was replaced because it requires hypothetical thinking about the competence of opposition leaders who have never assumed office. Judging by coefficients for media across the models (and normalizing their effects in terms of 1 standard deviation change in the outcomes, see Supplementary Appendix B.2), these expectations are confirmed if we exclude the prospective measures from the picture. This partial support for our

hypothesis is not altogether surprising: Prospective evaluations are often incoherent and unstable (Kinder and Kiewiet 1981). The literature provides stronger grounds for understanding where retrospective evaluations come from—after all they relate to a time period that has actually been experienced (Healy and Malhotra 2013, Funk and García-Monet 1997). In any case, the media effect is substantially the largest when it comes to the evaluation of *counterfactual* alternatives. In Figure 2 the predicted probabilities for selected economic evaluation measures are illustrated for viewers of different TVs (when all other variables are held at mean, based on table 6). It shows that the differences between viewers of pro-government TV and everyone else become more substantial from pocketbook to sociotropic and then to counterfactual evaluations.

All in all, various kinds of evidence suggest that pro-government media viewership weakens the connections between how an individual perceives her own pocketbook, the national economic performance, and the attractiveness of imagined alternatives.

Instrumental Regression Analysis for Vote Decisions

It is well known that there may be causal influence of the vote decision on economic perceptions, generating an endogeneity problem when one estimates the former as an outcome of the latter. So far we addressed this issue by controlling for past vote. In this section, we further tackle endogeneity with an instrumental variable (IV) approach, by instrumenting favorable economic perceptions with our predicted group income growth variable. Income growth can be exploited for IV analysis, since it cannot possibly be influenced by the respondent’s 2018 vote decision, and it is also a good predictor of economic evaluations. In the first stage of our IV regression, we estimate favorable economic perceptions ($econ^j$) with the following OLS regression¹²

¹² Ferrer-i Carbonell and Frijters (2004) have shown that the bias with regard to the direction and significance from using OLS in place of an ordered probit estimation is negligibly small. We repeated the

$$econ_i^j = \alpha_0 + \alpha_1 growth_i + \sum_{k=2}^n \alpha_{ki} X_{ki} + \varepsilon_i$$

where $econ_i^j$ is the preferred economic perception index, $growth$ is our predicted income growth for the group that the individual belongs to, and X_k is the set of control variables including the logarithm of adjusted household income and the pro-government media dummy. The second stage consists of a probit regression estimating vote decision, in the following form:

$$incumbent_i^* = \beta_0 + \beta_1 \widehat{econ}_i^j + \sum_{k=1}^n \beta_{ki} X_{ki} + \varepsilon_i$$

$$incumbent_i = 1\{incumbent_i^* > 0\}$$

where \widehat{econ}_i^j is the economic perception index predicted in the first stage, $incumbent$ is the intention to vote for the incumbent and X_k is the same set of control variables in the first stage.

To check whether an instrumental analysis would indeed be methodologically justified for the outcomes of interest, we run Wald tests of exogeneity. For the parliamentary (AKP) vote, Wald tests failed to reject the null hypothesis of no endogeneity at far from conservative levels. Therefore, simple probit estimations of the AKP vote are probably more efficient than instrumental analysis, which we therefore abandon. For the presidential (Erdogan) vote, Wald tests suggest that an endogeneity bias exists at 1% significance level for economic evaluation variables (except for the counterfactual evaluation, which displays weaker endogeneity). Kleibergen-Paap rk LM statistic show that our instrument—predicted income growth rate—is not underidentified, at 1% significance level. Moreover, for retrospective pocketbook evaluation, prospective sociotropic evaluation and index of economic evaluations, Kleibergen-Paap rk Wald F statistics are larger than the critical values of the Stock–Yogo weak ID test at the 20% maximal size, indicating a strong instrument for these

analyses with the *bioprobit* package, which allows the first stage of the instrumental analysis to be administered as an ordinal probit (Sajaia 2008). The results are indeed substantially the same.

variables. For the counterfactual evaluation, income growth proves to be a weak instrument, echoing findings presented in Table 6.

Table 8 IV-Probit estimates for the voting intention for Tayyip Erdoğan

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Instrumented variable</i>						
Retrospective pocketbook	1.291*** (0.071)					
Retrospective sociotropic		1.227*** (0.025)				
Prospective pocketbook			1.271*** (0.039)			
Prospective sociotropic				1.190*** (0.053)		
Counterfactual evaluation					1.638 *** (0.111)	
Index of econ evaluations						1.436*** (0.055)
<i>Highlighted controls (see Table 4 for full list)</i>						
Past AKP voter	0.318 (0.407)	-0.098 (0.315)	-0.022 (0.341)	0.164 (0.354)	-0.528 (0.416)	0.057 (0.358)
Pro-government TV	-0.044 (0.142)	-0.287** (0.109)	-0.230* (0.132)	-0.151 (0.132)	-0.300 (0.172)	-0.238* (0.131)
<i>First stage for the instrumented variable</i>						
Income growth (1 year)	0.008** (0.003)	0.006** (0.003)	0.006** (0.003)	0.008*** (0.003)	0.002 (0.003)	0.007*** (0.003)
Pro-government TV	0.259*** (0.044)	0.363*** (0.051)	0.340*** (0.064)	0.352*** (0.053)	0.251*** (0.051)	0.351*** (0.055)
Wald test (p-value)	0.0013	0.0009	0.0006	0.0005	0.0633	0.0004
Kleibergen-Paap LM	0.0005	0.0250	0.0143	0.0031	0.2652	0.0013
Kleibergen-Paap F statistic	11.889	4.948	5.843	8.653	1.213	10.277
Log pseudolikelihood	-2807.6	-2936.1	-2827.4	-2931.7	-2292.0	-2600.6
N	1,882	1,867	1,846	1,841	1,810	1,828

Notes: Province-level clustered standard errors reported in parenthesis. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Stock-Yogo weak ID critical test values are 16.38 for a 0.1 maximal IV size, 8.96 for a 0.15 maximal IV size, 6.66 for a 0.2 maximal IV size, and 5.53 for 0.25 maximal IV size. IV Probit estimations include all control variables in Table 4.

Table 8 shows IV-probit estimations of the vote intention for Erdoğan. Economic perceptions are strong predictors of the outcome. Moreover, predicted income growth is a significant predictor at the first stage for the standard measures of economic perception, whereas pro-government TV viewership is significant for all measures

including the counterfactual. These results suggest that both real changes in economic conditions and partisan media affect voting intention by shaping economic perceptions.

Table 9 Marginal effects of predictor variables on probability to vote for Erdoğan

	(1)	(2)	(3)	(4)	(5)
<i>Marginal effects for the second stage</i>					
Retrospective pocketbook	1.291				
Retrospective sociotropic		1.227			
Prospective pocketbook			1.271		
Prospective sociotropic				1.190	
Index of economic					1.436
Pro-government TV	-0.044	-0.251	-0.230	-0.151	-0.238
<i>First stage coefficients</i>					
Income growth (1 year)	0.008	0.006	0.006	0.008	0.007
Pro-government TV	0.259	0.363	0.340	0.352	0.351
<i>Total marginal effects</i>					
1% extra income growth	0.010	0.007	0.007	0.009	0.010
Pro-govt TV viewership	0.291	0.194	0.202	0.268	0.267

Notes: Based on estimations in Table 8. The total marginal effect for the impact of 1% extra growth is (first-stage coefficient for income growth*second stage marginal effect for the economic evaluation variable). The total marginal effect for the impact of pro-government media is (first-stage coefficient for pro-government media*second stage marginal effect for the economic evaluation variable + second-stage marginal effect for pro-government media).

The second stage of the instrumental variable analysis produce unexpected signs for the direct effects of both pro-government media and religiosity (and past vote, in some models) on the vote for Erdogan. This is a mathematical artifact of the two-stages estimation technique and should not be interpreted independently from what goes in the first stage: Hernan and Robins (2017) explain that when there is a smaller causal effect of the instrument on the endogenous regressor relative to the effect on the same by an exogenous variable, the coefficient for the latter may be biased to estimate below its true (direct) causal effect, possibly into switching signs. This is the case here. Because religiosity and pro-government media have stronger effects on economic perceptions than the instrument does (the first stage), their influences on the vote choice are absorbed by instrumentalized economic perceptions (the second stage), turning the coefficients for direct effects to negative. In other words, while the predicted income growth instrument

we construct from limited data performs surprisingly well in predicting economic perceptions, it is not strong enough to produce straightforward findings regarding the effect of the non-instrumented variables in a second stage where we estimate vote choice.

In Table 9, using the estimations in Table 8, we show the marginal effects of our economic evaluation variables and predict the effects of pro-government media viewership and 1 percent difference in income growth on the probability of voting for Erdoğan, while holding other variables at their mean.¹³ In sum, pro-government media viewership would increase the probability of voting for Erdoğan between 20.2% and 29.1% and 1% extra growth in individual's predicted group income (compared to other groups) would increase the probability by between 0.7% and 1%.

Discussion and Conclusion

In most settings we know of, favorable perceptions about economic performance increase the likelihood that a citizen will vote for the incumbent (Lewis-Beck and Stegmeier, 2000). In this article we analyzed how these perceptions are formed, utilizing data from the competitive authoritarian case of Turkey. We tested whether citizens who watch pro-government TV channels for accessing the news have significantly higher evaluations of government economic performance. In the absence of experimental treatment, reported TV choice might be endogenous to the respondent's political orientation. To tackle this problem, we controlled for an extensive list of demographic variables in addition to the respondent's vote in the last national election, which can be considered to effectively absorb political orientation. In addition, to investigate whether economic evaluations can be decomposed into real and perceived components, we simulated income growth based on data from income changes over a two-year period derived from a pseudo panel (different samples of Turkish voters repeatedly surveyed using the same

¹³ IV Probit estimates with counterfactual evaluation are excluded from this analysis as growth variables are weak instruments for counterfactual evaluation.

methodology) to test whether the simulated proxy for income growth predicts how respondents evaluate the economy. Our most confident results point to three findings:

First, even in a setting like Turkey where the electorate is highly polarized on socio-cultural grounds, economic motivations are important for the vote decision. Holding past partisanship and demographic differences like religiosity constant, voters are strongly more disposed to vote for the incumbent leader/party if they believe that the economy has been going well, and if they believe that the economy would be badly affected by replacing the incumbent.

Secondly, we demonstrate that, controlled for past partisanship, favorable economic perceptions can be predicted by a measure of real income growth, echoing previous findings from comparative data (Nadeau et al., 2012). We exploit this finding to utilize an instrumental variable approach to estimate vote decisions, to tackle issues of endogeneity. We instrument economic perceptions on a proxy measure of the respondents' real income growth rate over the last year and demonstrate that income growth affects the likelihood to vote for Erdogan by generating favorable economic perceptions. In short, the association between economic perceptions and vote intention is not merely an artefact of partisan bias, and instead has an independent effect on vote decision as well as a real material basis.

Third, nonetheless, watching the news on pro-government TV channels makes economic perceptions substantially more favorable, again controlling for past partisanship and regardless of whether real income growth is accounted for. This holds for questions with an explicit government responsibility component as well as an open-ended question that investigates—with no political cues or suggestive benchmark—the respondent's perceived price inflation rate. Viewing pro-government media also makes respondents more likely to think that the national economy has done better than their own household, a situation that we call “sociotropic overestimation.” In addition, regardless of how they view actual economic performance, the audience of pro-

government TV are more likely to think that it could be worse under alternative leadership—a situation of “counterfactual rationalization.” Strikingly, among all measures of economic perception, the respondent’s evaluation of the counterfactual alternative is the one with the weakest connection to some real measure of income growth, the most strongly affected by media, yet it has the strongest independent effect on the vote decision. This is a substantially important finding considering that even when a majority of the voters believe that the economy is going badly, a plurality still believes that the economy would have been worse if the incumbent was replaced by someone else.

Our findings testify both to the capacity of the individuals to anchor their economic perceptions on their individual economic fortunes, and to the media’s ability to weaken the connections between an individual’s personal experience, her perception of the national performance, and her view of the imagined alternatives. We can therefore suggest one explanation for why voters, without fooling themselves about their own economic situation, may still keep voting for an incumbent performing badly: it is because pro-government news media makes the national economic costs of not re-electing the incumbent look higher than it probably is.

This also means that, when the economy is manifestly deteriorating, authoritarian incumbents may try to use media influence to convince the electorate that their own household experience does not reflect national reality and that the alternatives would be even worse. In a recent paper Guriev and Treisman (2018) write of leaders such as Putin and Erdogan as “informational autocrats”, who aspire to be loved rather than feared, and bolster popular support for their regimes chiefly by the manipulation of information (also see Rozenas and Stukal, forthcoming). Previous studies have not tested in the individual level whether pro-government news is actually effective in bolstering favorable perceptions of economic performance, increasing the voters’ likelihood to vote for the incumbent. We now present evidence from Erdogan’s Turkey compatible with this thesis.

These findings should be highly relevant to cases of competitive authoritarianism like Russia and Hungary, and arguably even to more liberal cases like USA where the President Trump has been directing supportive statements to what he sees as friendly media groups and verbal attacks towards non-friendly ones (Levitsky and Ziblatt, 2018). Our findings should be discussed and corroborated in future work.

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