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## RESEARCH NOTE

# Measuring Political Participation—Testing Social Desirability Bias in a Web-Survey Experiment

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How valid and reliable are the measures of political participation used in the major social science surveys? We know that there is considerable variation in estimated levels of political participation in different surveys (Keeter, Zukin, Andolina, & Jenkins, 2002). But as question wordings as well as the response options, time constraints, survey techniques, and levels of nonresponse differ, uncertainty surrounds to what extent the item construction biases the results.

For voting, we know that self-reported levels in surveys often are overestimated. This is most likely because of social desirability bias, that is, the fact that some respondents falsely claim to have voted because they are embarrassed to admit that they really did not (Belli, Moore, & VanHoewyk, 2006; Belli, Traugott, Young, & McGonagle, 1999; Clausen, 1968; Duff, Hanmer, Park, & White, 2007; Gorecki, 2011; Granberg & Holmberg, 1991; Granberg & Holmberg, 1992; Holbrook & Krosnick, 2010). Other forms of political participation than voting have, however, gained limited attention within this field. For example, Verba, Schlozman, and Brady (1995, p. 615) point out that: "It certainly seems possible that we also have biases in the reports of other activities [than voting]". Yet, empirical analyses on this issue have been scarce.

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¹One might raise the objection that it is unclear whether all studied forms of political participation are seen as socially desirable in the same way as voting. Although we have not measured what is and is not considered a socially desirable behavior, as for example, Holbrook, Green, & Krosnick (2003), we do argue that in the Swedish context, all types of political behavior under study are subject to substantial socially desirability pressure. For example, in the Swedish government's official report on democracy, it was expressed that "political participation is a duty rather than a right. Ideally, all citizens should participate directly" (SOU, 2000:1, p. 22, our translation). In our view, every (legal) form of participation is one additional way in which citizens' can exercise political influence. Results from survey research support this claim. The nationally representative Swedish Citizen Survey from 2002 (principal investigator Anders Westholm) included the question: "what is important to do in order to be a good citizen?" Respondents were asked to rate "voting," "try to influence political decisions," and "boycotting/buycotting" on a scale from 0 (not important) to 10 (very important). The mean value for voting was 8.0, for "try to influence political decisions" it was 6.2, and for "boycotting/buycotting" 7.2. Hence, although different in their

To overcome the problem of overreporting, voter turnout surveys have tried to incorporate question formulations as well as response alternatives aiming to normalize inactivity and avoid social desirability bias to obtain as valid and reliable measures of turnout as possible. Belli et al. (1999) use a split ballot experiment to compare the standard American National Election Studies (ANES) question with an experimental question, emphasizing both social desirability and memory failure separately. They find that the experimental question significantly decreases reported voting. However, a replication of the Belli et al. study in Israel shows no significant effects of the experimental question introduction (Waismel-Manor & Sarid, 2011). Hence, the generalizability of these findings to other contexts remains an open question. Duff et al. (2007) show that providing respondents with the opportunity to give face-saving response options decreases the reported turnout by about eight percentage points. Belli et al. (2006) find that a question version that contained both memory cueing techniques and face-saving response options resulted in significantly lower levels of reported voting than the standard ANES questions. Moreover, Holbrook and Krosnick (2010) show that using the item-count technique leads to significantly lower levels of reported turnout in telephone surveys.

Keeter et al. (2002) offer the only previous study using a question wording experiment on a wide array of forms of political participation other than voting. However, they find relatively modest results from their own manipulations intended to reduce social desirability bias in reported levels of different forms of participation. Nevertheless, when providing a question introduction intended to normalize inactivity or providing face-saving response alternatives, the reported levels of voting are slightly reduced.

In this research note, we test the effects of both of introductions and response options. As regards response options, the idea behind our treatment is that participants might more easily admit that they have not participated in political activities if they are not forced to choose a definitive "no" alternative but instead may opt for a face-saving version of the "no" alternative (compare Holbrook & Krosnick, 2010). Hence, social desirability bias is hypothesized to be reduced when providing a way to say "no" that does not make respondents feel shameful.

The obvious follow-up question is: Who are the respondents who tend to over-report their level of political participation? Although different studies use different measures, findings indicate that overreporting occurs more frequently among individuals with greater political interest, higher education, strong party identification, or high political attentiveness (Granberg & Holmberg, 1991; Karp & Brockington, 2005). Moreover, experimental studies have shown that citizens with a high propensity to vote are more likely to respond to social desirability issues (Panagopoulos, 2010). The reason why these groups overreport more than others is most likely that they are those who find political participation most socially desirable. Given that our sample consists of respondents with higher political interest than the population in general, it is reasonable to expect social desirability bias in the results.

character, all these three forms of participation were generally considered to be important and desirable for a good citizen to perform.

To sum up, from previous research, we know that there are two ways to modify survey items to reduce overreporting because of social desirability bias: to include a question introduction that normalizes inactivity (Keeter et al., 2002) or to include face-saving response alternatives that indicate that inactivity is socially accepted (Belli et al., 1999, 2006; Duff et al., 2007; Holbrook & Krosnick, 2010; Morrison & Brown, 2009).

#### **Experimental Setting and Study Population**

Previous studies have mainly tried to reduce overreporting to get as valid measures as possible. We take another approach and use items that increase, as well as items that decrease, reported participation to gauge the differences resulting from using different item constructions commonly applied in the major surveys.

In this experiment, we test an experimental set-up that draws on and develops the designs used by Belli et al. (1999, 2006). We combine three forms of question introductions with two sets of response alternatives resulting in a full factorial design with six treatments in total (Table 1). We test three different question introductions aiming at: (a) normalizing inactivity, (b) expressing social desirability, and, as a control, (c) give a neutral introduction to the question (neutral in the sense that it neither expresses that political participation is desirable nor aims to normalize inactivity). By comparing these three question introductions, we can test the effects of both trying to increase and decrease social desirability bias on political participation. We also test two different sets of response options: (a) only dichotomous response options (yes/no) and (b) dichotomous response options (yes/no) in combination with face-saving response options ("have done this before," "have not done this but would consider doing it in the future").

We ask for 11 different forms of political participation that represent both institutionalized and noninstitutionalized political activities. Originally, the items were chosen to correspond to five modes of participation that have been theoretically derived and empirically supported in previous research on participation in the European context: voting, party activity, contacting, protest activity, and consumer participation (Teorell, Torcal, & Montero, 2007). Although differencing between modes of participation is the most established way to approach political participation since the seminal work by Verba and Nie (1972), we constructed one additive index that simply is the sum of the number of forms of participation performed (we further elaborate on the rationale behind the index construction in Appendix A, where we present a number of robustness checks). The index consists of the following items: (1) voting, (2) contacts with politicians, (3) contacts with civil servants, (4) active participation in political party, (5) contacts with mass media, (6) active work in action group, (7) petition signing, (8) demonstrating, (9) boycotting, (10) having donated or raised money, and (11) internet campaigning (Cronbach alpha scale reliability coefficient: .709). We use this index as the dependent variable in our analysis. Hence, the dependent variable indicates how many acts of participation each respondent reports having performed during the past 12 months (irrespective of the item constructions applied and the kind of no-option chosen).

Table I
Summary of Treatment Conditions

		Question introduction	
Response options	Normalizing inactivity: Many people feel that they have little time to get engaged in societal and political issues. Have you been able to do any of the following things in the last 12 months?	Neutral: There are different ways to engage in societal and political issues, have you performed any of the following activities in the last 12 months?	Social desirability: It is important for a well-functioning democracy that many people actively participate in societal and political issues. Have you engaged in any of the following activities to express your political opinions in the last 12 months?
i: "Yes" o: "No"	T1 N: 111 Mean: 4.532 SD: 2.346	T2 N: 116 Mean: 4.353 SD: 2.510	T <sub>3</sub> N: 97 Mean: 4.227 SD: 2.238
1: "Yes, I have done it the last year."	T <sub>4</sub>	T <sub>5</sub>	T6
o: "Have done X before." o: "Have not done X, but would be able to do X."	N: 112 Mean: 3.768	N: 99 Mean: 3.616	N: 86 Mean: 3.884
o: "No, I have not done it and would never under any circumstances do it."	SD: 2.274	SD: 2.376	2.447

Unfortunately, there is no objective source of information that could be used to verify each respondent's answers (such as government registers in the case of voting). Thus, it is not possible for us to know the exact level of overreporting (or underreporting). We take a more modest approach and analyze whether manipulations of item constructions result in variations in reported behavior (compare Peter & Valkenburg, 2011). We interpret higher levels of reported behavior when face-saving responses are absent or when question introductions induce social desirability bias as

an indication of overreporting. However, overreporting need not be because of respondents lying or reporting what they think is a socially desirable behavior. It could also be explained with reference to multiple conflated events (Belli, 1998) or construction of a pragmatic meaning of the question (Schaeffer, 2000). Thus, respondents might not correctly remember whether they signed a petition or contacted a politician during the specific period mentioned. Moreover, it is also possible that some respondents view themselves as active citizens, and thus answer that they have been active during a specific period (when face-saving response options are absent), even though the political activity was of older date. Although we acknowledge that both of these scenarios also lead to overreporting of performed political activities, we argue that the tendency to report a "yes" rather than a "no" about a political activity can be interpreted as a social desirability bias. If the behavior asked about is not seen as socially desirable, memory failure should lead to both false-positive and false-negative results.

The survey experiment was conducted using the Citizen Panel hosted by the Multidisciplinary Opinion and Democracy Research Group (MOD) at the University of Gothenburg, Sweden. The Citizen Panel is an online survey sent out to ~8,000 participants on regular intervals. Our data were collected in the second wave of the Citizen Panel, carried out in March and April 2011. In total, 738 participants were assigned for our survey experiment, and 640 answered the survey (participation rate 86.7%).

As the respondents of the Citizen Panel are recruited and not chosen using a probability sample, it is important to note that the respondents are not representative for the Swedish population.<sup>2</sup> As a consequence, we focus only on the effect of the experimental treatments for reported levels of political participation. It is important to note that our objective is not to estimate accurate population values, as the data are not suited for such purpose (compare Baker et al., 2010). Rather, our more limited purpose is to evaluate and test the effects of applying different item constructions using a randomized experiment within this group of participants.<sup>3</sup>

#### Results

Descriptive statistics including the mean levels and standard deviations for each treatment are presented in Table 1 (for more information on the treatments,

<sup>2</sup>Participants were recruited through various sources, but mostly through banners on websites of Swedish local newspapers. Hence, we cannot report any American Association of Public Opinon Research (AAPOR) response rate at the recruitment stage. The survey respondents deviate from the population of Swedish adults in a number of ways. First of all, the respondents are all Internet users and probably regular consumers of news online, as a majority of them were recruited from local newspapers' web pages (Dahlberg et al., 2011). Although 85% of the adult Swedes have access to Internet, and as many as 95% between the ages of 18 and 54 years also have Internet access (Findahl, 2010), a nonprobability sample in an online web survey by definition implies that certain groups, such as the older, are underrepresented, as this group, to a much lesser extent, are Internet users. Thus, the survey includes an overrepresentation of young respondents, males, highly educated, and highly politically interested individuals, compared with a traditional survey using a probability sample representing the Swedish population (Dahlberg, et al., 2011). There were no biases in the responses to this particular survey in comparison with the original panel.

<sup>3</sup>To validate the randomization, we compared the mean levels of age, gender, political interest, and years of education among the participants in our six treatment groups. There are no significant differences across the treatments that can be assigned to gender, age, education, and political interest.

Table 2
Estimated Levels of Political Participation Resulting from Different Item Constructions, OLS

	Model 1	Model 2
Introduction: social desirability (T <sub>3</sub> and T <sub>6</sub> )	0.052 (0.240)	
Introduction: normalizing inactivity (T1 and T4)	0.134 (0.228)	
Face-saving response options (T4–T6)		-o.626*** (o.190)
Constant	4.014*** (0.163)	4·377*** (0.131)
Observations	621	621
$R^2$	100.0	0.017

Note. For question wording, see Table 1.

Standard errors in parentheses, \*p < .10, \*\*p < .05, \*\*\*p < .01.

Supplementary Appendix Table B2, provides frequencies from the original coding divided on all response options). As for inferential statistics, we begin by examining the main effects of question introductions. To compare the reported levels of political participation resulting from the different question introductions, we estimate an Ordinary Least Square Regression (OLS) model (Model 1) with the participation index as the dependent variable. We use the neutral question introductions (T2 and T5) as the baseline, including a dummy variable for the question introduction aiming to normalize inactivity (T1 and T4) and another dummy variable for the question introduction expressing social desirability bias (T3 and T6). The results from Model 1 are presented in Table 2. We find no main effects of any of the question introductions. The question introduction aiming to normalize inactivity and the question introduction expressing social desirability do not differ significantly from the neutral introduction.

Next, we estimate the main effect of including face-saving response alternatives. Recall the important difference that participants in  $T_1$ – $T_3$  only got a dichotomous response alternative, whereas participants in  $T_4$ – $T_6$  got two face-saving response alternatives in addition to the "yes" and "no" alternatives. In Model 2, we include a dummy variable for face-saving response options ( $T_4$ – $T_6$ ) and use the other treatments as the reference category. Here, we find a significant main effect, including face-saving response alternatives considerably decreases the reported levels of participation during the past 12 months (p < .01). On average, the reported level of participation is reduced by  $\sim$ 0.6 U on the 0–11 scale, which corresponds to a decrease of  $\sim$ 5.5% points.

As much of the previous literature focuses on voting, it is worth mentioning the effects of the manipulations on this item separately. As a matter of fact, we found no

<sup>&</sup>lt;sup>4</sup>We also tested the interaction between question introductions and sets of response alternatives to test whether the combination of these two forms of treatments alters the results. We find that the interaction terms are not significant and can thus conclude that none of the question introductions have any different effects in combination with the two sets of response options.

significant effect of introductions or response options on voting (Appendix Table A1). For example, face-saving response options significantly increases all forms of reported participation but voting. This might be because of the high level of political interest among respondents in our sample; reported voting is on average  $\sim 96.5\%$ .

Which face-saving alternative accounts for the largest reduction in reported participation? If we combine T<sub>I</sub>-T<sub>3</sub> and T<sub>4</sub>-T<sub>6</sub>, respectively, we find that when dichotomous response alternatives were given, participants reported that they had performed on average 4.4 political activities in the past year. When face-saving alternatives were added, the average number of reported activities was reduced to 3.8. In both cases, the level of political activity among our participants was relatively high.<sup>5</sup> When including the face-saving response alternatives, participants answered that they on average had engaged in 2.4 activities before last year, that they had not done but would consider doing 3.0 activities, and that they had not done and would not consider doing 1.8 activities.

As a final test, we also analyzed whether reported participation was reduced more among some groups of participants than others when adding face-saving alternatives. The results showed that reported participation was not reduced more in some groups (as regards to age, gender, education, or political interest) than in others when face-saving alternatives were applied (Supplementary Appendix Table D1).

#### Discussion

Our results have some important implications for survey research. As we find that all participants in our sample—regardless of group characteristics—are affected by face-saving response options to the same extent, overreporting does not affect the correlations with other variables and probably does not bias analyses of causal effects on political participation. If our results are generalizable, only the assessment of point estimates should differ between different item constructions.

However, our study has several shortcomings that are important to address. The null findings regarding the impact of question introduction could be because of the fact that our sample size is too small. For a medium-sized effect, our sample sizes are satisfactory; the minimum required sample size is 76 when anticipating a medium effect size ( $f^2 = 0.15$ ), with a power at the conventional 0.8 level and p = .05. However, for a small effect size, our samples are indeed too small, and given the null results, we will consider larger samples in our future studies.

An additional shortcoming that could have contributed to the null findings regarding the lack of impact of question introductions is the absence of manipulation checks. It may be that respondents do not pay much attention when reading question introductions or that the introduction stimuli are too weak compared with a longer vignette. A way to test this, which to our knowledge not yet has been tried in surveys of political participation, would be to include an Instructional Manipulation Check (IMC) to test whether respondents actually pay attention to the question introductions (compare Oppenheimer, Meyvis, & Davidenko, 2009). A follow-up question asking about the importance to be an active citizen or whether the respondent generally

<sup>&</sup>lt;sup>5</sup>See Supplementary Appendix B for a discussion on this issue.

perceives oneself as an active citizen could have been an indicator of whether the introductions had any effects.

The choice of survey mode and its effect on the size of the social desirability bias in reports of political participation is also a shortcoming worth highlighting. On the one hand, our own review of the referred studies reveals that overreporting of voting occurs regardless of survey mode, and effects of social desirability bias could be found in all studies that explicitly test this. The only exception is the study by Holbrook and Krosnick (2010), in which levels of reported voting could not be reduced using the item-count technique in web survey experiments. Moreover, Waismel-Manor and Sarid (2011) were unable to replicate the findings of Belli et al (1999) when using validated voting records in Israel. On the other hand, we know that participants in Internet panels provide more accurate responses in general than respondents in mail surveys, telephone surveys, and face-to-face interviews (Kreuter, Presser, & Tourangeau, 2008). Results from previous studies show that respondents' inclination to overreport political attitudes decreases with less interaction with the interviewer (Díaz de Rada, 2011). This would indicate that the social desirability bias would be stronger in face-to-face and telephone surveys than in our Internet panel.

At the same time, and in direct contrast to what we stated earlier in the text, the use of an Internet panel based on a nonprobability sample and with an overrepresentation of politically interested individuals makes it more likely to expect social desirability biases in answers compared with a survey based on a probability sample of the general population. From previous studies of voting, we know that overreporting occurs more frequently among the politically interested (Granberg & Holmberg, 1991), but we also know that other variables, such as partisanship, education, and political knowledge, also are of importance. Thus, future replications should try to compare social desirability bias in political participation across survey modes with probability samples and especially focus on the comparison between self-administrated and non–self-administrated modes and compare respondents across a wider range of background variables.

Despite these reservations about the generalizability of our findings, we conclude that surveys that rely on two clear "yes" and "no" response options most likely overestimate the level of political participation. Hence, when using such surveys, conclusions about the true population averages with regard to the levels of political participation should be made with caution.

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<sup>&</sup>lt;sup>6</sup>A possible objection is that the effect is only a result of adding more response options and not that respondents are attracted by the face-saving options. Supplementary Appendix B presents the frequencies from the original coding. It is evident that respondents indeed tend to choose the face-saving options rather than the non-face-saving no-alternative.

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#### Supplementary Data

Supplementary Data are available at *IJPOR* online.

# APPENDIX A Robustness Checks

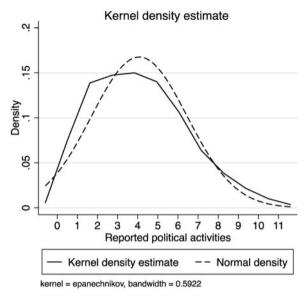
We performed a number of robustness checks to ensure that the main finding (including that face-saving response options decrease reported participation) is not a statistical artifact.

First, one concern in experimental studies is that the randomization has not worked well enough, and that remaining imbalances postrandomization affect the results. Thus, we included the four background variables (education, gender, age, and political interest) to stabilize for remaining imbalances postrandomization in all robustness checks (compare Gerber, Huber, & Washington, 2010). All control variables are mean centered, so that the treatment dummies reflect the reported level of participation for the average participant.

Second, using a combined additive index as independent variable might seem problematic, as previous research has usually distinguished between different modes of participation. We take into account that it might be controversial to use a single index as dependent variable, although previous research shows that there are different dimensions of political participation. However, our own factor analysis (EFA, unrotated solution) reveals one dimension in the data. All items except voting loads on one dimension, and the factor loadings are ≥.42. Contact with politicians and contact with civil servants load on a second "contact dimension," yet the factor loadings are stronger on the first dimension. The factor loading for voting only reached .11 on the first dimension and .19 on a fourth "voting" dimension (however, Eigenvalue drops <1 already for the second factor). However, for our purposes, using the additive index is a feasible choice, but we will also report voting separately. The distribution of the dependent variable is illustrated in Appendix Figure A1, which shows that it roughly resembles a normal distribution.

To make sure that our finding is not a consequence of the way we constructed the dependent variable, we made additional analyses using different constructions of the dependent variable. However, we want to emphasize that as our purpose is to test the effects of different item constructions, and as these effects are in the same direction for all items, we find it reasonable to use an additive index. We arrived at this conclusion by estimating 11 logit models with each of the items (forms of political

Figure A1
Distribution of the dependent variable, index of political participation



activities) as dependent variables, presented in Appendix Table A1. Results from these models show that including face-saving response options decreases reported participation for all items (the logit coefficients for "face-saving response options" vary from -.52 to -.09). However, it only reaches statistical significance for five of the items: boycotting, worked in action group, signed petition, contact with politicians, and contact with media. Does this imply that including face-saving response options does not significantly decrease reported participation for the six other items, or is it simply not possible to gauge the treatment effect on all items? To further test this, we constructed an index of the six items for which the treatment had an insignificant effect and estimated an OLS model. The results, presented in Appendix Table A2, show a significant negative effect of including face-saving response alternatives (coefficient: -.23, p = .036). Drawing on these additional analyses, we conclude that our main finding is indeed robust.

Third, as the dependent variable consists of the number of acts reported, one could argue that it calls for another estimator than OLS, such as ordered logit. Results from ordered logit are presented in Appendix Table A<sub>3</sub>. As there are no significant differences between the question introductions, we used only a dummy variable indicating that face-saving responses were included ( $o = T_1 - T_3$ ,  $I = T_4 - T_6$ ). However, ordered logit produce substantially the same results (including that face-saving response options significantly decrease reported participation).

Fourth, to detect that our results are not driven by a few influential observations, we re-estimated our models with bootstrap and jackknife regression estimators. The results remained the same, as presented in Appendix Table A4.

Table A1 Results from Logit on Each of the Participation Items

	Contacts with politicians	Contacts with civil servant	Active participation in political party	Active work in action group	Contacts with mass media	Petition signing	Demonstrating	Boycotting	Internet campaigning	Voting	Donated or raised money
Introduction: social desirability (T <sub>3</sub> and T6)	-0.324 (0.254)	-0.204 (0.247)	-0.239 (0.309)	-0.223 (0.326)	-0.139 (0.264)	0.582**	0.477* (0.263)	0.061	0.019	-0.553 (0.698)	-0.037 (0.251)
Introduction: normalizing inactivity	-0.053 (0.242)	-0.066 (0.236)	-0.088 (0.291)	-0.356 (0.308)	-0.023 $(0.251)$	0.534** (0.219)	0.511** (0.248)	0.235 (0.237)	0.252 (0.247)	-0.624 (0.649)	0.020 (0.239)
Face-saving response options (o = $T_1$ - $T_3$ , $t$ = $T_4$ - $T_6$ )	I.897*** (0.208)	I.592*** (0.203)	3.415*** (0.254)	3.742*** (0.275)	2.323***	0.524*** (0.184)	2.050*** (0.215)	1.320*** (0.203)	I.705*** (0.218)	0.022	1.682***
Age	-0.024 (0.046)	0.047	-0.035 (0.054)	-0.056 (0.057)	0.090*	-0.027 (0.041)	-0.103** (0.046)	0.031	0.134*** (0.046)	-0.003 (0.113)	-0.026 (0.045)
Age2	0.000)	00.000	0.000 (0.001)	0.000 (0.001)	-0.001** (0.000)	0.000	*100.0 (0.000)	(0.000)	-0.001 (0.000)	0.000 (0.001)	0.000)
Gender (male)	0.052	0.167	0.048	0.261	-0.030 (0.227)	-0.659*** (0.202)		-0.414* (0.219)	-0.467** (0.228)	0.432	-0.343 (0.220)
Year of education	-0.058 (0.043)	0.062	-0.136** $(0.053)$	-0.002 (0.053)	0.108**	0.031	-0.101** (0.044)	0.069*	0.021	0.147	0.061
Political interest	0.550***	0.490***	0.261	-0.274 (0.208)	0.277	0.077	0.191	0.071	0.353**	0.585	0.249
Constant	-0.883 (1.263)	-4.022*** (1.226)	0.452	0.196	-5.021*** (1.320)	-0.047 (1.124)	1.691	-1.671 $(1.208)$	-4.088*** (1.265)	(3.045)	-0.929 (1.242)
$\frac{N}{P}$ Seudo $R^2$	509 0.160	511	511 0.382	509 0.421	510	509 0.044	509 0.191	, 508 0.085	508 0.135	512 0.051	508 0.130

Note. Standard errors in parentheses, \*p < .10, \*\*p < .05, \*\*\*p < .01. For question wording, see Table 1 and Supplementary Appendix C.

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Table A2
Results from OLS, Index Consisting of Active Participation in Parties, Active
Participation in Action Group, Contacts with Media, Demonstrating, Boycotting,
Voting, and Donated Money

Treatment	
Face-saving response ( $0 = T_1 - T_3$ , $I = T_4 - T_6$ )	-o.226** (o.108)
Socioeconomic factors	, ,
Age	-0.024 (0.024)
Age2	0.000 (0.000)
Gender (male)	-o.349*** (o.116)
Year of education	-0.002 (0.022)
Political interest	0.474*** (0.087)
Constant	2.344*** (0.077)
N	504
Pseudo R <sup>2</sup>	0.088

Note. Standard errors in parentheses, \*p < .10, \*\*\*p < .05, \*\*\*\*p < .01. For question wording, see Table 1 and Supplementary Appendix C.

Table A<sub>3</sub>
Results from Ordered Logit

Treatment	
Face-saving response ( $0 = T_1 - T_3$ , $I = T_4 - T_6$ )	-o.518*** (o.159)
Socioeconomic factors	
Age	0.052 (0.035)
Age2	-0.001* (0.000)
Gender (male)	$-0.477^{***}$ (0.172)
Year of education	0.037 (0.033)
Political interest	0.935*** (0.135)
Cutpoints	, , , , , , , , , , , , , , , , , , , ,
Cutpoint 1	-4.741*** (0.397)
Cutpoint 2	$-2.077^{***}$ (0.158)
Cutpoint 3	-1.169**** (0.133)
Cutpoint 4	-0.47I*** (0.124)
Cutpoint 5	0.128 (0.122)
Cutpoint 6	0.845*** (0.129)
Cutpoint 7	1.546*** (0.146)
Cutpoint 8 and Cutpoint 9	2.183*** (0.172)
Cutpoint 10	2.826*** (0.214)
Cutpoint 11	3.682*** (0.303)
Constant	4.803*** (0.509)
N	497
Pseudo R <sup>2</sup>	0.033

Note. Standard errors in parentheses, \*p < .10, \*\*\*p < .05, \*\*\*\*p < .01. For question wording, see Table 1 and Supplementary Appendix C.

Table A4
Results from OLS with Bootstrap and Jackknife Standard Errors

	Jackknife	Bootstrap (50 replications)
Treatment		
Face-saving response	$-0.637^{***}$ (0.203)	$-0.637^{***}$ (0.187)
$(o = T_1 - T_3, i = T_4 - T_6)$		
Socioeconomic factors		
Age	0.085* (0.043)	0.085** (0.043)
Age2	-0.001**(0.000)	-0.001** (0.000)
Gender (male)	-0.573**** (0.216)	-0.573*** (0.229)
Year of education	0.032 (0.043)	0.032 (0.041)
Political interest	1.199*** (0.162)	1.199*** (0.159)
Constant	4.395*** (0.146)	4.395*** (0.124)
N	497	497
Pseudo R <sup>2</sup>	0.132	0.132

*Note.* Standard errors in parentheses, \*p < .10, \*\*\*p < .05, \*\*\*\*p < .01. For question wording, see Table 1 and Supplementary Appendix C.

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