When do text messages increase voter registration? Comparative evidence from RCTs with a local authority and an advocacy organisation in the UK

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Abstract

Voter registration often involves two types of actors, government authorities and advocacy organisations. We present and compare the results of two RCTs that aimed to increase voter registration in the UK using SMS text messages, relying mainly on non-cognitive, behavioural messaging. The study contrasts the large and positive effects of a text-message intervention conducted in collaboration with a local authority with the null findings obtained from a similar experiment conducted in the same election with an issue advocacy organisation. In the local authority trial, we randomly-assigned unregistered citizens to receive a series of non-cognitive or cognitive mobilisation messages or not to receive any message, while in the advocacy organisation trial, we randomly assigned subjects to receive text messages, either with or without a textback/callback option, or not to receive any message. The local authority's text messages resulted in an increased registration rate of eight percentage-points, which translates into a three percentage-points increase in turnout. The advocacy organisation's text messages neither increased voter registration, nor turnout. The striking differences in results indicate that the type of mobilising organisation might matter for the effectiveness of voter registration campaigns.

Introduction

Voter registration campaigns often involve two types of actors, government authorities and advocacy organisations. In this paper, we report the results from two voter registration trials using SMS text messages which we conducted in collaboration with a local authority and an issue advocacy organisation during the 2021 local elections in England. The social stratification of voter registration is increasingly of concern in the UK (Fieldhouse et al., 2021; Mitchell, 2018), highlighting the persistent exclusion of social groups that already have limited access to economic, social, and political resources in wider society. These trends reflect similar debates in the United States and other countries, where automated voter registration has not been implemented (Holbein and Hillygus, 2020). Over the past decade in the UK, the switch from household to individual voter registration and the future introduction of voter identification requirements (James and Bernal, 2020) have put a spotlight on how behavioural interventions can be used by governmental and non-governmental actors to counteract adverse effects on groups that are likely to be impacted. However, there is not a great deal of warrantable knowledge about the effectiveness of interventions to increase voter registration in the UK (but see John, MacDonald and Sanders (2015); Sweeney et al. (2021), with most evidence coming from the United States (Nickerson, 2015; Mann and Bryant, 2019; Bennion and Nickerson, 2016, 2011). Most of the interventions that have been shown to be effective focus on in-person activities such as canvassing (Nickerson, 2015; Braconnier, Dormagen and Pons, 2017) or classroom-based activities (Bennion and Nickerson, 2016). During the Covid-19 pandemic, impersonal methods of voter registration have naturally attracted increased attention. However, most field experiments on the effects of e-mails on voter registration show null effects on registrations and turnout (Bennion and Nickerson, 2011; Nickerson, 2007; Bennion and Nickerson, 2021) and there is little robust experimental evidence on whether SMS text messages can increase voter registration. Bennion and Nickerson (2011) show that "warm" text messages, sent to individuals who received registration forms by email before, can increase voter registration in the United States, while Harris, Kamindo and Van der Windt (2021) find mixed results in Kenya. Text message reminders did not increase voter registrations on their own, but had a small effect when delivered alongside an intervention that made registrations more easily accessible locally. Based on Get-Out-The-Vote (GOTV) experiments that identify positive effects of text messages on turnout, there are good reasons to believe that they should also be effective at increasing registration (Malhotra et al., 2011; Dale and Strauss, 2009; Schein et al., 2020; Bergh, Christensen and Matland, 2016). In this paper, we provide the results of two field experiments that use the same mode to deliver voter registration messages, and where the content of messages are comparable. The type of organisation that sent the messages to individuals differed: one organisation was a local government authority, while the other was an issue advocacy organisation. These two organisation types reflect the range of

actors commonly involved in voter registration efforts in the United Kingdom, and elsewhere. While the number of experiments on voter registration remains too small for a meta-analysis, comparing the results of experiments in similar contexts can indicate whether the results are likely to generalise across organisation type, and if not, help build hypotheses about the type of scope conditions which might be conducive to effective voter registration. We hope that the findings will stimulate future research that randomly assigns the type of mobilising organisation that contacts citizens with voter registration messages. In our study, messages sent by the state-run local authority generated an approximate eight percentage-point treatment effect on voter registration and a three percentage-point effect on turnout, whereas messages sent by the advocacy organisation did not increase voter registration, or turnout. Against expectations, we also find that increasing the level of personalisation through text-back and call-back offers did not increase the effectiveness of the text messages sent by the issue advocacy organisation.

Evidence on what works to increase voter registration is sparse

A mobilisation message from an outside source may be delivered in different ways that offer information and motivation to the receptor. In the classic literature on GOTV (Gerber and Green, 2000), mode matters because the delivery of the message varies in intensity and degree of personalisation, with face-to-face messages, such as door knocks, generating the largest effect sizes (Green, McGrath and Aronow, 2013). Modes that are conducive to conversations, such as telephone canvassing, tend to beat more impersonal forms of communication, like mailshots and e-mails. However, Dale and Strauss (2009) hypothesised that text messages work to increase turnout because they are more noticeable than other impersonal methods of voter mobilisation. We therefore expect that text messages should positively affect voter registration. Moreover, based on the few experiments that tested the effects of voter registration interventions, it appears that, in line with GOTV research, more personal methods appear to be more effective (Nickerson, 2015; Braconnier, Dormagen and Pons, 2017; Nickerson, 2007; Bennion and Nickerson, 2011; Mann and Bryant, 2019; Harris, Kamindo and Van der Windt, 2021). We therefore expected that the offer of a personal conversation, *personalising* the text message outreach and the ensuing personal conversations over text message or on the phone, would lead to higher registration rates than standard text messages that are not personalised.

Cognitive versus non-cognitive mobilisation

Research on GOTV interventions, Gerber and Green (2000) initially found minimal effects of varying message content. Subsequent research using behavioural science has been more promising, especially if the social side of voting is stressed, with social pressure having a strong effect (Gerber, Green and

Larimer, 2008), and also good impacts for behavioural-focused interventions, such as social norms (Gerber and Rogers, 2009), plan-making (Nickerson and Rogers, 2010), and gratitude (Panagopoulos, 2011). Messages that give incentives for registration (John, MacDonald and Sanders, 2015) or stress penalties (Kölle et al., 2020) also appear to be effective. Recent research in the United States has sought to fashion messages more closely linked to the specific nature of the task. Holbein and Hillygus 2020 introduce the theoretical distinction between cognitive messages targeted toward empowerment and raising motivation and non-cognitive messages that are more task-orientated and geared toward increasing the capacity of the respondent to complete the task at hand, presenting a great deal of laboratory studies and interviews to back up their case. It is plausible to infer that behavioural follow-through messaging, when appropriately crafted, should positively affect individuals' voter registrations. We therefore hypothesised that non-cognitive behavioural messages sent via SMS text messages positively affect voter registration, and are more effective than messages relying on cognitive mobilisation.

Do effects vary across organisation type?

Existent experiments on voter registration have mainly been researcher-led or conducted with advocacy organisations. Notable exceptions are the experiments by Harris, Kamindo and Van der Windt (2021), where the authors worked with the Electoral Commission in Kenya, and the experiment by John (2016) who worked with a local council, the local government authority responsible for voter registration in the UK. The fact that in many countries, there are some governmental organisations tasked with voter registration, but the field of voter registration is also shared by non-governmental actors, invites the question if the effects of mobilisation campaigns vary across the different organisations. Most GOTV experiments that vary source cues or messenger identity focus on the difference between ethnic minority and majority messengers (Green, McGrath and Aronow, 2013) and partisan versus non-partisan sources of GOTV appeals (Panagopoulos, 2009; Foos and De Rooij, 2017). However, the field of voter registration is unique in the respect that governmental actors play an important role not only in the administration of the voting process, but also in mobilising individuals to register in the first place. There are multiple reasons for why the effectiveness of such voter registration messages could vary across the organisations that sends them. First, organisations' pre-existing relationships with subjects differ, including the degree of trust and confidence that individuals have in the organisation. Second, the populations targeted by different organisations differ. While issue advocacy organisations mostly target their members and supporters whose contact details they hold, local government authorities can better target local residents who might not yet be on the voter rolls. Finally, individuals' expectations about the role and purpose of the specific organisation that reaches out is likely to differ. A lot may depend on whether voter registration is perceived as within the explicit remit of the organisation.

Methods

Context

The authors were commissioned by (BLINDED) to carry out a set of field experiments in collaboration with different actors in the field of voter registration to test if impersonal campaign methods targeted at low registration groups can increase voter registration in the context of the 2021 UK local elections. The field experiments shared common messaging strategies, mainly focused on walking citizens through the online voter registration process.[1] Voter registration in the United Kingdom is done online on a governmental website and, on average, should take no more than five minutes to complete. The registration process is therefore directly accessible to individuals, who can complete it on their phones or on their computer once they receive a text message. The intervention hence fulfils a key requirement to be effective, as identified by Harris, Kamindo and Van der Windt (2021): individuals need to have the opportunity to directly act on the message they receive.

Based on research by Holbein and Hillygus (2020), we developed three types of non-cognitive messages, as well as a set of two cognitive messages. The first non-cognitive type was denominated the "follow-through" message, focused on accompanying the person in the registration process, helping them surpass challenges and obstacles to complete online registration. The second type, the "anti-sludge" message, had the objective of informing subjects about the economic benefits of registration including better credit ratings. Finally, the "dynamic norm" type appealed to social norm compliance by indicating that friends and neighbours were registering to vote. The non-cognitive messages focused on empowerment and not missing out.

While the messages and the mode of delivery across the two field experiments were similar, there were some differences: in the local authority trial we randomly assigned whether subjects were exposed to our set of non-cognitive or cognitive mobilisation messages, while in the issue advocacy trial, we provided both message types to subjects. Moreover, in the issue advocacy organisation trial, we randomly assigned whether subjects were provided with a textback/callback option, with the offer to speak to a friendly volunteer to help them complete the registration process. The textback/callback option was intended to provide practical help with registration, but also to introduce an element of personal contact.

Experiment 1: Messages from a Local Government Authority

The first trial was based on SMS text messages sent by an English local authority based in a small city in the South of England. In England, local authorities are the official body that registers citizens

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[1]These messages were piloted with focus groups and also in an online survey experiment. We chose the messages that appeared to work best in these pilots.

to vote, and have a statutory duty to encourage voter registration. They carry out yearly registration campaigns, often coordinating with the Electoral Commission, the regulatory body.

The council was involved in all aspects of the trial: the design and selection of text content for the SMS, the identification of all unregistered citizens suitable to participate in the experiment, as well as the actual delivery of SMS texts in two waves.[2]

There were three randomly assigned experimental conditions: (1) a cognitive SMS treatment arm, a (2) non-cognitive SMS treatment arm, and (3) a pure control group. Groups 1 and 2 received messages, in waves. The treatment texts are displayed in Appendix D. The first SMS wave was sent on the week of Monday 12 April 2021 and the second wave was sent on the week of Thursday 15 April, the week directly preceding the voter registration deadline on 19 April. The total number of participants was 493, none of whom was registered to vote at the time of the experiment. They were randomly assigned to one of the three conditions, with equal probability of assignment. We report Intention-to-Treat (ITT) effects. Specifically, we use the OLS estimator, and heteroskedasticity-consistent (HC2) standard errors:

$$Y_i = \alpha + \beta_1 Assignment_i + \epsilon_i \tag{1}$$

where Y is one of our three validated binary outcome variables: 1) whether the online registration form was submitted, 2) whether the voter provided all necessary information to be registered, and 3) whether they turned out to vote in the local elections on 6 May 2022.

Table 1 shows that SMS messages had a large positive and statistically significant effect of around 10 percentage points on submitted applications to register. We find that there is a small drop off between submitted online registration forms and completed voter registrations of around two percentage-points, which points to administrative hurdles in the voter registration process. Cognitive messages increased voter registration by 7.3 percentage-points, while non-cognitive messages increased voter registration by 7.9 percentage-points. The small difference between the impact of the two messages could be explained by sampling variability alone. Table 1 shows the results in detail.

The table also reports the downstream effect of the text messages on voter turnout, which amounts to 2.7 percentage-points overall and is significant with p<0.05. This means there is an attenuation of the treatment at each stage of the process. Note that this pooled treatment effect is comprised of a statistically significant 3.7 percentage-point increase for the non-cognitive message, whereas the effect for the cognitive message is estimated to be 1.8 percentage-points and is not significantly different from zero. While we cannot reject that the treatments were equally effective, the significant effect of the non-cognitive message provides some tentative support for the Holbein and Hillygus (2020) thesis

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[2]Both the local government authority and the issue advocacy organisation field experiment received ethical approval on 29 March 2021, reference numbers respectively 22216 and 21816, name of research ethics committee withheld for blinding.

	Form submitted	Form submitted	Registered	Registered	Voted	Voted
Control Mean	0.012	0.012	0.012	0.012	0.006	0.006
	(0.009)	(0.009)	(0.009)	(0.009)	(0.006)	(0.006)
Treatment	0.095***		0.076***		0.027*	
	(0.019)		(0.018)		(0.012)	
Cognitive		0.098***		0.073**		0.018
		(0.026)		(0.023)		(0.014)
Noncognitive		0.092***		0.079**		0.037*
		(0.025)		(0.024)		(0.017)
R^2	0.029	0.029	0.022	0.022	0.007	0.009
Adj. R^2	0.027	0.025	0.020	0.018	0.005	0.005
Num. obs.	493	493	493	493	493	493

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$
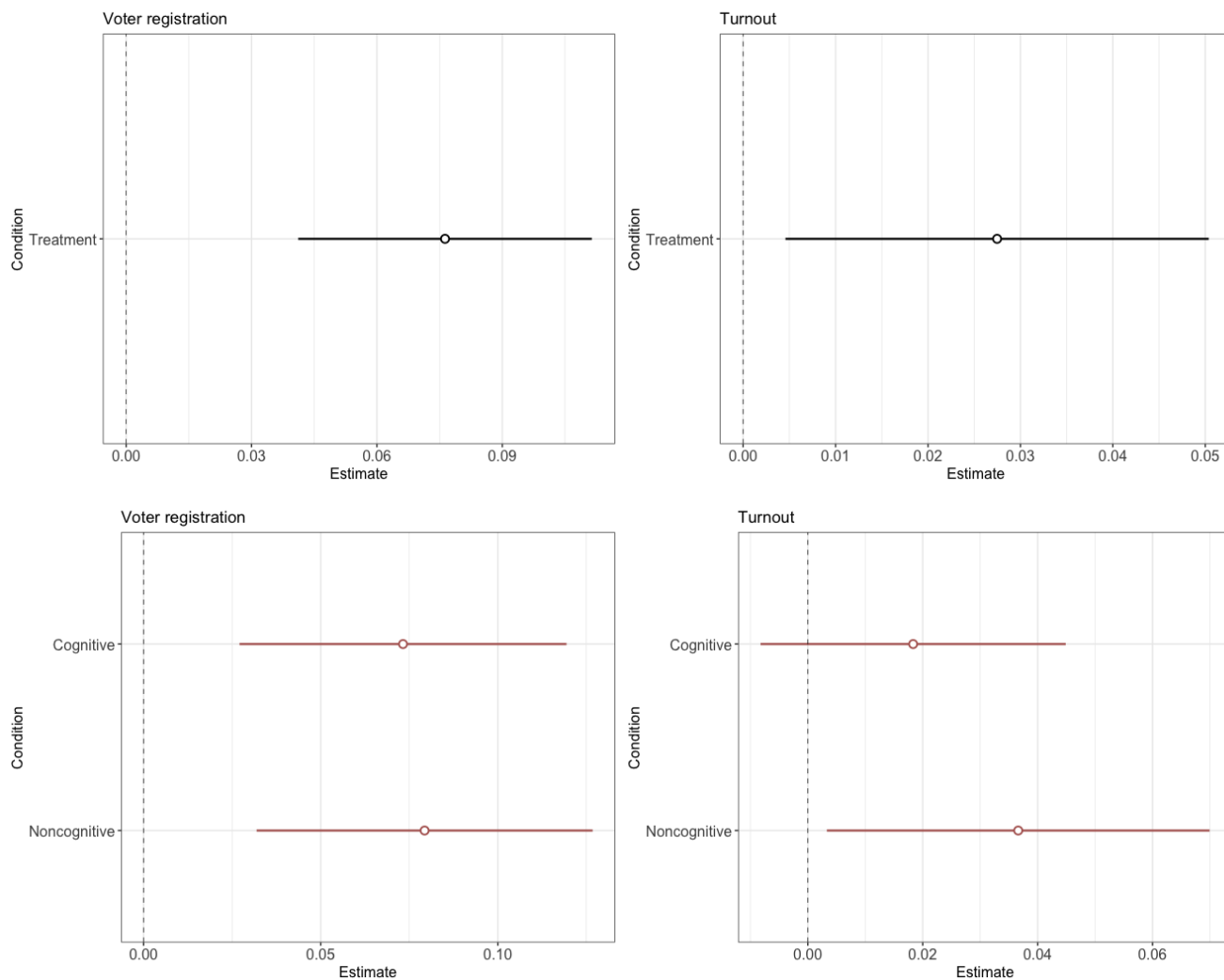
Table 1: Local authority results

Figure 1: Local Authority Trial: Coefficient plots with 95% CI; ($N = 493$).

that non-cognitive messages are effective at increasing turnout.

Experiment 2: Messages from an Issue Advocacy Organisation

The aim of the second experiment was to test if SMS text messages sent by an issue advocacy organisation positively affect voter registration and electoral turnout. The sample consists of individual members and supporters of the issue advocacy organisation, who consented to be contacted by the organisation. The association which is focused on private sector renters held phone numbers for around 9460 individuals, and 5497 members took part in the SMS experiment.[3] Subjects were block (by county) and cluster-randomly assigned (by household) to either receive a SMS message, a SMS message with a textback/callback option, or to receive no contact (control group). The treatment texts are displayed in Appendix D. Appendix Table 6 shows covariate balance between treatment and control groups.[4]. We again use the OLS estimator and estimate cluster-robust standard errors at the household level:

$$Y_{ij} = \alpha + \beta_1 SMS_{ij} + \gamma County_{ij} + \epsilon_{ij} \tag{2}$$

$$Y_{ij} = \alpha + \beta_1 SMS_{ij} + \beta_2 Callback_{ij} + \gamma County_{ij} + \epsilon_{ij} \tag{3}$$

where Y is whether individual i located in household j registered to vote/turned out to vote, SMS is whether individual i in household j was assigned to receive voter registration SMS messages, $Callback$ is whether the individual was assigned to receive messages offering volunteer textbacks/callbacks and $County$ are county fixed effects. We were able to collect and validate voter registration data for 5,153 members and turnout data for 4,386 members.[5] The issue-advocacy trial was pre-registered on OSF.[6]

Figure 2 reports the pooled ITT estimates (corresponding to equation 2 and the dis-aggregated ITT effects for the SMS including and excluding the textback/callback option (equation 3). The left panel plots the ITT effect of the SMS and the SMS+callback message versus the control on voter registration, and the right panel displays the aggregated and dis-aggregated ITTs on turnout. Tables 3 and 4 show the corresponding regression tables. We also report the ITTs based on the covariate-adjusted OLS estimator in Appendix table 3. The results consistently show that the effect of the SMS message on both voter registration and turnout is zero and the 95% confidence intervals are narrow enough

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[3]The remaining members participated in an experiment that delivered messages via Facebook ads. We report the results elsewhere. They are consistent with the null results reported for SMS messages.

[4]The only significant difference is between women and men. Results are unchanged once we adjust for gender in the analysis

[5]Appendix Table 7 checks attrition by coding missing outcome data as 1, and 0 otherwise. There are no significant differences across experimental conditions.

[6]Link to de-identified pre-registration document

that a positive effect larger than 1.5 percentage-points on registrations would lie outside. Moreover, against expectations, including a callback/textback option did not increase the effectiveness of the text messages. Point estimates are negative for the text message with the callback option, but not significantly different from the standard text message and not significantly different from zero.
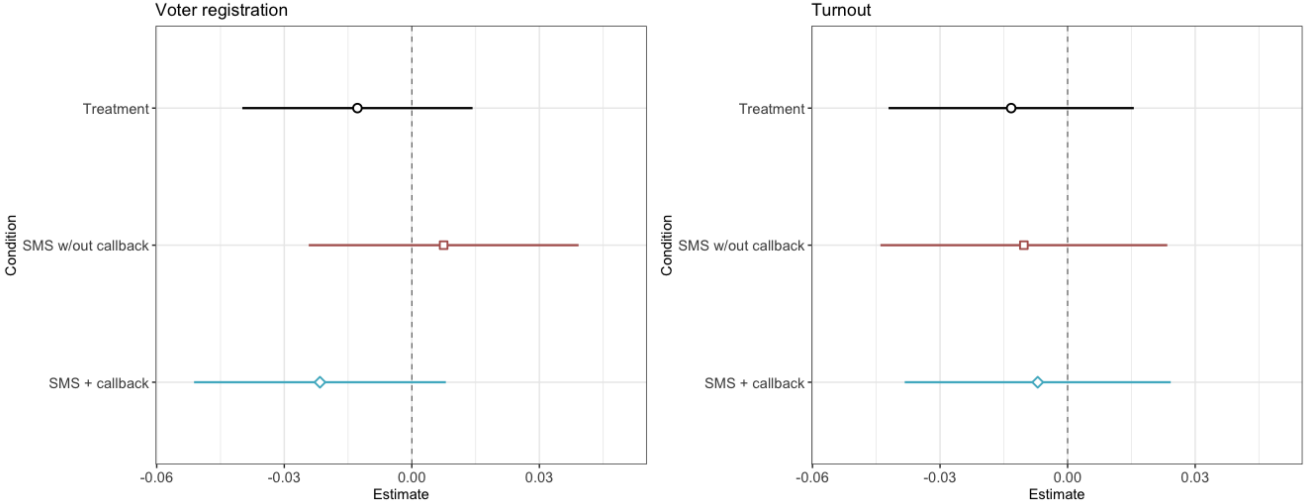

Figure 2: Advocacy Organisation Trial: Coefficient plots with 95% CI; Tables 3 and 4 display corresponding regression tables; *N = 5153 (registration) and N = 4386 (turnout)*

Discussion and conclusion

In this paper we provide the first field experimental evidence on the effectiveness of text messages on voter registrations in the United Kingdom. With the two trials reported in this paper, we double the sparse international evidence base on whether text messages work to increase voter registration (Bennion and Nickerson, 2011; Harris, Kamindo and Van der Windt, 2021), and we add to our understanding of what works to increase voter registration in the United Kingdom (John, 2016; Sweeney et al., 2021). Impersonal methods such as text messages have increased in prominence since the onset of the pandemic and have been used widely by different types of organisation, both governmental and non-governmental over the past two years. We find that text messages sent by a local authority were effective at registering citizens to vote and that around one third of the effect translated into higher turnout. The magnitude of the downstream effect is slightly larger than the effect recorded by Bennion and Nickerson (2011) and contrasts with the null finding on turnout in Harris, Kamindo and Van der Windt (2021).

While the positive downstream effects on turnout in the local authority trial as a function of non-cognitive mobilisation messages are encouraging and consistent with our hypothesis and theory (Holbein and Hillygus, 2020), given sampling variability, we would need further experiments to establish

whether their effects differ significantly from cognitive messages. One limitation of the advocacy organisation trial is that we did not randomly assign cognitive and non-cognitive messages separately. However, we think that it is unlikely that assigning message content separately in the second trial would have resulted in large positive effects, given that the majority of messages sent to participants were of the non-cognitive message type.

If we had conducted these two experiments independently, we might have reached different conclusions about the impact of SMS on voter registration and turnout in the UK, for one experiment resulted in large and positive effects, while the other shows null effects. Our mixed results are consistent with other studies that use behavioural approaches to increase voter registration, based on letters (Kölle et al., 2020; Sweeney et al., 2021). By presenting the results of the two experiments that share the same electoral context, as well as a similar experimental design and theoretical underpinnings, alongside each other, we hope to provide a more nuanced picture of when SMS text messages might be effective at increasing voter registration and turnout. The striking contrast in the effectiveness of the messages could indicate a role of organisation type in the effectiveness of text messages on voter registration. Local authorities play an important role in voter registration campaigns in the United Kingdom, and we found that the local authority we worked with was effective at their task.

Within the issue advocacy experiment, we randomly assigned whether subjects received a personalised offer of help to complete the registration process, with the use of dedicated volunteers. Based on the well-known finding from the GOTV literature that more personal methods are more effective (Green and Gerber, 2015), we expected that subjects would use the textback option and that volunteers would be able to walk individuals through the registration process. However, this was not the case. If at all, the SMS that included the callback option was less effective than the standard SMS. What are the potential explanations for this null finding? Based on the qualitative coding of messages received in response to the textback/callback treatment (see Appendix , some subjects expressed the belief that voter registration did not fall within the remit of the organisation. For example, one individual replied, 'Hi, I am interested in the community and grass-root actions of [blinded] but I would rather if you stop sending me information about elections and political parties, as honestly I can't bother about that. Thanks.'[7] In this way, organisation type might have been bound up with the perceived purpose of the organisation and the self-understanding of some contacted participants, which might have conflicted with the register to vote drive conducted by the issue advocacy organisation. In contrast, a local authority organises local elections, and has the explicit goal of registering citizens to vote. The lack of effectiveness on the part of the issue advocacy organisation may hence be due to a perceived conflict between the purpose of the advocacy organisation and the campaign. While the role of organisation

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[7]See Appendix for inter-coder reliability checks and more details on the qualitative analysis of SMS replies from participants in the textback/callback option.

type must remain a hypothesis, we would encourage more research to test the hypothesis arising from this study deductively.

Note: There are no conflicts of interest to declare.

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APPENDICES

A Spillover Rate in Experiment 1

	Turnout	Turnout
(Intercept)	0.002	0.001
	(0.005)	(0.005)
Registered	0.360**	0.373**
	(0.120)	(0.121)
R^2	0.370	0.371
Adj. R^2	0.369	0.370
Num. obs.	493	493

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table 2: Downstream effect on turnout (Proportion of the registration effect that translates into turnout)

Notes: The first column uses dummy treatment variable as the instrument z and the second column uses factorial assignment variable (control, cognitive and non-cognitive) as z.

B   Tables (Experiment 2)

	1	1 Cov.	2	2 Cov.	3	3 Cov.
(Intercept)	0.657***	0.676***	0.648***	0.668***	0.656***	0.676***
	(0.043)	(0.043)	(0.042)	(0.043)	(0.042)	(0.043)
Treatment	−0.013	−0.012				
	(0.014)	(0.014)				
SMS w/out callback			0.007	0.008		
			(0.016)	(0.016)		
SMS + callback					−0.022	−0.021
					(0.015)	(0.015)
Male		−0.030*		−0.031*		−0.030*
		(0.014)		(0.014)		(0.014)
Other/Unknown		−0.050·		−0.051·		−0.050·
		(0.026)		(0.026)		(0.026)
R^2	0.007	0.008	0.007	0.008	0.007	0.009
Adj. R^2	0.005	0.006	0.005	0.006	0.006	0.006
Num. obs.	5153	5153	5153	5153	5153	5153
RMSE	0.483	0.483	0.483	0.483	0.483	0.483
N Clusters	4903	4903	4903	4903	4903	4903

***$p < 0.001$; **$p < 0.01$; *$p < 0.05$; ·$p < 0.1$

Table 3: Voter registration

	1	1 Cov	2	2 Cov	3	3 Cov
(Intercept)	0.357***	0.360***	0.352***	0.356***	0.352***	0.355***
	(0.042)	(0.043)	(0.041)	(0.042)	(0.041)	(0.042)
Treatment	−0.013	−0.013				
	(0.015)	(0.015)				
SMS w/out callback			−0.010	−0.010		
			(0.017)	(0.017)		
SMS + callback					−0.007	−0.007
					(0.016)	(0.016)
Male		−0.004		−0.004		−0.004
		(0.015)		(0.015)		(0.015)
Other/Unknown		−0.012		−0.012		−0.012
		(0.028)		(0.028)		(0.028)
R^2	0.065	0.065	0.065	0.065	0.065	0.065
Adj. R^2	0.063	0.063	0.063	0.063	0.063	0.063
Num. obs.	4386	4386	4386	4386	4386	4386
RMSE	0.477	0.477	0.477	0.477	0.477	0.477
N Clusters	4174	4174	4174	4174	4174	4174

***$p < 0.001$; **$p < 0.01$; *$p < 0.05$; ·$p < 0.1$

Table 4: Turnout

	Registration	Turnout
(Intercept)	0.684***	0.348***
	(0.057)	(0.057)
SMS w/out callback	0.020	-0.003
	(0.019)	(0.020)
R^2	0.010	0.075
Adj. R^2	0.006	0.072
Num. obs.	2749	2325
RMSE	0.484	0.474
N Clusters	2621	2218

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$; $^{.}p < 0.1$

Notes: SMS with callback treatment arm is the omitted reference category in both models.

Table 5: Comparison of Treatment Arms: SMS with and without callback

C   Balance and Attrition Tables: Experiment 2

	Treatment	SMS w/out callback	SMS + Callback
(Intercept)	0.519***	0.235***	0.285***
	(0.045)	(0.038)	(0.042)
Male	0.034*	0.014	0.020
	(0.014)	(0.012)	(0.013)
Other/Unknown	0.024	−0.008	0.032
	(0.027)	(0.022)	(0.025)
R^2	0.001	0.001	0.001
Adj. R^2	−0.001	−0.001	−0.001
Num. obs.	5264	5264	5264
RMSE	0.499	0.424	0.458
N Clusters	5007	5007	5007

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table 6: Balance table

	Miss. reg	Miss. reg	Miss. reg	Miss. turnout	Miss. turnout	Miss. turnout
(Intercept)	0.128***	0.132***	0.135***	0.125***	0.131***	0.133***
	(0.028)	(0.027)	(0.027)	(0.028)	(0.027)	(0.027)
Treatment	0.015			0.020		
	(0.011)			(0.011)		
SMS w/out callback		0.016			0.018	
		(0.013)			(0.013)	
SMS + callback			0.003			0.008
			(0.012)			(0.012)
R^2	0.013	0.013	0.013	0.131	0.131	0.131
Adj. R^2	0.012	0.012	0.012	0.130	0.130	0.130
Num. obs.	7174	7174	7174	7174	7174	7174
RMSE	0.447	0.447	0.447	0.455	0.455	0.455
N Clusters	6808	6808	6808	6808	6808	6808

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table 7: Attrition table

D   Treatment Arms and Messages in Experiments 1 and 2

Treatment Arms for Experiment 1: Local Government

1. Control Message: (no message)

2. Cognitive Messages:

   (a) Send first: 'An election has been called. Your vote matters. Register to vote: Click on the link.'

   (b) Send second: 'An election has been called and time is running out to register to vote. The registration deadline is on 19 April, 23:59. Register to vote: Click on the link.'

3. Non-Cognitive Messages:

   (a) Send first: (Anti-sludge) 'Did you know there is more to registering to vote than you think? Registering to vote can increase your credit score. When you register to vote, your electoral details are recorded on your report. This data helps lenders confirm your name and address. As a result, your credit score can increase. Register to vote now: Click the link.'

   (b) Send second: (Follow-through) 'It's only 3 easy steps to register to vote.

   Step 1: Go to the registration link

   Step 2: Enter your details

   Step 3: Wait to receive your registration confirmation!

   The registration deadline is on 19 April, 23:59

   Try it now and register to vote: Clink the link.'

Treatment Arms for Experiment 2: Issue Advocacy Organisation

1. Control Message: (no message)

2. SMS only

   (a) Send first: (Follow-through) 'Are you registered to vote in the local election? It's only 3 easy steps to register to vote.

   Step 1: Go to the registration link: `https://www.gov.uk/register-to-vote`

   Step 2: Enter your details.

   Step 3: Receive a registration confirmation! -[BLINDED]'

   (b) Send second: (Anti-sludge) 'Did you know that there is more to registering to vote than you think? Registering to vote can increase your credit score. If you are not registered (or unsure) you can register to vote here: https://www.gov.uk/register-to-vote -[BLINDED]'

   (c) Send third: (Dynamic Norms) 'Join your friends Don't be left out on voting day! If you are not registered to vote (or unsure) you can register here: `https://www.gov.uk/register-to-vote`

   -[BLINDED]'

3. SMS + callback

   (a) Send first: (Follow-through) 'Are you registered to vote in the local election? It's only 3 easy steps to register to vote.

   Step 1: Go to the registration link: `https://www.gov.uk/register-to-vote`

   Step 2: Enter your details.

   Step 3: Receive a registration confirmation!

   Would you like one of our friendly volunteers to walk you through registration? Just text back and we will contact you. - [BLINDED]'

   (b) Send second: (Anti-sludge) 'Did you know that there is more to registering to vote than you think? Registering to vote can increase your credit score. If you are not registered (or unsure) you can register to vote here: `https://www.gov.uk/register-to-vote`

   Would you like one of our friendly volunteers to walk you through registration? Just text back and we will contact you. - [BLINDED]'

   (c) Send third: (Dynamic Norms) 'Join your friends Don't be left out on voting day! If you are not registered to vote (or unsure) you can register here: `https://www.gov.uk/register-to-vote`.

   Would you like one of our friendly volunteers to walk you through registration? Just text back and we will contact you. - [BLINDED]'

E   Qualitative Coding of the Callback Option in Experiment 2

Below are the three SMS messages sent with a callback option:

- Send 1st message: 10 April

  Are you registered to vote in the local election? It's only 3 easy steps to register to vote. Step 1: Go to the registration link: `https://www.gov.uk/register-to-vote`. Step 2: Enter your details. Step 3: Receive a registration confirmation! Would you like one of our friendly volunteers to walk you through registration? Just text back and we will contact you. - [BLINDED]

- Send 2nd message: 13 April

  Did you know that there is more to registering to vote than you think? Registering to vote can increase your credit score. If you are not registered (or unsure) you can register to vote here: `https://www.gov.uk/register-to-vote`. Would you like one of our friendly volunteers to walk you through registration? Just text back and we will contact you. - [BLINDED]

- Send 3rd message: 18 April

  Join your friends Don't be left out on voting day! If you are not registered to vote (or unsure) you can register here: `https://www.gov.uk/register-to-vote`. Would you like one of our friendly volunteers to walk you through registration? Just text back and we will contact you. - [BLINDED]

A female and a male volunteer within the advocacy organisation were in charge of responding to any replies from participants in distinct cities during the three waves of texts. They were both trained to have standardised type of answers for participants reaching out, in a friendly tone. For example, if a participant asked about thoughts on who to vote for, the volunteers salute them and briefly direct them to an official page showing the available candidates. Also, if participants asked to be removed after one of the waves, the volunteers were in charge or removing them from the list immediately and before the next SMS wave.

The female volunteer received 132 SMS messages and the male volunteer 120 SMS messages. In order to analyse the content of the messages, we categorised them by using Cohen's kappa (κ) inter-coder reliability statistic. This is a robust statistic commonly used to assess two-coders' agreement rate and takes chance into account. In practice, κ can go from 0 to 1, with values closer to 1 meaning higher agreement between coders. We supported this exercise with one leading moderator and two independent coders who were in charge of categorising each of the SMS messages. The leading moderator created four categories:

- Help: when the person asks for additional help and/or information related to registering to vote or voting.

- Stop: when the person explicitly asks to stop receiving the messages.

- Other: any other situation such as indication of being already registered or not being eligible to vote.

- Disregard: for messages that were not part considered in the final dataset, e.g. tests.

Our κ measure was 87% which according to Cohen's ranks, corresponds to a 'strong' inter-reliability score.

Examples of SMS replies:

- HELP: 'We registered already but waiting so long for card vote we don't know where location and when ???'

- HELP: 'What day do we vote?'

- STOP: 'Please remove me from these updates'

- STOP: 'Please stop sending these unsolicited text messages'

- OTHER: 'I am registered, thanks'

- OTHER: 'I am sorted...thanks'