

Networked nudging: Designing a voter registration nudge in urban India

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Abstract

This paper explores the potential of a behavioral intervention to improve voter registration (and turnout) among urban youth in India. Electoral bodies at the national and sub-national levels regularly conduct communication campaigns but have been unable to spur meaningful change in registration rates. We document policy lessons from a pilot behavioral intervention aimed at nudging voter registration among college-going youth in Mumbai. We adapted a plan-making intervention to make the process of registering to vote more salient and randomized at the level of educational institutions. Colleges that received the plan-making intervention had a higher registration on average than those that did not receive the intervention. Implications for intervention design, implementation challenges, and suggestions for scaling up are proposed, specific to the Indian context.

JEL Classification: C93; D72; D73

Keywords

voter registration — behavioural science — interventions — plan-making — nudging

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Introduction

The functioning of electoral systems and bodies has received extensive attention in the public administration literature (Leroux, 2011; Montjoy, 2010). In a typical setting, running elections involves numerous tasks prior to, during, and after the election days (Montjoy, 2008). Of these, registering eligible voters to be on the rolls is a perennial activity, given universal adult franchise present in most countries. One can imagine the challenge of registering newly eligible voters in a country like India, where nearly 120 million individuals in the age group of 15 to 19 are eligible to register to vote as of 2021 (nearly 10% of the population, Election Commission of India 2016). Added to this is the diverse socio-economic context, where many citizens remain undocumented and have poor access to formal documentation required to register as a voter (McMillan 2012). Much of this exclusion is exacerbated further by ethnic divisions and caste-based hierarchies in India, especially in rural areas (Rai, 2011; Haque, 2005). Ultimately, this leads to lower representation and voter turnout, sometimes even leading to civil unrest and citizen apathy. What can be done to tackle such issues?

The Election Commission of India (ECI), set up in 1950, is the regulatory body overseeing elections in the country. As Singh and Roy (2018) note, the ECI has faced tremendous challenges in making registration inclusive – particularly in conflict-ridden states such as the northern-most Jammu and Kashmir. As a central authority, the ECI supervises the work of several State Election Commissions (SECs) that are tasked

with planning and executing elections at the state-level. A large part of any electoral authority's work in a democracy is to conduct free and fair elections with procedural certainty (Mozaffar and Schedler, 2002). The trust that eligible voters place in both elections as well as the electoral system corresponds substantially with how much procedural certainty there is in conducting elections (Singh and Roy 2018). To continually gauge feedback from citizens on electoral systems, the ECI launched the Strategic Voter Education and Electoral Participation (SVEEP) program in 2008. This was aimed at identifying and targeting voter mobilization measures in districts (smaller administrative units within each state) where the turnout was among the bottom 10%. Experience from other countries such as Australia and the United States identify not just individual characteristics that drive voter turnout (Smets and van Ham, 2013), but psychological and institutional factors that enable higher turnout. For example, having compulsory voting, allowing postal or electronic ballots, are all found to be positively associated with mobilization. In turn, having more rigid registration rules prior to elections was found to impose additional costs on turnout (Geys, 2006), suggesting that initiatives such as automatic or election day registration could enable higher turnout. In its most recent edition, the SVEEP - III program by the ECI has been targeting voter registration with the following objectives (Chief Electoral Officer Maharashtra 2014): using a targeted approach for bridging the elector-registration gap in youth (age groups 18-19 and 20-29 years) and among women; improving out-

reach activities and removing urban apathy with the active participation of non-profits and civil society organizations in India; among others.

Elsewhere, such as the United States, non-profit organizations have since long been involved in national voter registration activities, yielding many positive outcomes (Leroux, 2011). As Hale and Slaton (2008) indicate, election administrators that build professional networks (in which non-profits feature prominently) may have more efficient local election processes. This type of networked approach to improving electoral system efficiency – especially in cases where public entities such as the ECI face a huge administrative task – has been recommended in resolving issues related to technology adoption, inclusivity, and voter apathy (Montjoy, 2008). But even with the combined efforts of NGOs, the ECI, and the SECs, there remain challenges in efficient voter registration in India. For example, in Maharashtra, the second-most populous state in India, and home to the financial capital of the country, Mumbai, average voter turnout was 63.84% and 60.32% in the 2014 Legislative Assembly and Lok Sabha General Elections, respectively (Elections.in, 2020). In contrast, the turnout in urban-only constituencies was 50% on average, suggesting that urban samples are far less active in voting than other constituencies (Patil and Pullamvilavil, 2018). Various factors are associated with this: voter indifference, lack of access to polling stations, and erroneous voter registration data. For instance, voter indifference is best exemplified by the fact that voter registration among 18- to 19-year-olds was at a dismal 38% of the total population in that age group in 2014 in Maharashtra, which went up marginally to 41.3% in 2019.

Increasing voter registration: What works?

Manning and Edwards (2014) review research on the impacts of civic education on voter registration. They find that of the few studies that measured voting, a majority found no statistically significant effect of civic education on registration or voting. Although a majority of the evidence in this domain relates to western, educated, industrialized, rich, and democratic (WEIRD) countries, there is evidence that strong electoral administration in low-to-middle income countries can play a role in better electoral outcomes. For example, Piccolino (2016) finds that Ghana's relative success with voter registration (compared to Cote d'Ivoire) was on account of better technology for registering voters, particularly biometric identification. This was in contrast to the case of Cote d'Ivoire, where updating to include newly eligible voters was an issue.

It is a widely held belief that young urban voters are indifferent to outcomes associated with voting, thereby leading to lower registrations and lower representation in the political act of voting. Neri et al. (2016) suggest that among other behavioural factors, students are uncertain about the details and implications of registering and could often overestimate the difficulty of the process. Furthermore, voting is not 'visible' on campus and therefore does not encourage students to think

concretely about registering. Thus, the authors narrow down three psychological barriers that students experience before registering to vote, and eventually, voting: uncertainty about the details and implications of voting, inability to register on their own, and psychological distance that prevents students from linking everyday experiences with voting. However, to the best of our knowledge, there is no experimental test of these interventions as of 2021. Recent work by Holbein and Hillygus (2020) in the United States lend credence to this argument, suggesting that self-control and other 'noncognitive' factors could explain the lower voter registration and turnout among youth in the US. Indeed, evidence from large-scale randomized control trials (RCTs) by Nickerson and Rogers (2010) suggest that having this implementation intention (i.e., making a plan to register to vote) was particularly effective in single-person households in the US. The authors randomly assigned households with eligible voters to receive one of six scripts immediately before election day in 2008, of which two contained simple reminders, one contained the self-prediction intervention (whether they intended to vote), and another on plan-making (that asked what time they would vote, where they would be coming from, and what they would be doing beforehand). Two other scripts on social norms were also implemented. They found that households that randomly received the implementation intention (but only single-person households with eligible voters) were 9.1 percentage points more likely to vote. However, there was no extensive discussion of whether these effects varied by age composition of households.

This brings the discussion to a crucial question: how can we nudge the youth to vote? One way to overcome such challenges is through the use of behaviourally informed interventions that account for cognitive biases that may be preventing potential first-time voters from registering. Studies using experiments and *nudges* are growing within the area of public administration (Jilke, Van de Walle, and Kim, 2016; Grimelikhuijsen et al., 2017). Typically, such experiments target citizens directly, in a bid to increase voter turnout or awareness, or engage with election officials (Hansen and Tummers, 2020; for reviews, see Battaglio et al., 2019). In the former case, the outcome of interest is not necessarily registration but rather turnout (e.g. Menger and Stein, 2018). In the latter case, the objectives of studies are to either uncover or target a bias within public officials (such as partisanship) that may affect election administration (e.g. Porter and Rogowski, 2018). Recently, researchers have called for more experimental work that explores the role of networks in determining electoral outcomes (Hale and Slaton, 2008). As Barsky (2020) notes, such networking among network officials can positively inform their reputations, while Merivaki (2021) argues that the eventual success of policies relies on how well these networks function. A useful example is the emergence of many private (often nonprofit) organizations that were registering voters as part of the National Voter Registration Act (NVRA) of 1993 in the US. LeRoux (2011) finds that state laws on registering

voters are particularly of importance in determining how well this networked approach works.

Despite the extensive engagement of public administration scholars with behavioural and experimental work, there are some gaps in this literature that are worth noting. First, a substantial majority of studies are based in a very small subset of countries: United States, United Kingdom, member states of the European Union, Canada, Japan, or South Korea (Battaglio et al., 2019). A potential explanation for this could be that the spread of behavioural science in policy and public administration has been heterogeneous across countries (OECD, 2017). There could also be limited state capacity to implement such interventions at a larger scale in a variety of countries (Tagat and Kapoor, 2020). Second, as Ko and Shin (2017) note, there are variations in how Asian countries look at public policy experiments. The authors argue that many changes in policy are considered to be pilots rather than experiments. However, such smaller scale tests of interventions in novel domains such as that of electoral administration in India could be valuable in learning about potential design and implementation challenges. Indeed, this could contribute to the lack of representation of Asian countries, in that these experiments (and therefore studies documenting them) might simply not meet the criteria for a full-scale public administration experiment.

Although our paper does not aim to conduct a full-scale public administration experiment to bridge this gap, we provide suggestive evidence of the value of a networked nudging approach to election administration in India. In particular, we document lessons from one such pilot contributing to this knowledge gap in behavioural public administration in Asia. We document the results of a plan-making pilot intervention implemented in Mumbai city, aimed at improving voter registrations among college-going youth. Assisting in implementing intentions to register as a voter is proposed to boost the likelihood of registration — the initial step toward participating in voting. In partnership with a non-political, non-governmental organization, the intervention was piloted with 16 educational institutions in suburban and central Mumbai. Thus, our intervention aimed to develop and harness a network of stakeholders (civic action NGO, educational institutions, and researchers) to help better understand how to nudge youth voter registration in Mumbai. However, due to several issues in design and implementation of the intervention, our results are only suggestive of the potential impact of plan-making on youth voter registration, and provide a framework for future work in this domain in India.

The remainder of this article is organized as follows. Section 2 contains the background of the specific case of voter registration in Mumbai, Maharashtra. Section 3 describes the approach to nudging voter registration and the intervention planned in colleges around Mumbai city. Section 4 highlights the key findings and summarizes the data collected. Finally, Section 5 concludes, and outlines challenges faced during implementation, as well as learnings for future interventions.

Context

Lower voter registration is only one component of lack of involvement in the democratic process of voting – low voter registration exacerbate lower voter turnouts, indicating the problem of voter indifference. Compared to other constituencies in Maharashtra, voter turnout is well below the 60% mark on average in the Mumbai Metropolitan Region (MMR); moreover, the lowest turnout exists in the same districts where the Electoral Photo Identity Card (EPIC) coverage is also low (Chief Electoral Officer Maharashtra 2018). Thus, the same mechanisms that may be driving a lack of registered voters may be influencing voter indifference and lower turnout. Outside of mass media communication campaigns, there have been few targeted outreach efforts to ensure that voters are registered and then turn up to vote.

Our study, therefore, proposes to implement a novel behavioural intervention targeted at improving voter registration among the age group with the lowest EPIC coverage (18–19-year-olds). The key focus is on targeting friction (Neri et al., 2016) and apathy potentially associated with voter registration among newly eligible voters in India, taking advantage of the networked approach to nudging highlighted in the public administration literature (Grimmelikhuijsen et al., 2017). This goal is facilitated with the help of services such as the National Voter Service Portal (NVSP), which allow seamless online registration of voters, and provide updates on the status of one's EPIC. In the following section, we describe the details of the intervention.

Universal Voter Registration Project (STS)

The NGO that we collaborated with to conduct this intervention had partnered with the University of Mumbai, National Service Scheme (NSS), and the State Election Commission of Maharashtra to address the goal outlined in SVEEP-III - that of achieving universal voter coverage (Chief Electoral Officer Maharashtra 2018). As part of the NGO's three-phase STS campaign (*Shambar Takke Shaai* or 100% turnout), the experiment we describe below was part of a large intervention with colleges¹ and corporate offices aimed at individuals whose names have never been on the electoral roll, for those who have relocated to a different city or within the same city, and for those needing corrections in their existing EPICs. With its ultimate aim being 100% voter turnout, STS has been non-partisan and independent in nature, from the start: it simply encourages the act of voting and never who one should vote for.

¹In Mumbai, as is the case elsewhere in India, students graduating from high school (K-12) can choose to apply to study at a college, which is typically under the purview of a larger university. Similar to the UK, the duration of most undergraduate courses (barring engineering and technology) is three years. Thus, the age group in college is generally between 18-21 years. The University of Mumbai, to which our sample colleges are affiliated, has nearly 300,000 places for students (Qazi and Mishra, 2018), split across commerce (nearly 55% of all students), science (25%), and arts/humanities (20%).

Design and methodology

In line with recent work in the behavioural sciences, we implemented a nudge intervention (Thaler and Sunstein, 2008) that integrated a component of implementation intentions into college-level voter registration drives in the city of Mumbai. Specifically, we adapted interventions from Nickerson and Rogers (2010) and Neri et al. (2016) to the Indian context to encourage college students to register to vote in Mumbai. In order to make the implementation intention more salient, we asked individuals to retain details of their intention on a cue card that served as a commitment device.

The partner NGO and NSS helped recruit and train student volunteers in implementing the intervention. The coordinating team in each college consisted of a faculty member in-charge of the NSS, and a team of up to 10 volunteers dedicated to undertaking voter registration drives. Colleges then helped select three to five points of contact who led activities within each college. These teams were invited to participate in a training program that instructed volunteers regarding the registration process. Guidelines were provided for registering first-time voters; the Voter Helpline smartphone application was also used by volunteers familiar with the interface. College authorities and College Registration Champions (CRCs) were responsible for informing potential registrants about the date(s) of the registration drive. The intervention took place over two days for treatment control colleges — but the registration desks were active for exactly the same duration in both treatment and control group colleges (i.e., two days). To be sure, in treatment colleges, student volunteers were only distributing plan-making cards one day prior to registration, and no registration desks were set up. Except in the case of treatment colleges, the first two days of drives were not always consecutive (see Figure 1).

The nudge was designed for administration in 20 colleges that were identified by the NGO out of 120 colleges in Mumbai that were part of the overall STS project. The NGO provided a list of these 20 colleges, each of which was assigned a unique numeric ID. Due to scheduling and logistical issues, 4 colleges dropped out. Thus, we document the intervention within a subset of 16 STS colleges, where the intervention could be tested. We used a random number generator to randomize treatment allocation as per their ID. The IDs were then sorted by their random number, and the first eight were assigned to receive the plan-making intervention and the voter registration desks (treatment group) and the remaining eight were assigned to receive only the voter registration desks. Volunteers from the control and treatment groups received detailed training for registering first-time applicants, and rectifying errors in existing EPICs. Following this, only treatment group volunteers were given additional training in plan-making prior to the registration day(s). Care was taken to minimize any communication between these two groups of volunteers.

Additional material was provided to volunteers (FAQs, checklists) and is presented in Appendix A. Specific infor-

mation for plan-making was also provided to the treatment college volunteers; CRCs and their teams then identified one-hour time slots for voter registration, with an upper limit of 5 to 6 individuals per slot. Thereafter, the NSS chapter in the college issued communication (via circulars or otherwise) specifying the dates and times at which registration desks would be set up. CRCs first approached each student with a time slot and invited them to register with a set of (scanned) documents. Those willing to register were given a card (a copy of which was retained with the CRC) that had the following details: (a) what time they will register (slot); (b) where they would be coming from; (c) what they would be doing before; (d) who they will be coming with (with or without slot); and (e) what they will be doing afterward (Appendix B). On the reverse of this card, we provided an ECI-approved checklist of documents required for registering. All plans were made one day prior to the days of the voter registration drive.

During the registration days, there were three types of potential registrations: (i) plan-made as per an assigned slot; (ii) non-plan-made (but plan-made for another slot/day); and (iii) non-plan made (on the spot, no prior plans made at all). CRCs classified individuals into each of these categories when they approached the desk. CRCs only made plans for on-the-spot registrants if slots were still available. In the analysis that follows, we compare voter registration between eight treatment colleges and eight control colleges.

Results

It is important to note that there are several factors such as availability (and robustness) of college infrastructure (e.g., access to the internet and functional computers), location of the college (geographical factors), and interest and motivation of college staff (e.g., the principal) that could affect the implementation of the intervention as planned. In an ideal scenario where a randomized intervention was being evaluated, these extraneous variables should be used as control variables in the eventual regression analysis of the treatment effects. Additional descriptive data on colleges were not available, but secondary data from college websites indicated no substantial differences that might impact voter registration. All colleges offered undergraduate degrees in varied disciplines (which specialized in either science, commerce, or humanities) and on average had the same student intake across treatment and control groups (Table 1). It is important to note that these results are based on a small sample, and lack sufficient power to make robust statistical inference, but still provide suggestive evidence of the effectiveness of this pilot intervention. Furthermore, colleges as well as the NGO did not have data on the current number of registered voters in each college, without which it is difficult to interpret the findings regarding new voter registrations. These limitations point squarely to the fact that our study is not aimed toward simply evaluating whether a particular intervention works or not, but rather documenting the value of the process through which the intervention was designed and implemented (and the associated shortcomings)

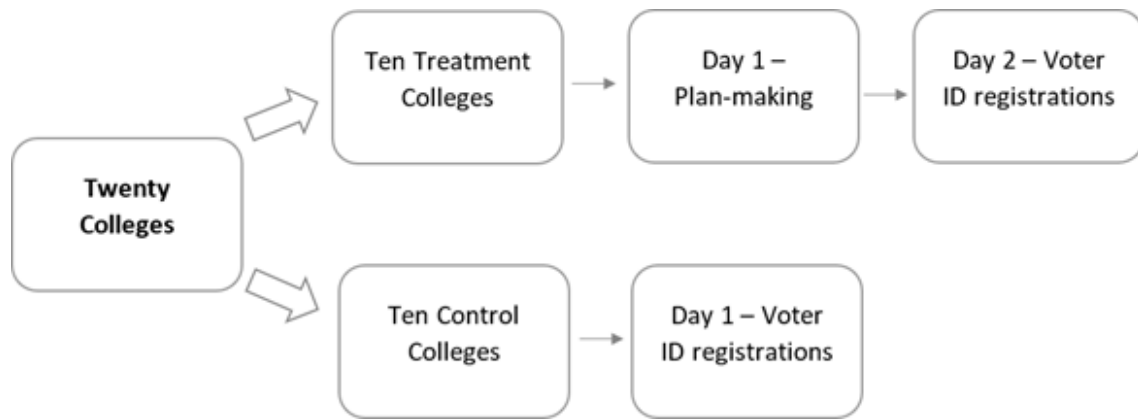


Figure 1. Experimental Design

to provide an overall view of the value of behaviourally informed interventions in election administration in the Indian context.

Averages	Treatment Colleges (n = 8)	Control Colleges (n = 8)
Years since founding	44	45
Courses offered	11	8
Students	2086	1715
Support staff	58	49
Teaching staff	85	90

Source: Secondary data from college prospectus

Table 1. Treatment and Control Group Characteristics

Across treatment group colleges, the average ratio of registrations to plan-making cards given out was 44.4%. This means that a little less than half of all students who made plans to register to vote followed through with their commitment. Data on whether or not this was pre-planned using the intervention cards suggested that the average rate of individuals who arrived to register as per their plan was 68.7%; reliable data on this metric was only available for five colleges. For all treatment colleges, 475 plan-making cards were distributed, of which 278 individuals registered to vote.

Our results suggest that plan-making in treatment colleges improved voter registration by 33.1% on Day 1 of the voter registration drive (Figure 2). Based on the sample size (N = 16), a non-parametric Mann-Whitney U-test was used to assess the difference between the treatment and control groups. The z-statistic obtained was -1.37, which implied that the difference was not statistically significant. An intervention of this type, if implemented on a larger scale, would need to better take into account various design and implementation

issues that we faced at the pilot level. We document these in greater detail in the following subsections. A larger sample size may be useful in detecting significant differences caused by the intervention, as well as using a regression framework to control for other factors (such as size of college, day of the week of the drive, among others). In what follows, we detail findings from specific colleges, including key findings from the experience of networked nudging in India.

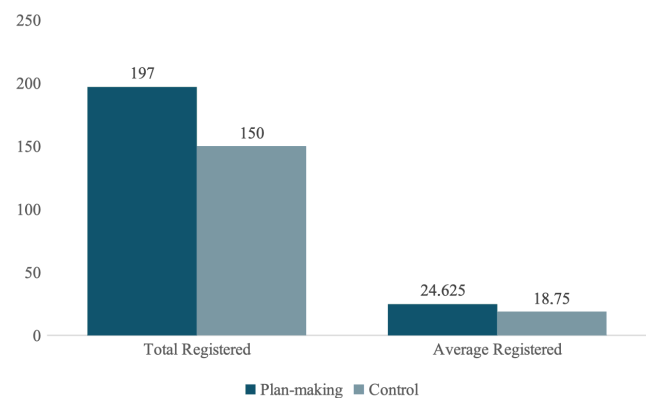


Figure 2. Differences in total and average voter registration per college between plan-making colleges and control colleges

Implementation

In all colleges, the registration desks were either set up in the computer lab or at/around the college entrance, or area most frequented by students in the target age group, on the same floor as their classrooms. This was meant to ameliorate potential technological issues (that we discuss in detail in the following section) that could arise in terms of the registration process. One problem common across all colleges (control and treatment), except one, was uncertain connectivity due to network interceptors installed on college premises. Administrative authorities at colleges, as part of the network of imple-

menters, were somewhat passive in their interest and ability to resolve such issues. Student volunteers often resorted to using their smartphones to access the NVSP website/app to complete registrations, which despite their best efforts faced server outages intermittently.

To minimize uncertainty in registration dates as well as ensure consistency in implementation, plan making cards contained plans for only the immediate next day, but potential registrants were informed that the desks would be set up on another day as well. In the first treatment college, about 91 cards were distributed, reflecting a high interest among students wishing to register to vote. However, it is possible that this high uptake of plan-making cards was due to their novelty and ease of communication, since only 34% of those who made plans in this college actually registered to vote on the following day. A major aspect that drove the implementation at both treatment and control group colleges was the motivation of student volunteers to take up the registration drive. Given that this is in practice difficult to measure (mainly because we have no identifying data on the volunteers themselves and that they often managed the desks in rotations), the conditions of the voter registration drives were not strictly uniform across colleges (except the process of registration itself). It is also possible that if implementation support were provided by the NGO's volunteers (who were also blind to the research question), there could have been more uniform implementation of the intervention. However, in the absence of data on these factors, we are unable to investigate their influence on outcomes. Thus, the networked approach to conducting such behavioural interventions provides important lessons in adapting to better suit local contexts, and involving other stakeholders to enhance implementation capacity. This is particularly important where a powered, large-scale randomized public administration experiment is proposed to be implemented.

Discussion and limitations

The evidence that behavioural interventions can improve voter registration in Mumbai city is mixed and indicates several challenges with implementation and design. Although our results are drawn from a pilot study, we provide useful insights for future experimental work in public administration in India and developing country contexts. We note some lessons below:

Challenges in working in networks

A motivation for this study was exploring the potential benefit of a non-profit organization involved in the voter registration process in India. Although past research has suggested advantages of this approach (Bushouse, 2017), our study points towards challenges in translating networked benefits in the case of India. For example, civil society organizations have sat uneasily with the public sector in India, and are often distrusted for a variety of reasons (Batley and Rose, 2011). In such cases, having a clear chain of communication for experiments is essential for efficient implementation. Assigning one

contact person per institution /stakeholder to coordinate dates and other details of the drive could help reduce delays and implementation issues, building trust between partners.

Logistical factors

Governance in India is increasingly being pushed toward a more information and communications technology (ICT) driven approach (Bajpai, Biberman, and Ye, 2018). In this context, two intertwined issues – a lack of adequate internet connectivity as well as persistent connectivity problems with the voter registration facility – are worth pointing out. This is especially important as past literature has suggested that adoption of technology in election administration could vary by the cognitive biases of election officers (Moynihan and Lavertu, 2012). The registration drives across colleges found that tackling this barrier proved to be the most taxing and time consuming, ultimately hindering the overall process of the drive itself. The latter is a supply-side issue that can only be rectified by raising server capacities at NVSP, and can be suggested to the ECI with an eye on meeting the enrolment gap. In terms of access to consistent internet connectivity to register individuals, provision of wireless internet facilities (where available) from college authorities could help ease the process.

Personnel and capacity building

The availability, efficiency, and readiness of key personnel in implementing a public administration experiment is critical to its success. In the 16 participating colleges, there were, on average, very few colleges where management and staff directly participated in the pilot study. Understanding the context within which these experiments might be implemented is also crucial for their success. Timing interventions in coordination with curricular and extra-curricular activities (and holidays) can be improved by having a nodal point of contact to process approvals at each college. Indeed, having trained and prepared volunteers,² along with such enabling staff can go a long way in maximizing experimental control and efficiency.

Finally, we note that the results of the pilot study are likely to reflect the fact that our intervention was embedded within a network of stakeholders: the Maharashtra SEC, a non-profit organization, college administrators, and volunteer groups. Our study provides first-hand evidence that plan-making has tremendous potential as a behavioural intervention to improve voter registration among college-going students in the Indian context. Thus, behavioural interventions that nudge individuals in the age group with the lowest representation in the electoral system can help meet the overall objective of universal voter registration in India. Future steps include expanding the intervention to other colleges across the city, as well as other cities in Maharashtra. One modification to the card can help in broadening its appeal: translating the

²We acknowledge that the success of the intervention depends largely on the efforts (and intrinsic motivations) of the volunteers recruited for the project. Heterogeneity in their characteristics and efforts could also alter the results and implementation.

content to Hindi or Marathi, or any regional/widely spoken language if the study were to be conducted in a different state, so that the content on the card becomes salient to individuals comfortable with other languages.

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