

Changing the Default: The Impact of Motor-Voter Reform in Colorado

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Abstract

Using monthly data from the Colorado Department of Motor Vehicles from 2017 to 2021, we study a series of reforms to the voter registration process conducted by the DMV between 2018 and 2020. Consistent with studies in behavioral economics about retirement savings, prior to the reforms, a large majority of unregistered DMV patrons declined the opportunity to register when conducting a transaction. When voter registration became the clear default option for certain unregistered Colorado DMV patrons in 2020, very few of them subsequently opted out, which resulted in a sudden, large increase in the rate at which DMV patrons registered to vote. Second, even registered voters in good standing are remarkably resistant to taking the crucial step of updating their registration address while at the DMV. The switch to a system of fully automatic updates meant that hundreds of thousands of Colorado registered voters whose addresses otherwise would have been out-of-date suddenly had the correct information on the voter file, obviating the prospect that mail ballots and other election mail go to the wrong address or get lost, or that in-person voters must update their addresses at the polls through same-day voter registration or a provisional ballot. Finally, we present more tentative evidence that registration rates at the DMV can also be increased simply by informing people of their registration status, indicating that some voters decline registration opportunities because they falsely believe they are already registered. Taken together, our results suggest that with some coordination and investment, DMV offices can be extremely valuable partners in registering voters and maintaining accurate voting lists.

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A growing body of research indicates that when faced with a choice, humans have a strong bias in favor of the default option. Recent observational and experimental studies have demonstrated that making an option the default increases the likelihood that the option is chosen over alternatives. Applications of this insight include air-conditioner temperature settings, consent to receive newsletters, parole hearings, and retirement savings plans (Thaler and Sunstein, 2008).

An important question for policymakers in the United States is whether the same insight applies to voter registration. In much of the United States, the default option is for an eligible person to remain unregistered unless they take pro-active steps to register. However, in many other countries around the world, and now in a handful of U.S. states, the default option is for an eligible voter to be registered unless he or she takes active steps to decline the opportunity.

To what extent can registration rates be increased simply by changing or strengthening the default option? This report examines data from the state of Colorado, which recently changed the process for voter registration at the Department of Motor Vehicles. The previous system can be characterized as a “front-end” automatic voter registration system with a default that gently pushed in the direction of registration but provided a very easy opt-out during the DMV interaction. The new system is a so-called “back-end” system in which registration is simply the default, with no decision to be made at the DMV office, for a certain class of Colorado residents who demonstrate proof of U.S. citizenship during their DMV transaction. For these individuals, no opt-out is offered at the time of the DMV interaction. Rather, the option to eschew voter registration is offered later by mail. We examine aggregate time series data on the rate at which eligible unregistered individuals in Colorado accept the opportunity to register when conducting a DMV transaction. We find evidence that the change in the nature of the default was associated with a substantial increase in the rate at which DMV patrons become registered. Our evidence points to the change in system as the primary explanation for this increase in registrations.

1 Background

In most industrialized democracies, the default option is for eligible citizens to be automatically registered to vote. In most of Northern Europe, registration is automatic when an individual turns 18 or becomes a citizen. The citizen need not take affirmative

steps in order to register, and in many cases, registration is automatically updated with a change of residential location. In Germany, one is required to proactively register one's address with local authorities, but this information is automatically transmitted to the voter roll. In Canada, election officials collect information from tax authorities and other government agencies to add eligible citizens to the rolls, without requiring them to take affirmative steps to register.

The United States is one of the only wealthy democracies in which voter registration has typically not been the default option. Rather, for most U.S. states over most of the postwar period, the voter registration process has been largely separated from the data-gathering conducted by other organs of the state, like departments of motor vehicles, revenue services, or social service agencies, and none of these agencies has taken an active role in facilitating registration or maintaining the voter roll. Rather, citizens interested in voting have been required to find their own way to a distinct set of county-level election officials and complete a location-specific registration process. Likewise, separate from their interactions with other agencies, Americans are required to update their voter registration information upon making a residential move.

It is not surprising, then, that the share of the eligible population that is registered to vote has been considerably lower in the United States than almost all other wealthy democracies (Rosenberg and Chen, 2009). For those who would like to increase registration rates in the United States, a longstanding goal has been to emulate other countries and move toward a system in which registration is the default option for eligible voters. This requires changes in standard operating procedures of government agencies—above all departments of motor vehicles.

An important milestone for reformers was the National Voter Registration Act of 1993, which required the DMV in most states to offer voter registration to its patrons. However, this broad legislation has been implemented in very different ways by different states, with important consequences for effectiveness in registering voters (Highton and Wolfinger, 1998; Naifeh, 2014). For instance, prior to losing a recent lawsuit, the implementation of the so-called “motor-voter” provision for online DMV customers in Texas was a web link to a page that the voter was required to print, fill out by hand, and after researching the correct address, mail to the relevant county election officials. Even in states where policymakers have attempted to create a more proactive role for the the DMV in registering voters, when saddled with long lines and impatient patrons, constrained DMV employees conducting face-to-face transactions might neglect

to mention the voter registration opportunity. In a recent survey conducted by the Pew Trusts, only 16 percent of unregistered voters, and 18 percent of registered voters, said they could recall being asked to register by a motor vehicle or social service agency (Pew, 2017).

While the “motor voter” provision of the National Voter Registration Act did not bring the United States into conformance with the practices of other advanced industrial democracies, it took an important first step by beginning the integration of the bureaucratic activities of the DMV and other administrative agencies with those of election officials in building and maintaining lists of registered voters. However, this integration remains quite incomplete in the vast majority of U.S. states. Moreover, for reasons explored further below, it is clear that as long as non-registration is the default option or registration is only a weak default, even a well-designed DMV process with diligent implementation by DMV personnel might allow a surprisingly large group of eligible people to pass through without registering to vote.

2 Why do People Decline Opportunities to Register?

Even if the DMV routinely offers an option for an unregistered individual to register as part of their application for a new or renewed driver’s license, the behavioral economics literature gives us good reasons to expect that a large number of patrons will decline the opportunity. In certain choice settings, humans are surprisingly oriented toward choosing the path of least resistance, even if upon some minimal reflection, it is clear that an alternative choice would be more beneficial. Moreover, humans are strongly inclined toward procrastination.

For instance, consider the classic case of new employees who, when filling out paperwork to start a new job, are asked whether they would like to participate in a retirement savings program that includes a match from the employer. It is clearly in the interest of the employee to take immediate advantage of this offer, but this requires taking a moment to fill in the requisite additional information and make some choices. However, a surprisingly large number of people decline, leaving money on the table.

This happens in part because new employees are constrained and pressed for time, and would like to finish the bureaucratic task at hand—getting on the payroll—as quickly as possible. Other tasks that seem less pressing and can always be revisited

later, like setting up a retirement savings plan, seem like a distraction from the immediate goal. It is quite easy to choose the default option and move on, perhaps making a mental note to revisit the issue of retirement savings when time permits. Unfortunately, for many employees, months and years go by without this happening. A golden opportunity was squandered, and the eventual cost of this poor decision is quite high.

Likewise, an unregistered individual can easily squander an opportunity to register to vote when obtaining or renewing a drivers' license. Whether the characterization is fair or not, many Americans view their state's department of motor vehicles as something similar to the hostile, impenetrable bureaucracy of a Kafka novel, and feel that they must gird themselves for a trying and time-consuming ordeal that will only yield the desired license or vehicle registration with good luck, careful planning, and persistence. After preparing all the documents, reviewing once again the rules about lane changes, and waiting in a long line, the moment arrives, and in the midst of the anticipated bureaucratic items comes a question about something unexpected and unrelated to the task at hand—voting.

Like a new employee encountering the question about retirement savings, for many, the temptation is very strong to move the process along, achieve the goal, and save the issue of voter registration for another day. Remarkably, for example, in California, well over half of unregistered individuals who enter a DMV transaction decline when offered the opportunity to register. In Colorado, among unregistered individuals who entered into a DMV transaction in 2017 and 2018 and were offered an opportunity to register, around 70 percent declined. To be sure, some of these individuals were non-citizens or otherwise ineligible to vote, but without question, a large share of eligible voters are turning down the opportunity.

In addition to hurry, procrastination, and bias in favor of the default option, people might decline these registration opportunities because they falsely believe themselves to be already registered. In a large survey fielded in conjunction with the 2020 general election the Cooperative Election Study asked if, and where, respondents were registered to vote. To validate these responses, researchers then attempted to find them in the voter file. It appears that over 20 percent of those who reported that they were registered were in fact not registered. A false confidence in registration might arise in part if states are aggressive in purging inactive people from the voter file who have not participated in recent elections.

Finally, it is entirely possible that people decline opportunities to register because

they are frustrated with politics and have no interest in voting. For such individuals, any reforms aimed at making it easier to register would presumably be ineffective.

Likewise, one might imagine that people do not save for retirement because they prefer to maximize their current income and are unconcerned with the future. However, one of the foundational discoveries of behavioral economics is that when individuals are automatically enrolled in a savings plan but given the option to opt out, they tend to remain enrolled in the savings plan. This suggests that the failure to save was due to default bias and procrastination rather than a well reasoned preference for current over future consumption.

The key question addressed in this report is similar: does a change in the default choice for voters at the DMV have a similar effect on voter registration? Specifically, what are the implications for registration if the DMV goes from a default that provides a weak nudge toward registration to a strong default in which an eligible citizen is simply registered without any action required? A recent paper by McGhee, Hill and Romero (2021) demonstrates that states that have adopted some form of automatic voter registration in recent years have seen increases in registration and turnout rates. Here, we focus on change over time in one state—Colorado—that has introduced a reform that changes the nature of the default and opt-out options for a relatively large group of individuals who interact with the Colorado Department of Motor Vehicles.

3 The Colorado Reforms

There are three categories of DMV transactions that trigger a voter registration opportunity in Colorado: (1) new driver’s license/ID, (2) renewal of a driver’s license/ID, and (3) changes of address for a driver’s license/ID. From February of 2017 to May of 2020, Colorado had a system known as “front-end” automatic voter registration, which provided all unregistered DMV patrons a weak default in favor of registration. While providing information and documentation necessary for a driver’s license/ID transaction, patrons were offered an opportunity to register to vote with the following prompt: “I’ll use the information you’ve given me today to keep your voter registration up-to-date or register you to vote if that’s ok with you.” However, an affirmative answer then triggered an additional set of questions about citizenship, county of residence, party affiliation, the type of ballot desired for the next primary, and whether the individual was interested in email reminders about upcoming elections. Constrained

DMV patrons could avoid this entire line of questioning at the beginning by simply declining.

As noted above, there are several reasons why an unregistered voter might decline to register, or why a registered individual might decline the opportunity to update out-of-date information: procrastination, bias in favor of the path of least resistance, lack of information about registration status, and lack of interest in voting. Prior to June of 2019, DMV personnel did not know the registration status of the individual at the time this choice was being made. After the fact, for its records, the DMV ascertained the registration status of these individuals. During this period, the DMV data indicate that over 70 percent of unregistered DMV patrons declined this registration opportunity.

To be clear, not all of these individuals were eligible to vote. Some were non-citizens or otherwise ineligible. Approximately 6.1 percent of Colorado residents are non-citizens. But assuming that DMV employees indeed followed their training—and we have no reason to believe they did not—it appears that a majority of eligible unregistered Colorado citizens turned down the opportunity to register, in spite of the gentle prompt in favor of registration.

3.1 Reforms for Existing Registrants

Beginning in 2018, Colorado instituted several consequential reforms. Starting in June 2018, Colorado introduced automatic updates for *existing* registrants. In other words, someone who was already registered, but whose registration address was out of date based on information provided during the DMV transaction, was automatically re-registered at their current address, regardless of their response to the registration prompt described above during the DMV transaction. However, from June of 2018 until May of 2019, everyone was still being given this prompt, which was given to DMV customers regardless of their registration status. Throughout this period, the DMV continued to keep records about whether individuals were previously registered or not, and whether they accepted this opportunity to update their address. From April of 2017 to May of 2019, 65 percent of those already registered declined the opportunity. Of course, some declined because they knew their address was current.

Fortunately, for a brief period from July to December of 2018, the DMV collected information about whether those who declined to update their address were indeed current. On average, 67.5 percent who declined an update were not in need of an update. But 32.5 percent who declined an update actually had an out-of-date address

and were in need of a voter registration update. The latter group was automatically updated under the new policy that began in June of 2018. But based on this information, we can determine that in the past, prior to the institution of automatic updates, a relatively large group of DMV patrons in need of registration updates declined the opportunity to update their registration address, despite needing an update. On average, there were 17,465 cases like this per month during the period when this information was collected, suggesting that in the course of a year, automatic registration updates have benefited more than 200,000 DMV patrons per year who would otherwise have continued to have been registered at the wrong address.

This is very significant because accurate registration records are the backbone of any election system. Voters must be registered in the correct county and precinct in order to receive election mail, including ballots and related materials, and to vote in-person without difficulty. Having the correct address on the voter file protects the voter against errors and lost ballots. With out-of-date information on the voter file, in-person voters might end up at the wrong precinct on Election Day, in which case they may have to cast a provisional ballot or use a same-day voter registration process, if available, to update their address. In some cases, this ballot might not be counted. Accurate voter rolls are also cost-efficient, preventing undeliverable mail, saving election officials time and effort on extra mailings, and reducing the need for extra paperwork and provisional ballots.

3.2 Reforms for New Registrants

Next, in June of 2019, the Colorado DMV implemented technology that immediately ascertained an individual patron’s registration status. The result is that registered voters will have their registration information automatically updated, and so it is no longer necessary to ask them any questions about registration. The registration prompts are now only offered to unregistered voters. In contrast with the period before June of 2019, the DMV employee now knows with certainty that they are interacting with an unregistered voter. The prompt no longer includes the words “keep your voter registration up-to-date.” It now simply reads “I’ll use the information you’ve given me today to register you to vote if that’s ok with you.” Thus, the prompt now implies that the individual is unregistered, and the DMV employee knows with certainty that this is the case. DMV employees are not trained to emphasize that the individual is unregistered or to exhort them to register, but it seems quite plausible that in the course of the

interaction, the DMV employee might reveal this information, especially if asked. As a result, if uncertainty about registration status is an important reason for declining a registration opportunity, it is plausible that the share of interactions resulting in a new registration would increase beginning in June of 2019.

Finally, in May of 2020, Colorado transitioned from the previous “front-end” system of registration to a “back-end” system for a large group of previously unregistered individuals. This means that some DMV patrons—specifically, those who provide documentation that demonstrates their U.S. citizenship—no longer see any information about voting at all, and are not offered an option to decline while interacting with the DMV. They are simply registered to vote, and later sent a mailer that provides them with the opportunity to opt out. This “back-end” policy does not apply to every unregistered individual who interacts with the DMV, however, because not all licensing transactions in Colorado require applicants to bring documents that demonstrate the applicant’s citizenship status (or lack thereof). Above all, individuals who are renewing an unexpired license are not required to bring documentation that demonstrates citizenship status. Individuals whose documents do not demonstrate their citizenship status still receive the same prompt as before, and are given the same opportunity to decline as before. Since May of 2020, this has been the procedure for around 65 percent of unregistered voters who conduct a DMV transaction. For the other 35 percent of unregistered voters, the default option has been changed. For them, registration is the default option, and they can opt out later by returning a mailer.

4 Empirical Analysis

We use monthly data from the Colorado DMV to estimate the effect on voter registration among unregistered DMV applicants for both changes to the Colorado system: the change in June 2019 to a system that more strongly signals to unregistered voters that they are in fact unregistered, and the change in May 2020 to a strong default of automatic registration for approximately 35 percent of the unregistered voters visiting the DMV. Our monthly data covers April of 2017 to September of 2021 and aggregates information from across all of Colorado’s DMV branches. The data set contains information on the total number of DMV transactions, the number of DMV patrons automatically registered to vote through the back-end process and how many returned a post-transaction mailer to opt out of this automatic registration, the number of un-

registered voters who could not be registered to vote through the back-end process and whether they ultimately decided to register when prompted as part of the DMV transaction, and finally the number of DMV patrons already registered to vote.

Our primary outcome of interest is the rate at which previously unregistered DMV patrons are registered to vote. We focus on the rate—the total number of newly registered voters divided by the total number of unregistered DMV patrons—because this enables us to adjust for any month-to-month variation in the total number of people arriving at the DMV. It also enables us to determine the share of DMV patrons who arrive with the appropriate paperwork to benefit from the back-end automatic voter registration system. To ensure our results are not sensitive to the focus on the rate, we also estimate the effect of the policy changes on the total number of individuals who are registered to vote. As a secondary outcome we will assess the effect of the policy changes on the percentage of unregistered patrons who *decline* the opportunity to be registered to vote. We expect that if the policy changes have been effective, we should also see a large decrease in the percentage of patrons who are declining the opportunity to register to vote.

The left-hand plot in Figure 1 graphically presents the rate at which previously unregistered DMV patrons registered to vote before the June of 2019 policy change (the black line) and then after (the blue line). The points represent the month-to-month actual rate of registration among the previously unregistered and the thick-smoother line represents a smoothed average of those points. The left-hand plot makes clear that there is a large and discontinuous increase in the rate individuals are registered to vote after June of 2019. This effect persists, until a further increase when the May of 2020 reform was put in place, as discussed below. The right-hand plot in Figure 1 shows that at the same time that registrations increased, there was a corresponding decrease in the percent of DMV patrons who declined the opportunity to register to vote.

To obtain precise numerical estimates of the effect of the June of 2019 policy change we use “regression discontinuity in time” a statistical technique that is intended to assess the effect of large events when there is no available control group. Intuitively, a regression discontinuity in time is a statistical technique that compares an outcome just before and just after a policy change to obtain a “Local Average Treatment Effect” (LATE): the effect of the intervention at this particular instance. This technique will estimate the causal effect of the policy changes of interest if there are no other major changes to how voters register at Colorado’s DMV that occur at the same time as

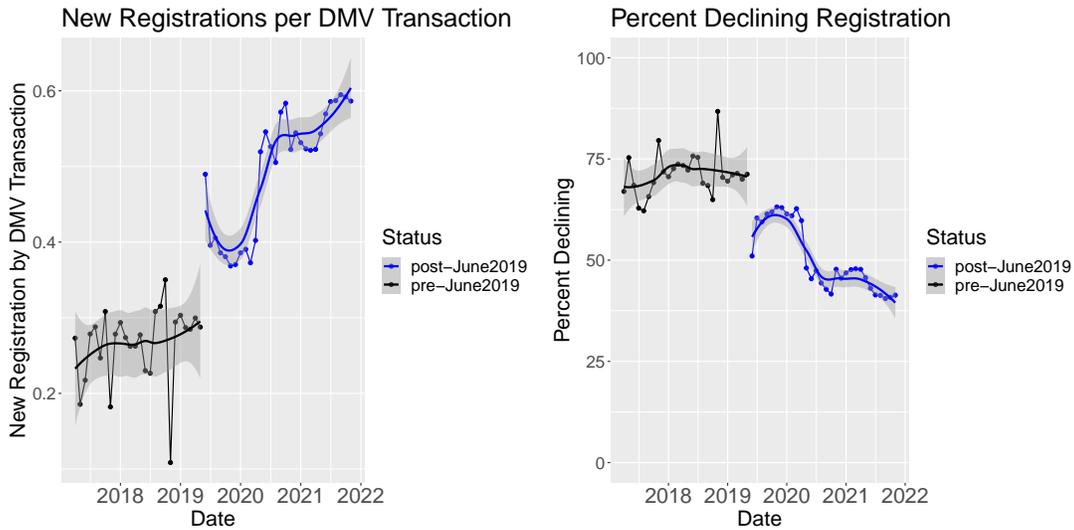


Figure 1. Graphical demonstration that switching to a system that more explicitly reminds voters they are not registered to vote leads to a lower rate of individuals declining the chance to register to vote (right-hand plot) and increases the number of new voter registrations per DMV transaction (left-hand plot).

the policies of interest. For example, we will necessarily assume that the proportion of DMV patrons who are eligible to vote is the same before and after the policy is implemented. We have no reason to suspect this assumption is violated: to the best of our knowledge there were no other major changes to DMV policy that coincided with these changes. Under the assumption of stability before and after the policy change and using best practice to determine the modeling parameters for a regression discontinuity in time (with bandwidth selection done using the Imbens-Kalyanaraman method (Imbens and Kalyanaraman, 2012), as implemented in the `rdd` package in the R programming language), we report the effect of the policy change on the outcomes of interest in Table 1.

In Table 1 we see that the June of 2019 policy change caused an additional 15 registrations per 100 DMV transactions involving unregistered voters (right-hand column), a statistically significant effect at standard confidence levels. Altogether, we estimate that this policy change resulted in an additional 14,637 individuals being registered to vote. And consistent with the graphical evidence, this resulted in a 16 percentage point decrease in the percentage of DMV patrons who declined the opportunity to register to vote.

We see a similar and additive effect on registrations as the result of the May of 2020 policy change. The left-hand plot in Figure 2 shows a second increase in the rate

	Decline Percentage	Total Registrations	Registration per Transaction (Unregistered Patrons)
Effect	-0.16 (0.04)	14616.79 (2586.32)	0.15 (0.04)

Table 1. Estimates of the effect of reminding unregistered voters of their registration status on the rate of decline (left-hand column) total registrations (center column) and the number of new registrations per transaction (right-hand column). The point estimates are the Local Average Treatment Effect and the standard errors are in parentheses. The reminder reduced the percent who decline registering to vote, increased total registrations, and increased the number of registrations per DMV transaction.

at which DMV patrons were registered to vote. And just like with the June of 2019 reform, the May of 2020 reform coincided with a decrease in the percentage of voters who declined the opportunity to register to vote. Again, using a regression discontinuity in time technique, we find that these are large and meaningful effects. The May of 2020 reform caused an additional 14 voter registrations per 100 DMV transactions. This corresponds to an increase of 12,836 individuals registered to vote. Interestingly, this corresponds almost exactly to the number of back-end transactions that occurred in June of 2020, 13,157, even though our statistical procedure did not have access to this information when estimating this effect. And consistent with the policy increasing voter registrations by strengthening the default option, we find a 13 percentage point drop in the percentage of unregistered voters who decline the opportunity to register to vote.

	Decline Percentage	Total Registrations	Registration per Transaction (Unregistered Patrons)
Effect	-0.12 (0.01)	12819.77 (4059.27)	0.14 (0.01)

Table 2. Estimates of the effect of back-end automatic voter registration system on the rate of decline (left-hand column) total registrations (center column) and the number of new registrations per transaction (right-hand column). The point estimates are the Local Average Treatment Effect and the standard errors are in parentheses. The move to back-end automatic system reduced the percent who decline registering to vote, increased total registrations, and increased the number of registrations per DMV transaction.

After the May of 2020 policy change, Colorado DMVs automatically registered 12,141 individuals per month using the back-end system. As clear evidence of the power of default options, very few of these individuals returned the mailer to decline their

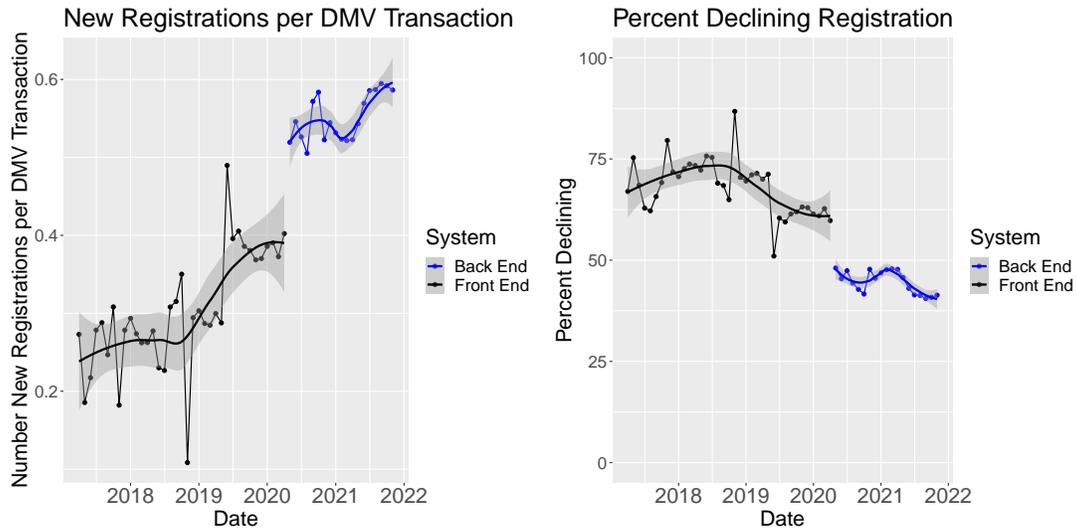


Figure 2. Graphical demonstration that switching to a strong default automatic registration system lowered the rate at which individuals declined registration (right-hand plot) and increased the number of new voter registrations per DMV transaction (left-hand plot).

registration. Only 0.6% of all individuals who were registered to vote automatically returned a mailer to decline their registration. In other words, of the 206,400 individuals who were automatically registered to vote, only 1,247 returned a mailer to decline that registration.

While our estimates indicate that the June of 2019 and May of 2020 policy changes caused a robust increase in the rate of voter registration, our statistical technique is likely an underestimate of the effect of the May of 2020 policy on those voters who are able to vote. This is because our estimates include both individuals who the policy can help get registered—unregistered eligible DMV patrons who provided proof of citizenship during the DMV transaction—and patrons who it cannot help get registered—unregistered DMV patrons who are not included in the back-end policy because their transaction did not require them to provide citizenship information. A greater share of individuals channeled through the back-end process would result in an even larger effect from the change.

Indeed, we have evidence that our estimates understate the effect of moving to the back end registration system due to the timing of when the reform was implemented. Around May of 2020, concerns about the COVID pandemic were quite high, causing a relatively low-share of all transactions to trigger the back end system, since Colorado residents were delaying in-person transactions that required proof of citizenship. The

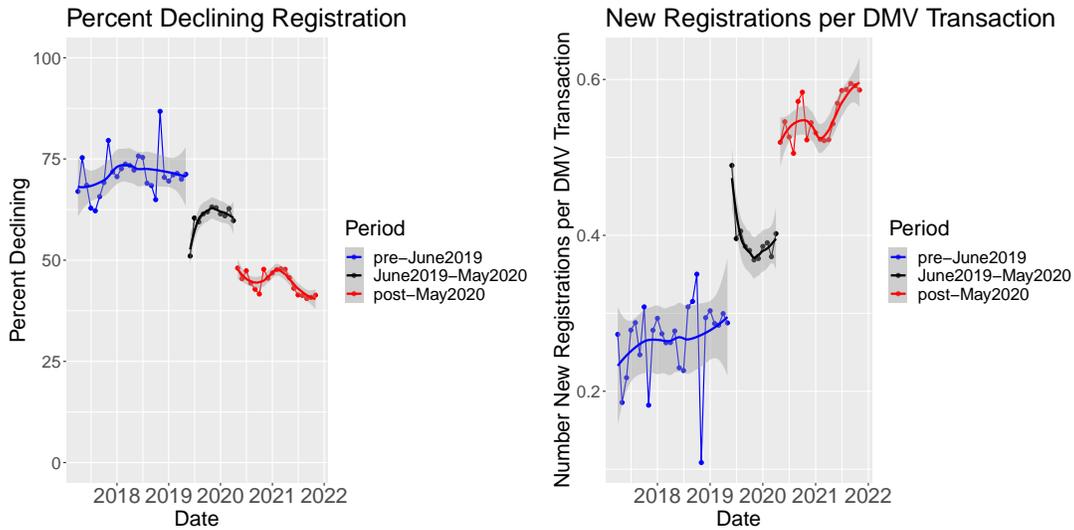


Figure 3. Graphical demonstration of the additive effects of the June of 2019 and the May of 2020 reforms. Cumulatively they lowered the decline rate (left-hand plot) and increased the number of registrations per unregistered DMV patron (right-hand plot).

share of back-end transactions have increased recently, due to lessening concerns about the COVID pandemic and a greater share of in-person transactions where customers present proof of citizenship that will trigger the back end system. The increased prevalence of back-end transactions implies that the reform will be even more effective under non-pandemic circumstances. Using the same method of analysis discussed above and extrapolating suggests that in November, 2021 the back-end system caused an additional 0.23 registrations per transaction—a considerable increase over the already large effect size of 0.14 registrations per transaction reported above.

The reforms of June of 2019 and May of 2020 together have a large effect on the rate unregistered DMV patrons are registered to vote. In Figure 3 we provide separate smoothed lines for the three periods of our study: before June of 2019, between June of 2019 and May of 2020, and after May of 2020. The left-hand plot shows that, together, the reforms lowered the declination rate, while the right-hand plot shows that the reforms cumulatively increased the number of registrations per unregistered DMV transaction. Taken together, the reforms caused at least an additional 29 voter registrations per 100 unregistered DMV patrons, and as much as an additional 38 voter registrations per 100 unregistered DMV patrons in post-pandemic circumstances.

4.1 Evidence from Pre-Registration Data

We observe a similar striking pattern when we examine pre-registration data: DMV patrons who are currently ineligible to vote because they are not yet 18 but who are offered the opportunity to pre-register so they are on the rolls after turning 18. The left-hand plot in Figure 4 shows the number of new pre-registrations per transaction among patrons who were not previously pre-registered before and after the change to more explicitly remind patrons of their registration status. This small change causes a large jump in the pre-registration rate. Similarly, the right-hand plot show that switching to a back-end opt out system causes a second jump in the pre-registration rate.

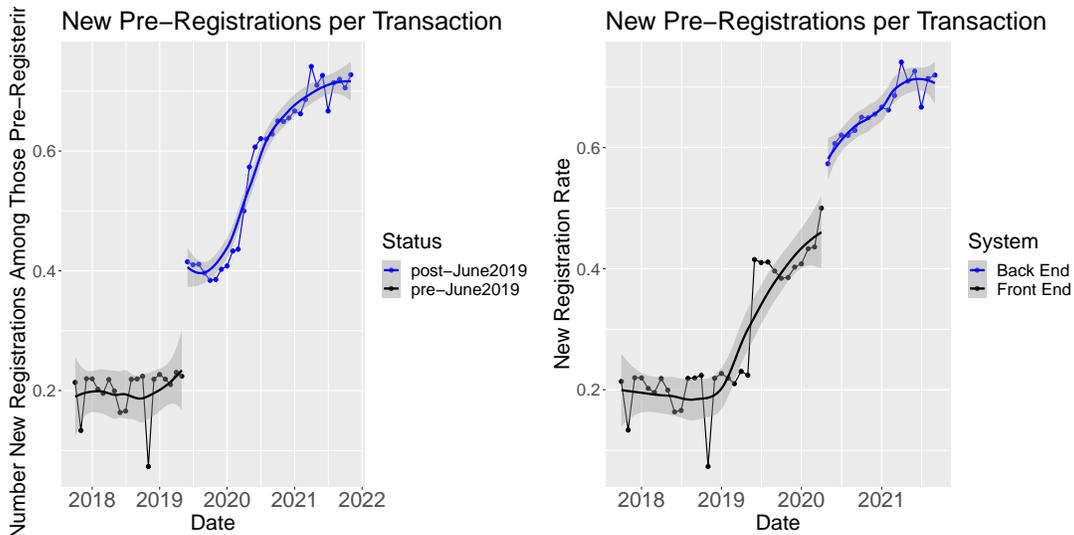


Figure 4. Graphical demonstration that switching to a system that more explicitly reminded voters about their registration status (left-hand plot) and an automatic registration system (right-hand plot) caused an increase in the rate 16-17 year old DMV patrons registered to vote.

Table 3 uses a regression discontinuity in time to estimate the effect of the June of 2019 and May of 2020 policy shifts on the total registrations and the number of pre-registrations per transaction for previously un-preregistered patrons who are less than 18. The effect of both policy changes is pronounced for patrons who are less than 18. For example, the policy change in June of 2019 caused an additional 18 per 100 previously un-preregistered patrons to become pre-registered. Similarly, the policy change in May of 2020 caused an additional 11 per 100 previously un-preregistered patrons to be preregistered. As noted above, the effect of the May 2020 change is

likely an under-estimate due to implementation during COVID. Looking to data from more recent months, calculations suggest that the back-end system caused an additional 30 per 100 previously unregistered patrons to be pre-registered, an even larger effect. Taken together, the June 2019 and May 2020 led to an increase of at least 29 pre-registrations per 100 unregistered DMV patrons under the age of 18 and as much as an additional 48 voter registrations per 100 unregistered DMV patrons under the age of 18 in post-pandemic circumstances.

	June 2019		May 2020	
	Total Preregistrations	Preregistration rate (Unregistered Patrons)	Total Preregistrations	Preregistration rate (Unregistered Patrons)
Effect	1641.56 (428.18)	0.18 (0.01)	3347.41 (798.91)	0.11 (0.02)

Table 3. This table focuses on patrons less than 18 years of age and presents estimates of the effect of making a patron’s preregistration status more salient and a back end automatic voter preregistration system on the total number of preregistrations and the number of preregistrations per previously unregistered patron. The point estimates are the Local Average Treatment Effect and the standard errors are in parentheses. Both reforms cause a dramatic increase in the total number of preregistrations and the rate of preregistration.

5 Discussion and Conclusion

This simple study provides strong evidence that with the right set-up, the Department of Motor Vehicles can be an extremely valuable player in registering voters and maintaining accurate voter files in the United States. It appears that voters often pass up opportunities to register at the DMV (and presumably other agencies) because of a very natural human tendency to procrastinate and accept the path of least resistance, especially when interacting with bureaucrats about unrelated tasks. When given a simple option to decline and procrastinate, a majority of prospective registrants at the DMV will take it.

The main finding of this study is that when voter registration became the clear default option for a large number of Colorado DMV patrons, very few of them subsequently opted out, which resulted in a sudden, large increase in the rate at which DMV patrons registered to vote in the course of conducting DMV transactions. The only reason why the reform has not yet led to the full population of voting-eligible

DMV patrons becoming registered is that a significant number of DMV patrons were not eligible for the back-end system because they did not have, or were not required to produce, documentation that clarified their citizenship status at the time of the transaction. Expansion of the pool of patrons eligible for the back-end process is already happening as concerns with COVID fade, and as more citizens apply for a REAL ID. Further expansion would undoubtedly increase registration rates even further.

It is also encouraging to note that the adoption of the back-end system led to a substantial increase in pre-registrations among 16 and 17-year olds. Given the stress and anxiety of the initial driver's license application and lack of familiarity with the pre-registration concept, it is not surprising that a large share of young people might procrastinate and choose to remain unregistered if that is presented as an easy option. The switch to an automatic pre-registration system can have a significant impact on registration rates among young people, many of whom might otherwise squander a golden opportunity to pre-register to vote when they interact with the DMV upon turning 16.

Second, we also discovered that even registered voters are remarkably resistant to taking the crucial step of updating their registration address while at the DMV. Roughly one-third of existing registrants who declined an opportunity to update their registration at the DMV actually had an out of date registration record and needed an update. The switch to a system of automatic back-end updates meant that hundreds of thousands of Colorado registered voters whose addresses otherwise would have been out-of-date suddenly had the correct information on the voter file, obviating the prospect of a provisional or out-of-precinct ballot in the future.

A final lesson is more tentative. Even before the introduction of the back-end system, we found a surprisingly large increase in registration rates among previously unregistered DMV patrons associated with a change in the prompt about voter registration. This new prompt was associated with the implementation of a system in which the registration status of the patron was determined by the DMV during the transaction, such that only unregistered individuals received the new prompt. Our interpretation is that the new prompt provided a stronger signal that the patron was in fact unregistered, and we suspect that DMV personnel might, in some instances, reinforce this information in their communications with the patron. The increase in registration rates associated with this change is consistent with the idea that, in addition to a bias in favor of the default, some people decline the opportunity to register

simply because they believe they are already registered.

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