The State of the Literature

In this chapter I will go through the existing literature on Vote-By-Mail (VBM). I will define what Vote-By-Mail is; I will then summarize the expectations that researchers have of the effects of VBM on turnout, based on existing theories of electoral participation. I will continue with a summary of previous quantitative research on the effects that VBM and similar policies have had on turnout. I will conclude with some more general comments on the available data, and literature concerning the most commonly used quantitative methods.

What is VBM?

Gronke (2007, 2008), RMStein (1998)

Vote-By-Mail is a process by which voters receive a ballot delivered by mail to their homes. Voters then have a variety of options on how to return these ballots, ranging from dropping them off at pre-designated locations, to mailing them in, to bringing them to a polling place and voting conventionally. This varies across states that have implemented VBM. Some common forms of the VBM policy are:

- *Postal Voting*: All voters receive a ballot by mail, which can then be returned to a pre-designated location or mailed in to be counted. This is the current system in Oregon, is an option in Colorado, and is implemented by a number of counties in California, Utah, and Montana.

- *No-Excuse Absentee*: Voters can choose to register as absentee voters without giving any reason related to disability, health, distance to polling place etc. This is the case in 27 states and the District of Columbia.

- *Permanent No-Excuse Absentee*: This is similar to the previous system, but allows voters to register as absentees indefinitely, without having to renew their registration each year; they become de facto all-mail voters. This is in place in Washington, Kansas, and New Jersey.

- *Hybrid or Transitionary Systems*: In hybrid systems, voters receive a mail ballot but can choose to disregard it and vote conventionally. This is the case in Colorado. Transitional systems exist in states that have chosen to eventually conduct all elections by postal voting, but have given counties an adjustment period during which this shift is not mandatory, or mandatory only for certain elections. This is the case in California, Utah, and Montana.

Vote-By-Mail is also commonly considered a type of early voting, since voters receive their ballots around two weeks in advance of election day; they are also able to return that ballot whenever they wish within that time-frame. This means that Vote-By-Mail can be counted as a "convenience voting" reform. These are usually implemented by state and local governments with the argument that they either expand the democratic franchise by bringing in new voters, or by making it more likely that current registered voters participate in the electoral process.

The Calculus of Voting

Grimmer (2011), Burden (2013)

Why Turnout Matters

Geys (2006, 2016), Smets (2013) ++ book sources

Turnout is the most commonly used measure for electoral participation. It is important because it signifies the level of engagement of the population with the state, the level of incorporation of different subgroups of the population into democratic processes, and the legitimacy of elected officials. It is widely accepted that

turnout should be maximized so that the democratic franchise represents the majority of citizens. Turnout for an election can be calculated or predicted, the difference being that in the former case we use data post-election to measure its absolute value, while in the latter we use a series of individual and community covariates to infer the levels of turnout for a future or past election.

Calculating turnout, at its core, involves the following equation:

$$\% \: Turnout = \frac{Total \: Ballots \: Cast}{Measure \: of \: Total \: Voting \: Population} \times 100\% \quad (1)$$

The choice of numerator is fairly obvious and universal; the denominator, however, is a different story. The two main statistics used are the total voting age population, and the raw number of registered voters in the geographical location we are examining. The total voting age population is used as a measure to incorporate the total amount of possible voters in a geographical area, and can be measured using data from the US Census. This causes some issues with voters that cross over to different districts; if someone lives in district A, it is still likely that they are registered to vote in district B. If this is not considered, the calculation of voting age population might be misrepresentative.

Using registered voters also brings with it two problems. First, the calculation necessarily occurs using voter registration files, which many times can include discrepancies, like deceased voters, voters included in multiple counties, or individual voters included multiple times. Furthermore, the total amount of actual voters among registered voters can be misrepresentative of democratic participation; consider that if a certain minority community has historically low registration rates, their lack of engagement will not be included in turnout rates, thus misrepresenting the level of inclusion in the district they reside in.

The punch line here is that how the turnout statistic is calculated is not a clear choice, and will have an impact on how studies are set up. To give one example, consider Oregon's Motor Voter program, that automatically registers voters when they interact with government services, like the DMV. It is conceivable that this reform will *decrease* turnout when measured as a percentage of the total registered voter count, but *increase* turnout when measured against total population. I will specify how I calculate turnout in the next chapter.**Need sourcing for this**

Statistical models of turnout can be constructed at either the individual or community level. At the individual level, a model is built to predict the probability of voting for every member of a group, and then sum over the members to create an estimate for turnout. Probit or Logit models are preferred. At the community level, researchers first choose a geographical level at which to calculate, which then constitutes the individual observation in the data that is used to create the model.

Both these models include a standard set of societal variables–at the individual and aggregate level–, policy variables–whether the district does Postal Voting, whether Voter ID requirements are particularly strict–, election-specific variables–closeness of election or campaign expenditure–and sometimes time-series data– previous levels of turnout–to make predictions on turnout levels. This type of analysis is not exclusively used to predict turnout but also to, as will be later shown, draw inferences on the effects that certain explanatory variables have on electoral participation.

Through meta-analyses on studies of turnout, it is possible to get a clear picture on what variables effect individual and collective choices to turn out. Three such studies are conducted by Geys (2006), Geys and Cancela (2016), and Smets (2013). Geys includes 83 studies of national US elections in his initial meta-analysis [@geys_explaining_2006], later increasing that number to 185 (Geys and Cancela, 2016) and adding local elections. On aggregate-level models for national elections they conclude that competitiveness, campaign financing, and registration policy have the most pronounced effects, while on the sub-national level there are more pronounced effects for societal variables and characteristics of election administration (spending, voting policy, etc.). Smets and Van Ham (2013) examine individual-level predictors for turnout in a similar meta-analysis, and conclude that "age and age squared, education, residential mobility, region, media exposure, mobilization (partisan and nonpartisan), vote in previous election, party identification, political interest, and political knowledge" [@smets_embarrassment_2013] are the most significant explanatory variables for turnout, along with income and race. ***I will add sources from books here***. I will specify the model I will use for turnout in the second chapter.

Theories of Voting

Aldrich (1993), Berinsky (2001, 2005), Edin (2007), Bendor (2003), Gerber and Green (2015), Matsusaka (1997), Fowler (2006)

Here I take one step back from turnout, and examine the theories surrounding individual choices to vote or abstain. There are three main theories outlined in the literature on why individuals chose to vote. While there is some overlap, the following are mostly distinct:

- *Decision "at the margins"*: In his 1993 study, Aldrich posits that voting is a low cost-low benefit behavior. Therefore, he continues, voting is a decision that individuals make "at the margins"; in most people, the urge to vote is not overwhelmingly strong, and therefore individuals will vote when it is convenient to them, when they are motivated by a competitive race, when policies are put in place to help them, and when they are subjected to GOTV (Get Out the Vote) efforts. For Aldrich, this is corroborated by the fact that most turnout models present consistent, yet weak, relational variables; if decisions are made "at the margins", then no single predictor would have an overwhelming result. This is also supported by Matsusaka (1997), and Burden & Neiheisel (2012). Matsusaka expresses support for a more "random" process of voting, where turnout models are ambiguous because of the difficulty that predicting "at the margins" entails [@matsusaka_voter_1999]. Burden & Neiheisel (2013) also demonstrate support for Aldrich's thesis by using data from Wisconsin to calculate a net negative effect of 2% on turnout due to a similar slight shift in turnout.[@aldrich_rational_1993; @neiheisel_impact_2012]

- *Habitual Voting*: While Aldrich supports that there is no single overwhelming predictor of turnout, Fowler (2006) posits that future voting behavior can be strongly predicted using individual voting history. This leads to the conclusion that individuals are set to either be habitual voters, or habitual non-voters [@plutzer_becoming_2002] by their upbringing and social circumstances, locking them into distinct groups. [@fowler_habitual_2006]

- *Social/Structural Voting*: Close to habitual voting are those that support a model of social and structural voting; these researchers claim that the decision to vote or not is deeply rooted in socioeconomic factors, which means that the divide between traditionally voting and non-voting groups can only be bridged by directly dealing with the socioeconomic divide between them [@edlin_voting_2007 ;@berinsky_perverse_2005]. Their reasoning is that "at the margins" voting only addresses groups that do not face significant burdens against voting–like the working poor, or marginalized racial groups–, and are usually already registered. Similarly, they address habitual voting claims by arguing that they are too short-sighted; individuals themselves might be habitually voting, but their decision to do so is rooted in strong societal and policy factors.

Need more sources, will use books

How they Apply to VBM

Berisnky (2005), Banducci (2000), and several applications of sources in above sections.

Under Aldrich's paradigm, vote by mail would effect significant change in voting behaviour, particularly by stimulating individuals that are currently not engaged in politics. If voting is a decision made "at the margins", then the significantly more convenient VBM model would shift those margins towards voing, since it offers a wider time frame, more methods of returning a ballot, and the stimulus of a ballot arriving at peoples' doorsteps. The effect would be pronounced for all groups, not only those currently registered, since voting would be easier uniformly.

If we asume habitual voting, the conclusion on VBM would differ significantly. In this case, the effect to be considered is how VBM impacts already formed habits around voting. It could be argued that VBM has no effect, which follows if we assume that voting habits formed do not shift if the mode of voting changes. It could also be argued that VBM might have a negative effect on turnout in the short term, because it disrupts the habit of election day for a readjustment period, before people settle into new groups of habitual voters

and non-voters, adapted to the new policy context.

Under social and structural voting contexts, VBM retains rather than stimulates new voters [@berinsky_perverse_2005]. This means that already registered and semi-active voters are more likely to participate, but there is no significant change in the amount of new voters entering the franchise. This would mean that traditional forms of voting policy that emphasize access to the polls will do nothing to bring in disenfranchised people, and potentially hide the problem under an inflated turnout statistic calculated on registered voters. Berinsky in particular emphasizes the need for a shift towards voter education, rather than early voting or VBM policies [@berinsky_perverse_2005].

Previous Study Results

In this section I will go through previous results from studies of Vote-By-Mail. I will also include a series of studies that are not necessarily about VBM, but have either been conducted in Vote-By-Mail states, or have to do with early voting which, as I have mentioned, is frequently linked to VBM. Most studies include a set of models or predictions of turnout, which are split into individual or county level results. I will group the studies according to whether the result shows a negative or positive effect on turnout.

General Results on VBM

Arcenaux (2012), Bergman (2011), Burden (2014), Edelman + Pantheon Analytics (2018), Gerber (2013), Rhine (1995), Neihelsen (2012), Keele (2018), Richey (2008), RMStein (1997, 2007), Gronke (2012, 2017)

I will start with studies that show a negative effect on turnout. Bergman (2011) uses a series of logit models of individual voting probability in California, during a period where part of the state conducted VBM elections, while others maintained traditional voting. This is called a "quasi-experiment", and is frequent throughout the literature. Bergman's results show a statistically significant drop in voting probability in VBM counties [@bergman_changing_2011]. Using a similar method, Keele (2018) takes a single city in Colorado, Basalt City, which is divided into two different voting districts using different voting systems. The conclusion is, again, a 2-4% drop in turnout along the VBM part of the city [@keele_geographic_2017]. Burden et al. (2014) takes a different approach, using country-wide election data from 2004 and 2008 presidential elections, and compares districts based on early voing practices. Their results show a significant drop in turnout, which can be associated to VBM as well due to its closeness to EV [@burden_election_2014].

In contrast, Gerber et al. (2013), applying both individual and county-level models for the state of Washington, reach the conclusion that VBM increases turnout by around 2-4%; they use the same quasi-experimental model that offers itself to researchers in states that are under transitionary systems [@gerber_identifying_2013]. R.M. Stein also reaches a similar conclusion when examining Colorado's practice of "vote centers", which are non-precinct attached polling places, which can service multiple counties [@stein_engaging_2008]. I include this paper here due to the link that voting centers have with VBM, as they serve as drop-off points for mail-in ballots. Richey (2008) examines the effects that Oregon's VBM program has on turnout by using past elections data, concluding a 10% positive trend associated with the policy [@richey_sean_voting_2008]. This effect is studied again by Gronke et al.(2012) who find a similar positive effect with much lower magnitude, which might point to a novelty effect: the existence of diminishing returns in turnout after the implementation of this policy [@gronke_voting_2012]. Gronke et al. (2017), again studying Oregon but focusing on Oregon's Motor Voter program, find evidence of positive association to turnout [@]. I include these effects due to Oregon being an exclusively VBM state, and because this paper uses a "synthetic control group" model, which **might** be discussed in a following section. Lastly, I include a study conducted by Pantheon Analytics on Colorado, which compares actual turnout to predicted levels for VBM counties in Colorado. The results show a positive effect of approximately 3.3% due to VBM [@edelman_analysis_2018].

The conclusion to be drawn from this section is that results on VBM vary significantly. There are multiple studies, using multiple methods, on multiple states, with multiple results. This only adds to the importance of being careful when constructing models and hypotheses to test VBM's effects on turnout, as assumptions made in the process can critically impact the results.

The Gerber Piece

Gerber(2017)

This is conditional on if I do a replication of Gerber.

Voter Registration Files

Inaccuracy of Survey Data

Ansolabehere and Hersch (2012), Burden (2000), Deufel (2010)

Apart from Voter Registration Files, the main source of data on the American electorate is national surveys, like the American NAtional Election Studies' survey (ANES), or the Cooperative Congressional Elections Study (CCES). These are post-election surveys, distributed to voters, which include fields associated directly with voting–participation, precinct, which party you voted for–and indirectly, through questions on societal factors like race, income, or gender. On the surface these seem like a better source of data, since no record linkage or ecological inference need be made to connect individual voters with an extensive list of covariates. There is, however, a significant problem with these data: survey misreporting.

Even without resorting to advanced statistical or data gathering methods, the fact that the CCES and NES often misrepresent the electorate is apparent just through looking at turnout statistics; both show higher turnout than what the true value, calculated from the population, was. When looking at surveys a bit closer, using either private, extensive data files like Catalyst [@ansolabehere_validation:_2012] or validated voter files from the late 20th century [@deufel_race_2010], the results show consistent misreporting among certain groups, that tend to either be politically engaged non-voters or minorities and low socioeconomic status individuals. This gap, according to Deufel et al. (2010), has served to propagate societal stereotypes and class entrenchment into studies on turnout, which in turn negativelly effect policy, since research using the ANES and CCES are widely used to study turnout among the groups that are consistently misreporting. Admittedly, the fact that misreporting happens among specific groups does open the way for statistical methods to compensate for the bias intoduced, but for the purpose of my thesis I will prefer the use of VRF. A last issue with surveys worth mentioning is that they are contingent on quantity of responses as well as quality. There is no guarantee that the CCES or NES will receive enough responses to correctly infer population-wide statistics; something which is more likely for the American Community Survey or the Census, whcih are backed by the legitimacy of the federal government. Survey under-reporting is directly linked with the practices of the groups conducting the survey, and as such is hard to control for after the results are published [@burden_voter_2000].

The Importance of VRF

Books, mentioned later

I will include what I remember from some readings and what advisers mentioned in MATH241

As mentioned in my introduction, access to voter registration files has provided researchers with unique insight into the voting process. Quantitative research has expanded significantly, for three key reasons. First, VRF data exists in a consolidated, state-wide format at least for national elections. This means that the process of data collection involves interaction with significantly fewer government agencies, and a data wrangling process that can be quickly adapted to a set format. This is, of course, not to say that the process of data collection and handling doesn't still pose a significant challenge, as will become apparent in my second chapter. Second, there is a huge benefit attached to the fact that VRF data describes the whole population, rather than a sample. As mentioned in the previous section, survey data might give more insight into variables not included in VRF, but that comes at a steep cost for accuracy. Using VRF, the problem of self-reporting bias is eliminated for some studies, and transformed into a problem of record linkage and ecological inference for others [@ansolabehere_adgn:_2017, @burden_new_1998]. Third, wide public access means reproducibility

and accessibility, which translates into greater accountability for researchers. This effect is important, even if mitigated somewhat by private data companies and access fees.

Common Methods Used and Problems Encountered

Methods

- *Synthetic Control Group*: Abadie (2010), McClleland (2017), Gronke (2017)
- *Record Linkage*: Ansolabehere and Hersch (2017), Harvey (1994, 97), Koudas (2013)
- *GLM (Probit/Logit/Poisson)*: Barreto (2004), Dow (2004)
- *DID*: Bertrand et al. (2002)
- *E.I.*: King (2013), Burden (1998), Calvo (2003), Chao (2004), Rm Stein (2002)
- *Mixed-Effects*: Gelman and Hill (2007)
- *General EDA and Models*: James et al. (2013), Chapman and Hall (2017)

Issues

Grimmer (2015) {Not always best to do inferential models}, Ansolabehere and Hersch (2010) {Problems with Voter Reg Files}, other sources from the previous section