Ranked Choice Voting in Alameda County

A Natural Experiment
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1.) Introduction

Citizens voting in elections is an essential part of healthy democracy. Yet many democracies have experienced declines in voter turnout over the past several decades. Despite it being one of the highest turnouts in recent memory only 53% of the voting age population voted in the most recent American midterms. Low turnout in the American context may be the result of the US’s long utilization of first-past-the-post (FPTP) voting; with elections from the federal to the local level combining single member districts with majoritarian elections. Proportional representation (PR) electoral systems have long been considered to lead to higher turnout than majoritarian electoral systems. However, the last ten years has seen a growing amount of electoral experimentation in the United States, especially on the local level. Ranked choice voting (RCV), where voters are able to rank candidates by order of preference, has become increasingly in vogue. Major metropolitan areas like San Francisco (2002), Oakland (2006), Minneapolis (2006), Santa Fe (2008) and New York City (2019) have instituted the system. Moreover, Maine (2016) has recently approved using RCV for both state and federal elections. Ranked choice voting is a move towards proportionality, and proponents of the system have argued that it among other benefits increases voter participation, but is this the case? Does ranked choice voting really increase voter turnout?

Electoral systems and turnout is one of the most studied areas of political science. Within this field the relationship between proportionality, the degree to which the proportion of votes is translated into seats, and voter turnout was long thought to be clear: Increased proportionality increases turnout. But data from democracies in South America has muddied the waters of this once clear relationship. Some studies such as Cancela and Geys find a strong support for the positive correlation, while others have more mixed results. Although it is still largely considered to be a positive relationship, it merits further examination. One suggested avenue of further

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2 Soljinov, Abdurashid, *Voter Turnout Trends Around the World*, IDEA, 2017
3 Jordan Misra, *Voter Turnout Rates Among All Voting Age and Major Racial and Ethnic Groups Were Higher Than in 2014*, US Census Burea 2018
4 Ranked choice voting (RCV) is a modification to the majoritarian electoral system. It allows voters to rank their candidates from 1-3. First place votes are then tallied and if no candidate has received a majority of these first place votes the candidate with the fewest number of first place votes is eliminated and ballots cast for them transferred to the ballots second place candidate. This process is repeated until a single candidate has a majority of the votes cast.
study is on the subnational level. Cox, Fiva and Smith (2016) argued in their analysis of district level voting in Norway that subnational investigations allow examination of electoral structures without pollution by outside variables. This thesis will engage in just such an investigation.

Ranked Choice Voting (RCV, also called “instant runoff voting”) has long been used in many contexts. Australia, New Zealand, Northern Ireland, India, Pakistan and Scotland all use some version of ranked choice voting for their national elections. In the American context RCV and its study is new. Implemented in 2004 in San Francisco, and 2010 in Alameda county the data has not yet come in. Papers on RCV have focused on issues of representation, understanding, candidate civility, undervoting/overvoting, and minority utilization. Ranked choice voting’s impact on specifically electoral participation has so far been largely left unstudied. In their working paper Kimball and Anthony (2016) found that RCV increases turnout by eliminating the need for runoff elections (which suffer from low turnout) but could otherwise find no impact on electoral turnout. The dearth of studies on RCV, these studies limitations as well as the significant and growing presence of RCV in American studies (and the claims of positive effects on turnout by RCV supporters) calls for further exploration of RCV.

This Bachelor’s thesis will examine the impact of ranked choice voting on voter turnout by examining the implementation of ranked choice voting in three cities in Alameda County, California. The central research question of this thesis is:

Has the introduction of RCV lead to an increase of turnout in the affected municipalities?

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12 John, Sarah, and Andrew Douglas. “Candidate Civility and Voter Engagement” 2017


The cities in question, Oakland, Berkeley and San Leandro, implemented RCV in 2010 and have used the voting system in elections for Mayor and City Council since then. Utilizing voting data from 2000-2018 this thesis will examine voter turnout longitudinally, across time, to see if the implementation of ranked choice voting has coincided with an increase in turnout in those cities. While Oakland, Berkeley and San Leandro have instituted ranked choice voting, the rest of Alameda county, including several major metropolitan areas, has not; they retained the majoritarian first past the post (FPTP) electoral system. Outside of this single variable, the electoral systems of the cities within Alameda county are virtually identical, which allows a lateral analysis and a natural experiment without pollution from outside variables. This Bachelors thesis will utilize a difference in difference (DiD) method to measure the impact of RCV on voter turnout. Utilizing data from the American Communities survey, the usual socio-economic determinants of voter participation, education, and income level, can be tested, ensuring a like to like comparison. By comparing turnout between cities with ranked choice voting versus those without in a single regional context, a deeper understanding of the impacts of ranked choice voting on electoral turnout can be achieved.

Based on a preliminary analysis of the data and previous research on the electoral impact of ranked choice voting I expect to find a minimal impact on turnout outside of the removal of runoff elections which have long been plagued by voter fatigue and low turnout. In addition, I expect to find that the determinant with the greatest impact is the scheduling of municipal elections to coincide with Federal elections. Beyond this, voter turnout in Oakland, Berkeley and San Leandro does not seem to have significantly changed as a result of the implementation of ranked choice voting; turnout in those cities does not diverge significantly from the rest of Alameda county. While RCV theoretically increases proportionality, this increase does not seem to result in increased voter turnout in this specific case. There may be a variety of explanations for this. The casual mechanisms that theoretically increase turnout in more proportional electoral systems may not be active in this context. Electoral reforms and structures on the municipal level may not drive up voter participation. Other mechanisms outside of the municipal context may be impacting voter participation, or more data points may be needed before trends are clear. Regardless, while early studies seem to point to RCV’s impact on representation and political campaigns, a preliminary study has shown no clear impact on electoral participation.

2.) Literature Review

Since Duverger’s Political parties and Douglas Rae’s The Political Consequences of Electoral Laws political scientists have studied the impacts that electoral systems have on voter behavior, candidates, parties, campaigns and policies. Ranked choice voting exists within this field of study. This chapter will discuss the literature surrounding ranked choice voting. It will first explore the

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22 Rae, Douglas W. “Political consequences of electoral laws” New Haven, Yale University Press, 1967
state of research on RCV and demonstrate that there exists a gap in the literature which this bachelor’s thesis can help fill. It will then discuss RCV as a proportional or quasi-proportional voting system and what the literature expects from the transition from a majoritarian to a proportional system. Then it will discuss ranked choice as a form of preferential voting and discuss the state of literature on preferential voting and its impact on turnout. It will conclude with an examination into what variables beyond electoral rules impact voting behavior.

2.1) Ranked choice voting

With its expansion to a variety of major metropolitan areas, ranked choice voting has begun to receive increased attention. This attention has largely been focused on issues such as representation, voter system understanding, candidate civility, undervoting/overvoting, and minority utilization. Generally, this research finds that RCV leads to increased descriptive representation; and less negative campaigning. It also shows that RCV is largely understood well by voters, but socio-economically disadvantaged voters suffer mildly under the system’s newness/increased complexity. McDaniel notes the paucity of research into turnout in his exploration of RCV’s impact on minority electoral participation. To date, there are only three papers on RCV’s impact on electoral participation, none of which are peer-reviewed: Kimball and Anthony’s working paper on RCV and voter turnout in the United States and Robb’s dissertation on the impact of RCV on democracy in San Francisco. McDaniel also presented a paper very similar to Kimball’s work at the conference for Election Systems, Reform, and Administration in 2019. This paper is discussed in the discussion chapter of this bachelor’s thesis.

References:

28 Although the data on the impact of RCV on low versus high information voters is not uniform.
Kimball and Anthony attempt to assess the impact that RCV has on voter turnout in American cities. They theorized that RCV may increase turnout by reducing costs of voting through eliminating wasted vote concerns, by increased voter mobilization through a greater number of candidates, or by decreasing negative campaigning which may have discouraged voter participation. Kimball and Anthony compare cities that have instituted RCV with cities that retain the FPTP system. These cities are matched on the basis of population, region, income and demographic diversity so that these variables should not impact turnout. Some of the cities that Kimball and Anthony compare are located in Alameda county. They utilized a difference in difference design, comparing cities before and after the implementation of RCV with cities during the same time period that did not implement RCV. Their total dataset was 96 elections from 2009-2015, 19 of which were RCV elections. They found that RCV has generally no impact on voter turnout outside of the removal of runoff elections that suffer from very low turnout. They also found that the most significant determinant of electoral participation is election scheduling, with high turnout in November elections running congruently with federal elections. Kimball and Anthony see this result in line with other contemporary research into the electoral impacts of electoral reform, which find few, if any, changes in voter behavior. Their method of matching cities with RCV to cities with plurality systems is intriguing, but problematic because the specific electoral, political and social contexts in the cities may vary greatly. The difference in difference design requires the populations pre-treatment (in this case implementation of RCV) to be very similar. American cities have a great deal of electoral system differences on the state level, including but not limited to differences in registration requirements, ballot design and voting procedures. For example, California has implemented a statewide voting by mail system with local drop boxes and eased registration requirements. In contrast Wisconsin has recently purged voter rolls and increased the costs of registering to vote. Thus, comparing cities in these two states, which Kimball and Anthony have done, is comparing two very different sets of electoral rules. In effect, this means that Kimball and Anthony do not fulfill the requirements for utilizing a difference in difference experimental model as the institutional design and context varies greatly among the cities making up their dataset. A more careful approach would be to analyze cities with and without RCV that share electoral characteristics. The authors are careful not to draw any significant conclusions from their data as they are aware of its limitations. They call on more research to be done on RCV as data becomes available.


35 The Difference in difference design model will be explored more thoroughly in my methods section
37 The decline from primary to runoff elections averages around 50%. Fair Vote. “Ranked Choice Voting / Instant Runoff.” Fairvote.org.
Robb’s dissertation explored the impact of RCV on democracy in San Francisco along several parameters including turnout. San Francisco was the first major metropolitan area to institute RCV and is across the bay from Alameda county. Using primarily descriptive statistics and data from elections between 1995-2010, Robb found that RCV increased turnout in San Francisco. Like Kimball and Anthony, Robb noted that the most significant impact of RCV on turnout was eliminating the need for low-turnout runoff elections. Robb made use of a comparison city for context, utilizing Los Angeles without explaining why it was an appropriate comparison. Robb’s data is very limited, encompassing a total of ten elections including runoffs. Another weakness of Robb’s analysis is that she does not account for effects of another significant reform that took place simultaneously, namely the implementation of districting in elections to the San Francisco Board of Supervisors. San Francisco went from a single at large election, with multiple Supervisors elected from a single electoral district, to single member districts, with one candidate elected from each geographical district. This reduces the proportionality of the election, which research indicates has a negative impact of voter turnout. As a result, Robb’s measure of the specific impact of RCV in San Francisco, may be polluted by a secondary change to the electoral rules in the city. The positive effect on turnout of allowing voters to broadcast more of their preferences through RCV might be clouded out by the decreased proportionality of single member districts.

2.2.) RCV as a proportional electoral system

There is extensive literature on proportional electoral systems and their impact on turnout. To be brief, with a few exceptions systems that are more disproportional have lower turnout then systems that are more proportional. Estimates on the size of this disparity vary between 3-8%. The most compelling reason for this is that disproportionality reduces the efficacy of an individual’s vote, leading them to abstain from voting. Additionally, proportional, parliamentary systems encourage the existence of multiple political parties. These in turn may incentivize voting by offering voters greater choice at the ballot box, increasing partisan attachment, and mobilizing voters. Additionally, proportional electoral systems lead to more competitive elections as there is no point where the outcome is completely decided. In proportional systems, a party’s margin of victory impacts the distribution of mandates, which in turn encourages party participation and voter mobilization. However, there is also evidence that greater numbers of political parties de-incentivize voting through coalition building. Voters in multi-party systems

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40 Ibid, pg. 190
46 Smith, Daniel M. “Electoral Systems and Voter Turnout.” 2018. Pg 3
may feel that their vote has little real consequence, and that it is instead political elites who decide the composition of government.

Cox, Fiva and Smith challenged the notion that transitioning from a majoritarian system to a proportional system increases turnout. Using historical data they studied the implementation of proportional representation in Norway from 1909-1927 and its impact on electoral turnout. They found that there was a contraction effect associated with the reform: electoral districts that were highly competitive pre-reform saw turnout fall, while districts that were uncompetitive saw turnout rise. This, they postulated, was due to the effects of increased or decreased party mobilization. In the previous winner-take-all system, political parties were highly motivated to mobilize in districts where the outcome was in doubt and much less motivated where the outcome was clear. By contrast, under the new proportional system incentives were more equalized across all districts. So, while turnout increased slightly across Norway as a whole, turnout between districts contracted towards the middle. Cox, Fiva and Smith’s paper reveals two things of relevance. First, it challenges the belief that proportional systems universally increase turnout. Secondly, it demonstrates the importance of party mobilization in driving turnout.

To what extent is RCV a typical proportional system? There is some debate over how preference voting systems such as RCV or the Single Transferable Vote (STV) are to be classified. While not technically proportional as no proportion of the vote is calculated, RCV and STV are considered quasi-proportional in that they have mechanisms which impact voter behavior in a similar way as more typical proportional systems. RCV allows voters to more accurately display their preferences without “throwing away” their ballot. This should increase their incentive to vote and encourage the formation of more specific political parties that can mobilize voter participation in the same way PR systems do. How, and if, these mechanisms operate in Alameda county, where elections for local office are non-partisan, merits exploration.

2.3) Ranked choice voting as preferential voting

 Ranked choice voting is generally categorized as a form of preferential voting. However, RCV is a sub-type of a preferential voting system that is comparable but different than other preferential voting systems like STV, and therefore has distinct qualities. Preferential voting is a voting system that allows the voter to show their preference for an individual candidate in some way. The term

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47 Data out of South America has also challenged the traditional notion that proportional electoral systems have higher voter turnout than majoritarian or plurality systems. See Blais, Andre, and Kees, Aarts. “Electoral Systems and Turnouts.” July 2006, 180-196.
50 See discussion on STV in the Irish context on pg. 9 for a description of STV.
51 Non-partisan elections are elections where the candidates are not identified by their political party on the ballot and the political parties have no formal role in the election.
preferential voting is somewhat contested and includes a wide array of voting systems.\textsuperscript{51} In the European context research into preferential voting is often aimed at exploring the different types of impacts open or closed list systems (the ability to vote for a specific candidate within a political party list) in proportional electoral systems have on voter behavior.\textsuperscript{52} Because the object of my investigation, Alameda county, has had non-partisan elections with individual candidate voting for decades, the relevance of this research on closed-vs-open party lists is limited. Research of the oceanic context\textsuperscript{53} is more fruitful as the term preferential voting is used there to explore alternative choice or single transferable voting.\textsuperscript{54} These systems are closely related to the RCV system instituted in Alameda County and as such more useful for this bachelor’s thesis.

By and large the literature exploring preferential voting is limited. Farrel and Katz\textsuperscript{55} point out that there is no single STV system but instead a wide variety of electoral rule configurations that include a transferable vote and candidate ranking. These individual configurations greatly impact the proportionality, i.e. the degree to which the proportion of votes are translated into seats, of the STV system. There are few countries that have an STV or alternative choice voting system and many of these operate in specific contexts that make analyzing electoral systems difficult. For example, Papua New Guinea has deep seeded ethnic divides and Australia has compulsory voting. One European country, Ireland, has a single transferable voting system which has been the subject of extensive study.

Using election data from Ireland, Endersby and Towle explore the single transferable vote and its impact on wasted votes and voter turnout.\textsuperscript{56} In the Irish single transferable vote system, voters rank their choices within multi-member districts. Voters’ votes are transferred from their first preference to their second if their first preference is eliminated or wins a mandate and has a surplus of votes. These surplus votes are then transferred to other candidates depending on the proportion of second-choice votes that a candidate had. Candidates have a surplus of votes if they have votes exceeding the quota needed for a mandate. Endersby and Towle hypothesize that fewer wasted ballots, i.e. ballots that have no impact on the election of a representative, should lead to increased turnout in elections. Their rationale is that the more mandates and therefore candidates there are in a single electoral district, the more an individual voter’s preference (ranking candidates on the ballot) will impact the election. As such districts with a high number of candidates will have empowered voters who should chose to vote in greater numbers. To test

\textsuperscript{51}Toplak, Jurij. “Preferential Voting: Definition and Classification.” \textit{Lex Localis; Maribor} 15, no. 4 (October 2017): 737–61.
\textsuperscript{52}Gallagher Michael, and Paul Mitchell, “Dimensions of Variation in Electoral Systems” 2018
\textsuperscript{56}Endersby, James W., and Michael J. Towle. “Making Wasted Votes Count” 2014
Contrary to their hypothesis Endersby and Towle found that the more candidates there are the
lower turnout is within the district, even after controlling for socioeconomic variables. This they
say goes against generally understood theories of voter behavior. Yet, their explanation of what
drives voter behavior instead is limited/weak. The authors do admit that, as a general rule,
polities with a single transferable vote seem to have higher turnout than polities with simple
majoritarian or plurality systems, but postulate that this might have something to do with the
polities and not their electoral systems. As such, devising an experiment where the impact of
electoral rules can be explored within a single polity or regional context may be more successful.

Zvulun attempted to do this. Zvulun studied the effect of some localities in New Zealand
implementing STV in 2004. Legislation passed that year allowed localities to choose between
first-past-the-post (FPTP) and STV in local elections. This provided the basis for a natural
experiment where voters in the same national and cultural context voted under two separate
electoral systems. Zvulun looked at two elections, 2004 and 2007, in which ten and eight localities
respectively used STV instead of FPTP and the impact this choice had on turnout. Zvulun’s
paper was primarily qualitative and included only descriptive statistics. He was unable to find that
the choice of electoral system had any impact on turnout, as the localities that had implemented
STV experienced the same slow decline in local voter turnout as those that had retained the
FPTP system. Zvulun’s research was extremely limited both in its scope and its design and as
such its results are not generalizable. However, the natural experiment afforded by New Zealand
having multiple electoral systems in the same cultural and political context is similar to that which
is offered by Alameda county. Zvulun’s study also falls within a growing trend to examine local
variations in electoral laws in order to measure the impact of those laws. A trend which this
thesis places itself within.

2.4) Voting behavior

There are two general schools of thought on voting behavior. The idea that choosing to vote is
based on an individual’s conscious or unconscious cost-benefit analysis: the rational choice
school, versus the idea that choosing to vote is a behavior learned during pre-adulthood
socialization. According to the cost-benefit school, voter behavior is determined on a election
by election basis, with the voter rationally analyzing the costs and benefits of voting before
arriving at a decision. The rational choice cost-benefit school sees voter behavior as fungible, and
voters open to making new decisions based on the current institutional context. The pre-
adulthood socialization school sees voters as having learned voting behaviors through their

57 Ibid, pg.150.
58 For example, the authors do not explore the possibility that voters may turn away from the poles if they feel
overwhelmed by the sheer number of candidates or that they lack the knowledge to make an informed choice.
59 Zvulun, Jacky Yaakov. “Electoral System Changes and Voter Turnout: Reflections on New Zealand General
Elections.” Lex Localis; Maribor 12, no. 1 (January 2014): 161
60 Ibid
61 Fiva, Jon H., and Olle Folke. “Mechanical and Psychological Effects of Electoral Reform.” British Journal of Political
Science; Cambridge 46, no 2 (April 2016): 265–79.
personal childhood context (including institutional arrangements at the time). The pre-adulthood socialization model sees the individual’s decision of whether or not to vote as much less changeable, it is not the product of a rational choice but instead a learned behavior cemented at an earlier time. Change in say voting behavior as a result of institutional change does not occur until a new generation grows up (and is socialized) under the new institutional context. Only then can meaningful behavioral and attitudinal changes in the population can be seen. Even then the changes would be muted as the prevailing cultural values persist due to generational transfer. Rational choice believes that individuals have the ability to respond to new institutional contexts by making new choices. To some extent both schools are correct, voter behavior seems to be both socialized (those with parents who vote are more likely to vote themselves) as well as a product of rational choice (making it easier to vote increases turnout). On its most basic level this bachelor’s thesis postulates that the rational choice model functions and that electoral rules on the local level impact voter participation.

In their argument that RCV increases turnout Robb, as well as, Kimball and Anthony, point to a reduction in the cost of voting: the removal of runoff elections. Runoff elections, undertaken when no candidate has received a majority of the votes cast in the first round of voting, generally suffer from low turnout, around 50% lower than the primary elections. This removal, and the subsequent increase in aggregate voter participation, is a mechanical effect of RCV. Duverger postulated that electoral reforms have two sets of impacts, mechanical and psychological. Mechanical effects were the impacts of the reform on electoral outcomes given the political status quo (usually how votes are translated into seats), whereas psychological effects are the longer-term impacts on the behaviors of political agents (voters, parties candidates etc.). Because the removal of the need for runoff elections through RCV simply removes a low turnout election it cannot be said to impact the behavior of voters. With RCV, voters simply no longer have the choice of whether to vote, their behavior is not changed, the arena in which they execute it is removed. While this is a significant change (runoff elections often suffer from poor turnout, which raises questions of democratic legitimacy) it does not demonstrate that voters are voting in greater numbers as a result of increased efficacy of their vote, increased ability to display preferences, or greater party mobilization. I also view increases in turnout as a result of scheduling of municipal elections to coincide with Federal elections (i.e., placing them in November in even numbered years) as having a mechanical effect. While turnout in municipal elections that are simultaneous with federal elections is significantly higher than in elections where only local offices are voted on, this is not due to voters choosing to vote in an election but rather due to the removal of an extra election. It has been postulated that one of the reasons voter turnout in the US is low is that voters are fatigued from the large number of elections they are asked to vote in. Reducing that number thus increases turnout through mechanical changes rather then through changes to voter behavior.

64 Dalton, Russell Citizen Politics and Political Parties 2013.
Beyond electoral rules and electoral system configurations there are other variables which impact voter turnout. Nevitte et al. used cross national data to investigate the impact that socioeconomic factors had on nonvoting.\(^6^7\) Examining voting in 23 countries they found that age, education, income and marital status correlated negatively with choosing not to vote. These factors are theorized by Nevitte et al. to operate in different ways. Age correlates positively with income, education and marital status. In addition, as one ages one’s investment in the society increases. One begins to pay taxes, own property or have kids, which strengthens the psychological link between voting and societal outcomes. Older people are thus more likely to vote. Educations impact is through educated citizens are more likely to embrace civic norms that value participation as well as skills that lower the barriers to voting. Income has an impact in that lower income voters are less likely to vote as it is theorized that these voters have more pressing concerns and lack resources to overcome barriers to voting. The data demonstrates that low income citizens tend not to vote in much higher numbers than medium or high-income citizens. Marital status impacts voting through married citizens often having deeper community attachments then un-married citizens, which increases their likelihood to vote.\(^6^8\) The conclusions reached by Nevitte et al. mirror the conventional understanding of the socioeconomic determinants of voting. Of the factors discussed it is generally observed that income and education have the most significant impact on the individual’s decision to vote.

Akee et al.\(^6^9\) examined a household incomes impact on voter turnout. Specifically, Akee et al utilized data from a Native American casino opening and subsequent cash transfers from the casino to various households to examine the impact household income had on voting behavior. They found that while cash transfers had no impact on voting behaviors amongst adults, children from poor families that had received the cash transfers ended up voting 10-20% more than their peers that did not receive these transfers.\(^7^0\) Thus, household income impacts turnout over time but not immediately. This, the authors suggest, is because voting behavior is the result of political socialization during the formative years.

Education is also robustly correlated to voting. In short, higher education leads to greater voter turnout. There is some debate as to whether education is a proxy for pre-adult socialization factors or a direct cause of voting through skills development. Regardless the mechanisms through which education is theorized to operate are by increasing skills and knowledge relevant to political participation as well as increase interest and the efficacy of a citizen’s vote.\(^7^1\) This can occur either in childhood socialization or through formal education. Regardless, education positively correlates to an individual’s choice to vote. On the individual level there are many potential determinants of voter behavior, two of the most robust are education and income.

\(^6^8\) Nevitte et al. “Socioeconomic status and Nonvoting: A Cross-National Comparative Analysis”, 2009 pg. 87-88
\(^7^0\) Ibid
\(^7^1\) Persson, M. “Education and political participation.” 2015
2.5.) Conclusion literature review

The literature on RCV and its impact on turnout is rather inconclusive. On one hand, the implementation of RCV can be seen as a move towards a PR system, which is correlated to high turnouts. PR increases voter interest through less wasted votes, higher degrees of party mobilization, more electoral contestation and greater diversity of preferences. RCV could theoretically benefit from that and other mechanisms which are behind increased turnout in PR systems. It has been demonstrated, that a move towards a PR system in Norway impacted turnout through incentivizing or de-incentivizing party mobilization, which in turn impacted voter turnout. An important question is if these mechanisms are present in non-partisan elections? Can RCV drive up turnout when party mobilization is excluded as a contributing factor?

On the other hand, RCV is a form of preferential voting similar to STV, which exists in a variety of contexts including Ireland and New Zealand; But early explorations of RCV’s impact on turnout in practice are limited. The few existing studies found no significant impact of RCV on voter behavior, which is in line with the state of research on preferential voting. By contrast, they argue that RCV increases turnout through what Duverger would term a mechanical effect; the elimination of runoff elections that tend to have turnouts that are less than half that of the primary election. If RCV has what Duverger would call psychological effects; impacts on voter behavior, remains to be seen. If and how RCV increases turnout in primary elections is therefore still a rather unexplored question.

3.) Methodology

This Bachelor’s thesis investigates whether the implementation of RCV has increased turnout in Alameda county. It seeks to answer the question: Has the introduction of RCV lead to an increase of turnout in the affected municipalities? In order to answer this question it will compare turnout between three cities in Alameda county that have instituted RCV and eight cities that have not. The geographical proximity of the cities as well as the uniformity of their electoral rules makes this an ideal area in which to conduct a natural experiment and engage in what Kimball

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Low turnout puts democratic legitimacy at risk Dalton, R. J. “Citizen politics: Public opinion and political parties in advanced western democracies” (2008).
and Anthony, Fiva and Folke, and Endersby et al. call for: an exploration of the impacts of electoral reform in a single local context.

3.1.) Experimental Design: Difference in Difference

In order to explore this question a difference in difference (DiD) experimental design is utilized. This is similar to the one used by Kimball and Anthony in their study of RCV’s impact on voter turnout. This method is borrowed from the field of econometrics and is often used in public health investigations. It relies upon treatment and control groups to have similar compositions and that there are very few uncontrolled variables that may pollute the study. Kimball and Anthony, as well as McDaniel used a DiD design in their investigations of RCV because they felt their experimental population was homogenous due to the fact that treatment and control groups had the same socioeconomic characteristics. Difference in difference experiments makes use of longitudinal data from a treatment and control group to estimate the effect of an intervention or treatment. It is recommended when a randomized test cannot be undertaken and has been used extensively in political science to evaluate the impact of policies. A DiD experiment requires four data sets:

1.) A = The treatment group prior to treatment
2.) C = The control group prior to treatment
3.) B = The treatment group after treatment
4.) D = The control group after treatment (no treatment is given to this group)

DiD can be expressed mathematically in: \( DD \text{ impact} = (B - A) - (D - C) \), where change in outcomes for the comparison group \( (D - C) \) is then subtracted from the change in outcomes for

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74 Fiva, Jon H., and Olle Folke. “Mechanical and Psychological Effects of Electoral Reform” 2016


the treatment group (B - A) to assess the impact. This bachelor’s thesis makes use of a simplified DiD method due to a lack of sufficient data. Mann Whitney or student t-tests\(^{80}\), as relevant, were used to evaluate treatment effects before and after RCV was implemented with significance levels set at \(p \leq 0.05\). Comparing the control cities (those that never had RCV) with the treatment cities (those that implemented RCV in 2010).

3.2) Alameda County

Alameda county provides an excellent test environment for this method. In Alameda county (Picture 1), three municipalities have instituted RCV while the other 13 municipalities retain a first past the post system. These can be seen in Picture 1: the three RCV-municipalities are Oakland, Berkeley and San Leandro. Beyond this, there is very little differentiation in electoral rules and procedures in the Alameda county municipalities. These rules and procedures include how polling places are distributed and when they are open, rules governing nomination procedures for candidates, how voters become eligible to vote, the voter registration process, voting by mail or absentee voting rules, polling hours, vote counting procedures, scrutiny of election results, campaign finance rules etc.\(^{81}\) There is substantial evidence that voter registration requirements significantly reduce voter participation and that variation electoral rules can increase or decrease the costs of voting and thereby impact voting behavior and turnout.\(^{82}\) As such ensuring the homogeneity of these rules increases the value of the investigation.

The lack of difference in their electoral systems as well as their regional and cultural proximity (see picture 1) make these municipalities a natural experiment on the impact of RCV, and ideal for a DiD methodology.

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\(^{80}\) Mann Whitney tests are performed when one cannot assume normal distribution of data.


Of the thirteen non-RCV municipalities in Alameda eight are suitable to serve as a control group: two lack accessible election data, and three have divergent political structures. Thus the total sample is eight non-RCV municipalities serving as a control group, while three RCV municipalities will be the treatment group. These cities are listed in table 1.

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83 Either city manager governments without a mayor, or the mayor being chosen from the City council based on which councilmember received the most votes.
Elections chosen for investigation are from November 2000 to November 2018. The time period was selected as a result of this time period being contemporary, the years before and after treatment being roughly equal and US census data and being available for this time period.

RCV is implemented at the municipal level and applies to city council and mayoral offices. However, because many municipalities in Alameda county have districted city council elections, and no data is available on the voting age population of each electoral district within a city, city council elections are not included in my dataset. Only city-wide elections are included (i.e. mayoral elections) in my data set. A secondary reason for eliminating districted elections from the dataset is that the suitability of Alameda county as a research object is largely due to the uniformity of its electoral rules. Retaining this uniformity is prioritized in my research design so city council elections are removed. Allowing electoral system variation concerning district magnitude may pollute the analysis of RCV. However, the removal of city council elections from the dataset reduces the number of elections that can be investigated.

Beyond only using mayoral elections there are other elections removed from the dataset. Off-cycle elections are those local elections which do not coincide with elections to Federal office, i.e. to the House of Representatives, the US senate or the Presidency. These off-cycle elections are removed from the dataset because the federal election cycle is the greatest determinant of voter participation in local elections, with participation being highest during presidential elections and lowest when there is no federal election. Newark is one Alameda county municipality that had off cycle elections for most of the period under investigation and as a result averaged a turnout rate of 25% during the period, half the average of the county as a whole. Including off cycle elections between 2000-2018 in the dataset reduced aggregate voter turnout numbers by 16% for the control group. This effect was not evenly spread but concentrated to the control group that had significantly more off-cycle elections with very low turnout. Not eliminating off cycle elections would essentially result in comparing turnout in on-cycle elections with that in off cycle elections. The effects of RCV implementation would be drowned out by the effects of the

84 Districted elections are elections in which a single representative is elected from a single voting district. This is in contrast to at large elections in which multiple council members are elected in a city-wide election.

85 The impact of districting on turnout is not clear, although district magnitude does impact the proportionality of elections. see Hajnal, Z. L., & Lewis, P. G. “Municipal Institutions and Voter Turnout in Local Elections.” 2003

86 Hajnal, Z. L., & Lewis, P. G. “Municipal Institutions and Voter Turnout in Local Elections.” 2003

87 Newark, along with Livermore which also had eligible elections included in the dataset switched to on-cycle elections in 2014 as part of a move by the state of California to improve turnout in the state’s municipal elections.
election cycle. In their research, Kimball and Anthony went a step farther and eliminated presidential elections from their dataset, arguing that these elections are so driven by the presidential contest that evaluation of voter turnout becomes impractical. McDaniel opted to compare off-cycle elections in cities with RCV to off-cycle in cities without. These options is not open to me as there are too few off-cycle elections to compare and eliminating presidential elections from my dataset would reduce the number of election years to five, far too few. So instead I eliminate the off-cycle elections from my dataset. Table A contains the number of elections included in my Alameda county 2000-2018 dataset. These are the mayoral elections occurring during on cycle elections (November in even numbered years).

3.3) Materials

Data for these elections is taken from the official Alameda county Statement of Votes, compiled and published in conjunction with each election. I measure turnout as a percentage of the Census estimated voting age population (CVAP) casting a vote (A common way of measuring turnout in the United States). This data is provided by the American Communities Survey, a division of the US Census. The American Communities survey provides a yearly estimate of each municipalities voting age population, which is analogous to the number of eligible voters. To calculate voter turnout ballots cast in the municipality’s election are divided by the American communities survey estimate of the voting age population for that municipality in that year. In contrast, the turnout reported by the municipalities themselves is calculated as a percentage of registered voters. Which is a measure of the number of registered voters casting a ballot and not the number of eligible voters voting. While voter registration is fairly simple in California (less strenuous identification requirements, voters can register at their polling place etc.) measuring turnout as a percentage of registered voters and not as a percentage of eligible voters is an inaccurate measure as it does not account for unregistered but eligible voters. This feature of American turnout has been discussed in cross-national examinations of voter turnout, as comparisons of voter turnout between for example the US and Europe can be inaccurate without a common measure of turnout. To this end CVAP is preferred in calculating turnout.

3.4) Assessing other variables

While the electoral and political laws regulating Alameda county are homogenous and the municipalities exist within a geographical and cultural proximity (see figure 1), there are socioeconomic differences that may impact voter turnout. The most significant and the most common correlates for turnout in the US are voter education levels, and household income. The aggregate population tested in this bachelor’s thesis is fairly homogenous when it comes to

88 McDaniel, Jason A, “Electoral Rules and Turnout in Mayoral Elections” 2019
90 Ibid
education. Around 45% of the population of both the control group and the treatment group have bachelor’s degrees or higher in both treatment and control groups (See table 2). Household incomes, both in absolute terms and those living in the bottom two quintiles of income (incomes under $35,000) are different on the aggregate, with the treatment cities being significantly poorer (See table 2). In a city to city comparison there is a significant range in both education levels and income between the cities (See table 2).

<table>
<thead>
<tr>
<th>City</th>
<th>Eligible voters (Cvap)</th>
<th>% of population in two lowest income quintiles</th>
<th>% of population with a bachelor's degree</th>
<th>Household incomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alameda</td>
<td>56110</td>
<td>18.5%</td>
<td>50.7%</td>
<td>89,045</td>
</tr>
<tr>
<td>Pleasanton</td>
<td>50655</td>
<td>11.2%</td>
<td>62.3%</td>
<td>138,269</td>
</tr>
<tr>
<td>Union City</td>
<td>48625</td>
<td>14.3%</td>
<td>35.5%</td>
<td>95,625</td>
</tr>
<tr>
<td>Dublin</td>
<td>34160</td>
<td>8.9%</td>
<td>61.5%</td>
<td>138,007</td>
</tr>
<tr>
<td>Newark</td>
<td>30205</td>
<td>14.0%</td>
<td>31.3%</td>
<td>96,817</td>
</tr>
<tr>
<td>Livermore</td>
<td>51875</td>
<td>12.5%</td>
<td>41.1%</td>
<td>109,084</td>
</tr>
<tr>
<td>Fremont</td>
<td>132340</td>
<td>12.0%</td>
<td>55.1%</td>
<td>122,191</td>
</tr>
<tr>
<td>Hayward</td>
<td>92980</td>
<td>21.3%</td>
<td>26.8%</td>
<td>74,927</td>
</tr>
<tr>
<td>San Leandro</td>
<td>58730</td>
<td>26.3%</td>
<td>29.8%</td>
<td>66,178</td>
</tr>
<tr>
<td>Berkeley</td>
<td>91270</td>
<td>28.3%</td>
<td>72.3%</td>
<td>75,709</td>
</tr>
<tr>
<td>Oakland</td>
<td>276050</td>
<td>31.0%</td>
<td>40.6%</td>
<td>63,251</td>
</tr>
<tr>
<td>Control group avg.</td>
<td>62118</td>
<td>14.9%</td>
<td>45.5%</td>
<td>107,996</td>
</tr>
<tr>
<td>Treatment group avg.</td>
<td>124451</td>
<td>28.53%</td>
<td>47.57%</td>
<td>68,379</td>
</tr>
</tbody>
</table>

This economic heterogeneity merited investigation as to avoid its influence impacting the results of my investigation. Simple linear regression and, when possible, multiple linear regression analyses were conducted with voter turnout as the dependent variable and the independent variables were education level as percentage of population with a bachelor’s degree or higher, median household income and proportion of each municipality’s households in the two lowest income quintiles (with incomes under $35,000). The data for this analysis was taken from American Communities Survey. Multiple linear regression showed no main effects on voter turnout, and there were no two-way interactions between the independent variables. Correlations between single independent variables and voter turnout were also investigated. Expected correlations between education and household income were identified, however no correlation between these and voter behavior were revealed. As such neither education nor income seems to significantly impact voter turnout in Alameda county. In this bachelor’s thesis I do not test for the effect of race on turnout for two reasons. One, the racial composition of the bay area is extremely mixed, and it does not follow the traditional non-white = socially disadvantaged relationship seen in many other American urban areas. Secondly, race is strongly correlated to both education and income levels. As such controlling for income and education should in effect control for race. I also do not assess the impact of other election variables such as the relative
competitiveness of an election (the degree to which an election is considered competitive may impact turnout).

3.5) Limitations

There are a series of limitations to this study. Firstly, and most significantly, the dataset is small. This reduces reliability, makes it harder to establish significance and makes it difficult to draw conclusions. Not enough time has passed since the implementation of RCV for a large dataset to be available and the elimination of off cycle elections reduces it further. Thirdly, there may be variables I am not aware of that have polluted the experiment and impacted my findings. DiD is not a randomized experiment, but a method for assessing the impact of a treatment on a population when randomization is not possible. Voter turnout, and what governs it is complex. With a host of micro and macro level variables impacting individuals’ decisions to vote, it is reasonable to assume that some variables are unaccounted for. Fourthly, my exclusion of off cycle elections and a lack of runoff elections during the time period exclude an analysis of these mechanical effects. However, it is readily apparent that municipal election consolidation, moving municipal elections to occur simultaneously with Federal elections, increases turnout. In addition, runoff elections have long suffered from very low turnout and eliminating these low turnout extra elections by implementing RCV increases aggregate turnout, a fact supported by data from Kimball and Anthony\textsuperscript{92} as well as Robb.\textsuperscript{93} Therefore, the fact that my experimental design and dataset precludes investigation of these mechanical impacts of RCV and election consolidation is not detrimental. These mechanical impacts exist and serve to increase aggregate turnout.

4.) Results

Between 2000-2018 Alameda county turnout in on-cycle elections ranged from 68% in Berkeley to 40% in Newark. Figure 3 shows turnout in Alameda county’s municipalities before and after the implementation of RCV in San Leandro, Berkeley and Oakland in 2010 municipalities. Hayward, Newark, Livermore and Oakland have no elections prior to 2010 included in the dataset as their elections were off-cycle during that time.

\textsuperscript{92} Kimball, David and Joseph Anthony, “Voter Participation with Ranked Choice Voting” 2016
Figure 3 shows the impact of the presidential election cycle on turnout across elections. Presidential elections average 65% turnout between 2000-2018 and federal non-presidential averaged 46%.

Figure 4 shows the impact of the presidential election cycle on turnout across elections. Presidential elections average 65% turnout between 2000-2018 and federal non-presidential averaged 46%.

The aggregate turnout is seen in figure 5. In aggregate data municipalities are treated as equivalent entities regardless of population disparities. Treatment municipalities as a whole prior to 2010 had a 54% turnout rate, compared to 52% for the control group. Following implementation of RCV in 2010 the treatment municipalities had an aggregate 52.5% turnout and the control municipalities 51.5%. The raw data for these calculations are included in appendix A, B and C.
Utilizing the DiD model the change in voter turnout between 2000-2009 and 2010-2018 was undertaken.

$$\text{DD impact} = (B - A) - (D - C)$$

Finding a decrease in participation of 0.64% for the control group of eight cities and decrease of 1.38% for the treatment group of two cities. A Mann Whitney non-parametric test compared percent change in voter turnout between the treatment and control group and found no significant difference between the treatment and control groups. The P value was 0.5714. Despite a change in voter turnout in absolute terms this change is not statistically significant due to a very small sample size. Figure 6 shows the change in turnout for each city before and after the implementation of RCV.

![Graph showing change in voter turnout](image)

**Figure 5**

**Figure 6:** Each dot represents the change in voter turnout before and after treatment in each city. The lines intersecting the plots are median values for the control and treatment group.
Figure 7 has each election in each municipality mapped out prior to and after the implementation of RCV. The lines intersecting the plots are median values. The P value in for the control cities before and after 2010 is 0.6299, the P value for the treatment cities before and after 2010 is 0.5302. Thus, there is no statistically significant difference before and after the implementation of RCV. Neither the cities that implemented RCV or those that retained FPTP saw significant changes in turnout.

In summary, my investigation was unable to find that the implementation of RCV had any significant impact on voter turnout in Alameda county. A small dataset made relatively minor shifts in turnout statistically insignificant. A much larger dataset would be needed for the data to be deemed statistically significant.
4.1) Other variables

As stated in the methodology, socioeconomic variables and their impact on voter turnout in Alameda county were investigated using simple linear regression and, when possible, multiple linear regression analyses. Voter turnout was the dependent variable and the independent variables were education level as percentage of population with a bachelor’s degree or higher, median household income and proportion of each municipality’s households in the two lowest income quintiles (with incomes under $35,000). These regressions revealed these independent variables as having no significant impact on voter turnout in Alameda county. These results are not included in this bachelor’s thesis.

5.) Discussion

While the small dataset and general lack of data makes it difficult to draw any definitive conclusions, the results indicate that RCV has not yet had a measurable effect on turnout in municipal elections. The minor variations seen in aggregate voter turnout between the control and treatment groups are not statistically significant. The limitations of the dataset utilized in this investigation are clear and should be discussed before delving into a discussion of what can be learned from this investigation of RCV in Alameda county.

When this investigation was undertaken it was assumed that eighteen years of elections in 11 cities should provide enough relevant data to undertake an investigation. Simply put this assumption was incorrect, there was not enough data to allow a more meaningful analysis of RCV. My study aggregated municipal data into control and treatment groups in an attempt to minimize the effect of individual-level contextual variables on my results. A larger sample size would minimize the effect of these individual-level contextual variables and make the data and conclusions drawn from it more reliable. At present, due to the small dataset, individual elections, such as Berkeley’s 2016 significantly impact the results. Additionally, macro level variables, such as the effect of the presidential election cycle supersedes other potential determinants of turnout (see table D) which asks more questions of the investigation. However, municipal elections that coincided with presidential elections could not be removed without further restricting the dataset.

This lack of available data is probably why Kimball and Anthony\textsuperscript{94} as well as McDaniel\textsuperscript{95} used American cities with RCV and matched them with their demographic equivalents rather than focusing on Alameda county as a natural experiment when undertaking their investigations. Their methodology allowed a larger dataset at the cost of comparing RCV cities and non-RCV cities with very different institutional, electoral and cultural contexts. While McDaniel’s study added election timing, election partisanship and election type as covariates in his analysis, matching for example RCV cities with off-cycle elections to non-RCV cities with off-cycle elections.\textsuperscript{96} He did not account for variations in other electoral rules, such as voter registration requirements, mail

\textsuperscript{94} Kimball, David and Joseph Anthony, “Voter Participation with Ranked Choice Voting” 2016
\textsuperscript{96} Ibid, Pg. 11
voting or other variables that impact turnout, by either easing or increasing the costs of voting. In addition, the matching process undertaken by McDaniel as well as Kimball and Anthony originated with a single paper by Donovan et al.\textsuperscript{97} and neither author engaged critically with Donovan’s work. In short, both my investigation and the previous literature have problems with their datasets.

5.1) Explaining the lack of impact

While this investigation’s small dataset hinders definitive conclusions on the impacts of RCV on turnout, it finds no evidence of impact in Alameda county. When taken in conjunction with previous work on RCV by Robb\textsuperscript{98} as well as Kimball and Anthony\textsuperscript{99} these finding are unsurprising. Neither of their studies found that RCV had an impact on voter turnout outside of the mechanical effect of removing low turnout runoff elections. McDaniel conducted a similar study to Kimball and Anthony and found RCV having a slightly negative effect on voter turnout in on-cycle elections when several other covariates are accounted for. A result he theorized was due to the increased complexity of RCV increasing the costs of voting.\textsuperscript{100} So why isn’t RCV increasing turnout like proponents of the system have claimed it would?\textsuperscript{101}

The implementation of RCV on the municipal level may not have enough of an impact on voter behavior to show any measurable change. Even if RCV has greatly improved local democracy, citizens voting behavior may still be mostly driven by the federal election cycle; as such the impact of RCV may be lost in the general noise. The positive structural effects of RCV may be counteracted by other mechanisms. Alameda county is in the bay area and has been undergoing high levels of in-and-out migration and urban displacement largely as a result of rapid gentrification during the investigation period.\textsuperscript{102} Migration throughout the region may depress turnout as new residents struggle to orient themselves in their political landscape either intellectually or physically. Increased political distrust and falling political support on the national level may depress turnout as the legitimacy of the political system as a whole is called into question.\textsuperscript{103}

In theory RCV can increase voter turnout in several ways. Ranked choice voting increases the ability of voters to display their preferences through voting, it also increases the efficacy of an individuals vote by reducing the incentive for strategic voting and eliminating “wasted votes”. This increased efficacy may incentivize citizens to vote more. This is what Endersby and Towle

\textsuperscript{97} Donovan et al. “Campaign Civility Under Preferential and Plurality Voting.” 2016
\textsuperscript{100} McDaniel, Jason A, “Electoral Rules and Turnout in Mayoral Elections” 2019.
\textsuperscript{102} The University of Berkeley runs a program tracking and mapping this migration. See Urbansplacement.org
hypothesized in their examination of the single transferable vote in Ireland. In addition, much like proportional voting systems encouraging multiple political parties which can mobilize voters, RCV increases the viability of alternative candidates, encouraging more candidates and parties to run. John, Smith and Zack did find that RCV have a positive impact on the race and gender diversity of politicians running for election. This greater number of (and more diverse set of) candidates and parties may in turn work to mobilize voters which may increase turnout. The ranking of candidates by voters may also increase the civility of elections as candidates are incentivized to be many voter’s second or third choice. This in turn may lead to increased participation as citizens who were alienated by “negative” politics now chose to vote, or candidates interact more with potential voters normally outside of their support groups thus increasing voter mobilization. RCV may also make elections appear more competitive, for example in 2010 Jean Quan won Oakland’s mayoral election despite having less first place votes then her chief competitor Don Perata. More competitive elections also increase turnout.

In practice however there is little evidence that increased ability to voice their preferences encourages voter participation. Endersby and Towle found no impact of the single transferable vote on voter turnout in Ireland. Zvulun found that the implementation of the single transferable vote in a few municipalities in New Zealand could not hinder the gradual decline in turnout in that country. Nor is there evidence that RCV increases voter mobilization. While John, Smith and Zack found evidence that RCV has led to a greater diversity of candidates for office in cities with RCV, and Robb saw an increase in the number of candidates running for city office in San Francisco these effects may not drive turnout under RCV (in the same way that party mobilization drives turnout in proportional parliamentary systems) because elections in cities with RCV are non-partisan, i.e. unaffiliated with any formal political parties. Thus, a greater number of candidates in non-partisan elections might not create a mobilization effect. While elections under RCV do appear to be less negative and more civil then elections under FPTP systems it is unclear whether this increased positivity actually drives voting behavior. Voters are generally motivated by closely contested elections, not civil ones. Finally, on the subject of contested elections, despite the 2010 victory by Quan in Oakland, there is no evidence that RCV actually increased the competitiveness of municipal elections. It is also unclear exactly how competitive elections drive turnout. Cox, Fiva and Smith argued that competitive elections drove turnout through increased party mobilization, and this mechanism would not be present in non-partisan elections. The explanation for RCV not increasing electoral turnout may be that the mechanisms which theoretically increase turnout are simply not present in municipal RCV systems.

112 Donovan et al., “Campaign civility under preferential and plurality voting.” 2016

26
elections. Instead RCV may in fact decrease turnout if the added complexity of the ballot (having to select three candidates instead of one) increases the cost of voting. McDaniel points to this increased complexity as an explanation for his findings that RCV reduces both minority and overall turnout.114

The literature on electoral reforms in the US may also help elucidate the lack of impact of RCV on voter turnout. Previous reforms aimed at increasing turnout, including the motor voter law of 1993, the Help America Vote Act of 2002, and various efforts to institute voting by mail or allow early voting were all efforts to increase turnout in the United States that had little to no appreciable short-term impact. Endersby and Towle also found that changes to electoral rules in Ireland had no immediate impact on voter turnout.115 It may be that outside of mechanical impacts, such as the removal of extra runoff elections or moving municipal elections to coincide with the Federal election cycle do not impact voter behavior, at least in the short term. Voters may first need to observe and experience the effects of the new electoral rules before adjusting their voting behavior. Or that their behaviors are set in their formative years though early adulthood socialization.

Five and Folke argued similarly in their study of the impacts of electoral reform in Norway. They found that a change in municipal election electoral rules in Norway affected the behavior of primarily parties and candidates.116 The reform shifted how votes were tallied in a way that effectively favored small parties. This increased the incentives for small parties to mobilize and appear in elections, which resulted in more parties standing in elections and entering city government. Their conclusion was that while elites (parties and candidates) responded to the changes in electoral rules immediately, voters appeared to need more time to adapt to changes in electoral incentives. In line with socialization/behavioral school of voter behavior Akee et al.’s study on cash transfers to families and voter turnout found that while cash transfers had no impact on voting behaviors amongst adults, children from poor families that had received cash transfers ended up voting 10-20% more than their peers who did not receive these transfers.117 This, the authors suggest, is because voting behavior is the result of political socialization during the formative years. As such it is unlikely to respond to changes in voting rules. Simply put, electoral changes need time to effect voter behavior.

6.) Conclusion

Elections are the most significant connection between citizens and their states and maintaining and improving these links is essential to the health of our democracies. Part of this maintenance and improvement is assessing the impact of changes to our electoral systems. This is especially

117 Akee et al. “Family Income and the Intergenerational Transmission of Voting” 2018
important as turnout rates fall in new and established democracies around the world,\textsuperscript{118} and democracy, declared an inevitability only thirty years ago, is being challenged on numerous fronts. This bachelor’s thesis has attempted to engage in this assessment, examining the impact of RCV on voter turnout rates in Alameda county. Despite the claims of RCV supporters like Fairvote\textsuperscript{119} this bachelor’s thesis has not found that RCV impacts voter turnout, nor has it been demonstrated to do so in previous research. While the lack of data makes drawing definitive conclusions impossible, previous research on both RCV specifically and electoral reforms in general suggests that modifications to electoral rules are not enough to improve voter turnout, or perhaps voters need time to acclimate themselves to the new rules and modify their behavior thereafter. Future studies may reveal that young citizens of Oakland, San Leandro, Berkeley or any of the other municipalities in the US that have instituted RCV vote in greater numbers, having been exposed to and learned the benefits of the voting system through childhood and early-adulthood socialization. Regardless of its lack of apparent current impact on voter turnout or its hypothetical future impact, RCV may still have a positive impact on American democracy. Allowing voters greater leeway in showing their preferences is a clear and tangible benefit. Majoritarian FPTP systems often result in voters feeling they must choose the lesser of two evils, as they engage in in strategic voting to avoid the worst-case scenario. It is my belief that the inexorable logic of FPTP systems results in two political parties engaging a zero-sum game, exemplified in the politics of the US at present. RCV finds a way out of this inexorable logic, it allows voters to cast a ballot for their real preference while having a more reasonable fallback plan should this candidate prove unviable. This is reflected in evidence that RCV has led to greater diversity among candidates and elected officeholders.\textsuperscript{120} It is also important to note the significant mechanical impact RCV has through the elimination of runoff elections. These elections have long been plagued by very low turnout, which calls the veracity of their results into question. Removing the need for them is a positive change. Another positive electoral change occurring in California is the statewide effort to move municipal elections to coincide with Federal elections. While giving municipal elections their own elections was meant to allow voters to engage fully in their local politics the reality is that low turnout in these elections shows that voters were in reality not engaging with local politics. These low turnout elections result in undemocratic and ineffective outcomes as local politicians become reliant on a smaller set of voters for support. While RCV does not seem to be a solution for problems of low municipal turnout the jury is still very much out, and further study is merited. When more years have passed, and more data is collected Alameda county will be a prime area of investigation for future studies.

\textsuperscript{113} Soljinov, Abdurashid, \textit{Voter Turnout Trends Around the World}, IDEA, 2017
\textsuperscript{120} Sarah et al. “The Alternative Vote”, 2017
7.) Bibliography


Rae, Douglas W.” Political consequences of electoral laws” New Haven, Yale University Press, 1967


Soljinov, Abdurashid, Voter Turnout Trends Around the World, IDEA, 2017


8.) List of Tables and graphs

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Appendix 3 – Ballots cast and CVAP estimates Alameda County 2000-2018

9.) Appendix

Appendix 1 Turnout averaged, pre and post 2010.

<table>
<thead>
<tr>
<th>City</th>
<th>Alameda</th>
<th>Alameda</th>
<th>avg pre 2010</th>
<th>avg post 2010 on federal elections only</th>
<th>change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alameda</td>
<td>73812</td>
<td>0.519048593</td>
<td>0.525023731</td>
<td>0.60%</td>
<td></td>
</tr>
<tr>
<td>Pleasanton</td>
<td>70285</td>
<td>0.637645264</td>
<td>0.620897823</td>
<td>-1.67%</td>
<td></td>
</tr>
<tr>
<td>Union City</td>
<td>69516</td>
<td>0.496653596</td>
<td>0.538599023</td>
<td>3.99%</td>
<td></td>
</tr>
<tr>
<td>Dublin</td>
<td>46036</td>
<td>0.385410959</td>
<td>0.487160635</td>
<td>10.17%</td>
<td></td>
</tr>
<tr>
<td>Hayward</td>
<td>144186</td>
<td>0.428156593</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newark</td>
<td>42573</td>
<td>0.402118854</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fremont</td>
<td>214,089</td>
<td>0.572453654</td>
<td>0.575766774</td>
<td>0.33%</td>
<td></td>
</tr>
<tr>
<td>Livermore</td>
<td>80968</td>
<td>0.552163323</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Leandro</td>
<td>84,901</td>
<td>0.394989159</td>
<td>0.394989159</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>Berkeley</td>
<td>112,58</td>
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</tr>
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</tr>
<tr>
<td>totals</td>
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<td>control</td>
<td>52.26%</td>
<td>51.62%</td>
<td>-0.64%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>treatment</td>
<td>54.08%</td>
<td>52.70%</td>
<td>-1.38%</td>
</tr>
</tbody>
</table>
## Appendix 2 Turnout as a percentage of CVAP population per election

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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## Appendix 3 Ballots cast and CVAP estimates Alameda County 2000-2018

![Graph of ballots cast and CVAP estimates](image-url)