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The cost of voting categorized: A comprehensive review

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The cost of voting categorized: A comprehensive review

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The primary purpose of this paper is to analyze the research field of cost of voting and review the relevant literature on voter participation. After reviewing the literature, a development of a theoretical framework to categorize multiple variables associated with the cost of voting will be completed. The goal is to create clear, concise, and simple categories that define the cost of voting. This should add conceptual clarity to the field by linking variables into a common foundation. The research also connects the sociological and psychological category of intrapersonal to concepts of social group needs, sense of achieving a greater good, and "us vs. Them" theory. This link to human psychology and sociology will set up future research in the field of election studies to be on a more individual level basis, to better understand voter perception and feelings towards the potential cost to voting.
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CHAPTER I
COST REVIEWED

Introduction

Is voting costly? Election science researchers have devoted significant time debating what constitutes a “cost” to voting, how that cost should be measured, and how it impacts voters.¹ In truth the cost variable in the cost-calculus seems to be one that is shaped by a multitude of factors, factors in which this paper will look to discuss and clarify this. Election science research on the cost of voting, in a modern sense, can be first attributed to Downs (1957) rational choice model, which argues voters are rational actors who make rational choices on the decision to participate politically based on a cost to benefit calculation. From this model sprang the countless theories and models that we have today, and with the expansive research on the topic has come multitudes of different variables attempting to explain what exact cost voters are left with and how it impacts their decisions to vote. From registration laws and required voter IDs to the level of rain on election day, the literature for the cost of voting has countless variables. On top of the vast amounts of variables, the current landscape of election turnout research focuses heavily on individual variables as determining factors in the cost of voting equation, but often the cost of voting itself is left undeveloped and undefined.

¹ Much of the debate on the cost of voting revolves around how impactful cost is on turnout. It also includes debates on which variables impact turnout out the most. Li et. Al (2018) shows the significance of many costs of voting variables.
This comprehensive review of the cost of voting literature will analyze 45 scholarly articles that define an independent variable as an increase or decrease in cost. The articles will be coded by independent variable and categorized by the new cost of voting categories of time and resources, intrapersonal, and mixed. The coded data will then be analyzed to determine which categories are used more frequently, which are used in conjunction with one another, and which categories are left under-researched. The next steps for election science research should be to use this category index for simplification and improved understanding. The improvement of cost understanding through defined categories and improved conceptual frameworks will allow for greater individual-level research to take place in the future.

**Literature Review**

Attempts to understand why voters turnout to the polls has led to research on the driving factors of both voting and nonvoting. The first major model developed was the rational choice model, which argued that citizens act as rational actors when deciding to vote. Every voter weighs the cost of voting against the benefits. If the benefits outweigh that of the cost, then the voter should vote (Downs 1957). This model was further expanded upon to encompass the variable of civic duty as a reason voters can overcome the cost of voting when benefits are perceived as low (Riker and Ordeshook 1968). Later research upon the model found that the significance of cost in the variable is much higher than previously thought (Sigelman and Berry 1982). Even in the early research, it is clear that the variable of cost is not only fluid but can be described as a lot of different things, both physical and nonphysical. To expand on turnout a bit more and to lay contextual foundations, I will briefly discuss a few more models that give clarity to other cost variables.
The resource model is one that argues those with higher levels of resources should have lower costs than those of lower income (Verba and Nie 1987). Those with higher incomes have more ability to pay the cost of voting, taking the time away from work to vote, and have a greater ability to reach information. The ability to reach information with ease due to income is the concept of the “digital divide” (Cohron 2015).

The sociological model encompasses a vast amount of social variables that impact or act as cost to voting. Mobilization theory tells us that certain tools can stir voters to action (Arceneaux and Nickerson 2008). These tools include campaigns messages, targeted advertising, or get out to vote drives. Targeted advertising is a growing mobilization tool and has been found to be effective at stirring certain voters to overcome the cost of voting (Haenschen 2022). In terms of acting as a cost variable, the sociological model adds cost to not voting or participation through social pressures. Peer pressure from those in one’s social bubble has been found to stir individuals to vote, to avoid falling out of that group’s norms (Levine and Mattozzi 2020). Civic duty has been found to make voters feel obligated to participate in elections (Tollison and Willett 1973) and voters may have needs of belonging that lead them to participation (Rogers et. al 2013). All these sociological variables define the cost by the understanding that non-participation adds a social consequence or punishment, often through peers (Levine and Mattozzi 2020).

The psychological model argues that voters have psychological dispositions that impact the likelihood of voting (Harder and Krosnick 2008). What makes us human encompasses this model, education, age, background, gender, race, and feelings of control or self-efficacy. These identifying factors, much like the sociological model, are not always used as the cost variable, but there are still plenty of dispositions voters process that increase or decrease the cost of voting. For example, connecting the psychological model to the sociological one, the ability to
obtain information during election time is a cost, once that is overcome the ability to retain and understand that information cognitively cost voters.

The conceptual framework above plays an important part in understanding what causes turnout, ultimately the models are meant for that. They can be used however to describe cost, as shown in the few examples above. To understand cost further though, the literature on cost as a variable must be reviewed. Cost as a variable, as noted previously, is fluid and has countless definitions or variables that make it up. Physical cost such as election policy and voting laws make up the COVI or Cost of Voting Index which argues that these laws have the power to increase or decrease the cost, resulting in lower or higher turnout (Li et al. 2018). The COVI allows for predictions of turnout to be made and states to be ranked based on cost differences, but it focuses mainly on the category we will discuss later, time and resources. Aside from the physical cost, cost can also be described as non-tangible or physical. This often comes in the form of information and decision costs. These costs are often tied to the effort a voter must make to not only vote, but to vote in an informed fashion (Blais et al. 2019). To make the variable of cost even more complex, cost can also be defined as non-human in nature. Factors such as what season an election is in, the weather on election day, how many inches of rain has fallen, or voter fatigue all can be defined as costs that voters must endure and have shown to be impactful on turnout (Rallings et. al 2003, Gomez et. al. 2007). As found above, cost can take many shapes and forms. Cost can be looked at on a macro-level in the lens of lawmakers, and on the micro-level in the lens of psychology. This paper will look to review the current literature on the topic in both these lenses in order to bring conceptual clarity and simplification.
Time and Resources: A Category Defined

As stated in the introduction, the purpose of this paper is to analyze the current literature on the cost of voting and simplify it by categorizing the vast amounts of variables used to describe the cost into a few main categories. The first step of this process is defining the category both individually and then as one. Time, in a physics sense, is “the one and only non-spatial variable that we need in order to describe the spatial evolution of any system under consideration” (Christopoulos 2014). Simply put, time is the currency we all possess, and is the resource that allows progression from past to future. In the scope of cost of voting, time is the amount of time it takes to complete a political action, such as voting. An example of this is the amount of physical time it takes to complete a ballot at the polls or register to vote. This can be measured into minutes, seconds, hours, days, months, and even years. Resources in our scope is the physical resources spent to participate. This can be gasoline in one’s car or the energy used to find the correct voting location. Resources and time are connected in a category because of a few reasons, the first being both are physical and tangible. Both can be seen, observed, and measured through physical means, such as measuring the distance between a voter’s house and the distance of a poll booth. The second reason the two share a category is because they often occur simultaneously or because of one another. If a voter travels by car to a voting location, that takes time and resources. On the other hand, intrapersonal variables such as the ability to retain information do not require time or resources. An argument could be made that improving one’s ability to retain is time and resources, but in this case it’s the understanding that retention alone requires neither time nor resource.

The second thing that must be done is to now define time and resources as a category. Taking from above, the first component of this category is that the variables inside are physical.
They must cost the voter in a physical or tangible way, this can be through the time it takes to commit an action, the energy it takes to commit an action, or the resources it takes to commit an action. If a voter is faced with a required voter ID law, it will physically take time to get one, and resources to travel to the proper institute to receive one. Due to the cost being physical and tangible, it would fall into the time and resource category. The second component of this category is that all variables must be able to be measured empirically through tangible means, for instance poll booth distances as a variable can be measured by distance traveled in feet, a physical amount of something. A better explanation would be it is hard to hold or grasp the level of civic duty someone has, but one can physically observe how much time it takes to vote by measuring minutes once a voter steps into a poll area.

Now that the category has been defined both separately and together, the variables that potentially could fall under this category should be described. Variables that encompass election procedures, voting laws, access laws, registration rules, and how elections are run all fall into this category. These variables have the ability to increase and decrease the cost of voting. They are all measurable through physical means, such as an early voting window being added physically increases the time (acting a resource in this argument) a voter has to participate.

**Intrapersonal: The Intangibles**

Intrapersonal as a category is meant to encompass all the variables that are strictly individual based in each voter. These variables can be subjective and based purely around a person’s perception of something. How a voter views their own civic duty, their perceived difficulty to vote, ability to determine an outcome, and how they believe those around them will react to them voting or not voting all fall into intrapersonal. Intrapersonal also encompasses the identifying factors that make us who we are. One’s age, race, background, and cognitive abilities
are all make-up of who a person is and fall under intrapersonal. These variables are much harder to observe and measure, as it’s difficult to quantify a feeling of civic duty or peer pressure. These variables often are measured through surveys, as they require individual-level observation. These variables also can increase or decrease the cost of voting. A member of a social group meeting social norms and receiving the social needs reward by voting has cognitively lowered the cost of voting through perception. The same can happen with the inverse, a member of a social group failing to meet the norm could lead to consequence, so the pressure to meet perceived standards greatly increased the cost of not voting while decreasing the cost of voting.

**The Mixed: The Variables That Intertwine**

In life it is said that there is not simply just black and white, and this is especially true for the cost of voting variables. While some variables fit cozy in their new respective categories, some of them mix and mingle between the two. Variables such as election competitiveness, the ability for one to abstain, education, political knowledge, the cost of information, type of election, and voter fatigue all fall into this category. The reason these variables are unable to be defined as either/or is due to their dual natures. Let’s take the cost of information for instance, physically it takes time and energy to explore outlets for information but cognitively one must be able to interpret and analyze the information provided. This causes the cost of information to be a bit tricker than early voting laws because it technically can be physically measured, by how much information exists, but that information is as helpful as people are able to use it once they have it. This is true for the other variables in this category as well, and all these variables are the least clear of the variables reviewed in this research. Election competitiveness can physically be measured by tools such as pre-election polls, but people knowing how competitive an election is requires them to perceive a close race while also interpreting poll results. The mixed category
helps fit the outliers of the cost of voting literature and acts as a safety net for those that may fit both categories.
CHAPTER II
METHOD AND DATA

Method

To begin the methodology explanation, I selected forty-five published scholarly articles from the years 2000-2023.\(^2\) The decision to limit the timeframe was made to ensure the articles pulled cover the latest theory and models of election science research. While previous literature is important, it acts more as a foundation to be expanded on than is does a researchable topic and in most cases the articles used in this review cite back and expand upon these ideas. After collecting the articles, each article was coded for its independent variables, dependent variables, and how each measured the variable “cost”. Once each article was broken down, the independent variables of all the articles were pulled and sorted into each of the three categories. Once these independent variables were categorized, I could then work backwards to categorize each of the articles based on their independent variables' categorization. If an article had both elements present, they were categorized into the mixture category. For example, if an article had three variables in total, two of which fit into time and resources while one fit into intrapersonal, the article was deemed a mixture due to the existence of the one variable.

\(^2\) Each article was selected because it defines cost through a variable or shows cost through a variable. Previous research like this looked at voter turnout variables as a whole. This resulted in many more articles (90) being used, but this process is vastly different as voter turnout variables and cost variables differ. (Smets and Ham 2013).
Data: The Article Variables

The first step of the data process was to identify all the different independent variables from each of the 45 articles. All articles that had duplicate independent variables were simply placed as one on this part of the data. As seen in table 1.1, 31 different independent variables were used to describe changes in the cost of voting. The most common variables used throughout the 45 articles were those of election procedures which were variables in 28 of the articles. Many of the articles tested for more than one factor, with 24 of the 45 having more than one independent variable. A majority of the articles defined turnout as their dependent variable, which comes to no surprise, but some did account for things such as campaign activity, access to political power, and registration.\(^3\) Out of the 45 articles, 20 of them measured cost in more than one way, often by mixing direct and indirect cost.

<table>
<thead>
<tr>
<th>Independent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voter ID Laws</td>
</tr>
<tr>
<td>Identifying Factors (Race, Age, Gender)</td>
</tr>
<tr>
<td>Electoral Rules/Voter Access Laws</td>
</tr>
<tr>
<td>Polling Place Location/Polling Place Changes/Distance of Polls/Precinct Consolidation</td>
</tr>
<tr>
<td>Convenience Voting Methods (Early Voting, Internet Voting, Vote-By-Mail)</td>
</tr>
<tr>
<td>Motivation/Mobilization</td>
</tr>
<tr>
<td>State Partisanship Competitiveness</td>
</tr>
<tr>
<td>Registration Laws</td>
</tr>
<tr>
<td>Civic Duty</td>
</tr>
<tr>
<td>Seasonal factors</td>
</tr>
<tr>
<td>Competitiveness of Election</td>
</tr>
<tr>
<td>Benefit of Voting</td>
</tr>
</tbody>
</table>

\(^3\)While some dependent variables did differ, these articles can still be analyzed due to them directly defining cost through independent variables. Ultimately every article aimed to answer how cost interacts with voter participation, some just accounted for extra dependent variables in doing so. Since all of the articles shared these common defining factors, all of them can be used.
Table 2.1 (continued)

| Ability to Abstain                  |  |
| Self-Efficacy                      |  |
| Education, Political Knowledge     |  |
| Divorce (Individual Background)    |  |
| Use of Voter Centers               |  |
| Stress                             |  |
| Targeted Adverts                   |  |
| Selfishness                        |  |
| Information/Instrumental Rationales|  |
| Peer Pressure                      |  |
| Rain/Weather                       |  |
| Type of Election                   |  |
| Voter Fatigue                      |  |
| Perception of Control              |  |
| Difficulty of Voting               |  |
| Social Norms and Approval          |  |
| Voter Needs                        |  |
| Voting as a form of Self-Expressive Behavior | |
| Sense of Belonging                 |  |

**Independent Variables Categorized**

After coding each of the articles for their independent, dependent, and how they measure cost, each independent variable was then categorized into the three categories of time and resources, intrapersonal, and mixed. As seen in table 1.2, time and resources were found to have 6 variables used in the literature reviewed. Voter ID laws fit into the category due their ability to increase or decrease the time it takes to participate in elections by requiring or not requiring an ID. ID’s physically take time to receive as one must travel (using resources) to a location and spend time filling out the proper paperwork to receive one. Voter access laws, those that make up accessibility rules in elections, reduce the cost by decreasing the energy required to vote and time.
required to vote. Polling place changes, vote centers and precinct consolidation both can be measured through changed distances, gas required to travel, and time spent traveling. Convenience voting is much like access voting as it eases the cost of voting by increasing the amount of time a voter must vote. Registration laws can both increase and decrease the cost through similar means, same-day registration can increase the amount of time a voter has while shorter registration windows can increase the cost by reducing the amount of time.

Table 2.2    Time and Resources Category
As for the intrapersonal category, table 1.3 shows fifteen of the independent variables were categorized into this category. Identifying factors are both individual based and not physically measurable, at least the impact one’s age, gender, background or race on a certain situation is not physically measurable. Motivation/Mobilization, which does cost time and resources for campaigns to do, is subjective to each voter and the impacts that it will have on them. It can only be measured for effectiveness on turnout after a campaign, but that would be measuring turnout and not how it manipulates the cost of voting for an individual. Civic duty, feelings of self-efficacy, selfishness, belonging, and self-expressive behavior are all similar variables as they can be described as feelings one may have. These are extremely based on an individual’s own self-analysis and how they view themselves in the world. Stress, peer pressure, social norms, and social approval are all related to how one views themselves within a social group. These variables, like the ones like civic duty, can raise the price of not voting by social shame while simultaneously reducing the perceived cost of voting by making the alternative to voting cost far worse. As said before, many of the variables in this category describe cost in the lens of subjectiveness and perception. These variables may not physically increase the time it takes or money it takes, but they can increase the cognitive cost voters undergo.
After sorting the first two categories of variables, the rest of variables that did not exactly fit firmly in one or the other category were placed into the mixed category. As seen in table 1.4, ten of the independent variables fell into the mixed category. State Partisanship competitiveness, the type of election, and election competitiveness all suffer from having the ability to be physically measured through votes casted, who wins, voter polls, while also requiring the constituents of these elections to perceive the election as important, and close. This variable requires both physical observations to occur and a voter’s cognitive ability to function. Seasonal factors and weather both can be measured through how bad or good conditions are. Weather can
physically cause travel time to be slower or faster, but how a voter perceives “good” or “bad” weather is completely individual based, which makes it hard to fit into either category. The ability to abstain from elections is a tricky one, as it is individual based as the ability to abstain differs from each person, but one’s ability to abstain can be placed in their perceived values or their lack of physical consequences due to not participating in an election, such as a voter not voting on during an election in which the candidates issues or platform do not direct impact the voter. Education, political knowledge, and information cost are all similar as they all require time and resources to gain. College students invest time and money to obtain degrees, political knowledge is gained through energy consumption, and the same can be said for information. The cognitive piece comes when people must retain or interpret information given to them. These abilities are individual based and must be measured as such.
The Categorized Articles

The final data piece to be presented is the list of articles categorized by their independent variables’ own categories. If an article had a variable in two of the categories, then both will be labeled, if all three then it will be labeled “all”. If an article only had one category representing their articles, then it will be sorted into that category as well. Table 1.5 shows the percentage of each category represented by the articles. With the vast majority at 51.11% time and resources.
had 23 of the 45 articles. This is furthered by 13.33% and 4.44% more of the articles having time and resources and another category. In total, the time and resources category were present in 31 of the 45 articles. Intrapersonal was present alone in 8 of the articles but did share 6 with time and resources and 2 with mixed. Mixed was the least represented only being present in 5 alone, and 2 with both other categories respectively. This data shows a disproportionate level of representation for time and resources, which can be discussed in the next section.

Table 2.5 Articles Broken Down by Category

<table>
<thead>
<tr>
<th>Articles Categorized</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time and Resources</td>
<td>51.11%</td>
</tr>
<tr>
<td>Time and Resources/Intrapersonal</td>
<td>13.33%</td>
</tr>
<tr>
<td>Time and Resources/Mixed</td>
<td>4.44%</td>
</tr>
<tr>
<td>Mixed</td>
<td>11.11%</td>
</tr>
<tr>
<td>Intrapersonal/Mixed</td>
<td>4.44%</td>
</tr>
<tr>
<td>Intrapersonal</td>
<td>17.77%</td>
</tr>
</tbody>
</table>
CHAPTER III

FINDINGS AND CONCLUSION

A Discussion on the Finding

After looking at the data, a few things become very apparent. Time and resources as a category make up the least amount of different variables but encompasses the majority of the literature reviewed. This can be interpreted in a few ways. Firstly, it can be understood that this category and the variables inside it are much clearer conceptually, and easier to observe than the other categories. Voting laws and their impact on the cost of voting have been researched, observed, and tested since the very foundational beginning of election science research. These variables also enjoy the ability to be observed post-election while many variables inside the mixed and intrapersonal category would require observations to be made during elections to best gauge perception at the time. This is due to perception being fluid and what a person values can change over the course of time (Foad et al. 2020). How voting laws and procedures impact the cost can be examined post-election by looking at differences in turnout before and after the passage of new laws or procedures. The next thing that is very apparent is the intrapersonal category encompasses a vast number of variables, which all touch very different parts of the human perspective. The category has variables that are fluid, such as feelings of civic duty or self-efficacy that can change over time with new ideas, education, or experiences, while also have variables such as race which is a fundamental component of who a person identifies as in society. Due to this variety of variables, the category does suffer from less clarity than the time
and resource category. In order to add conceptual clarity, each part of the category should be looked at differently. The sociological aspects of civic duty, social norms, and belonging should all find conceptual foundations in the sociological models. As humans we find ourselves tied to rules of behavior based on our social groups and norms, and these rules inform us on how to react in situations (Reese and Cameron 2019). Due to these social groups leading decision making, voters have been found to find themselves valuing what other social groups (those outside their own) have received through political means, and they decide if the group deserved the outcome received (Conover 2009). This understanding that people may have a “what benefits us” outlook could lead to further research on how social group status relates to outcome related cost and voting. It could also be further researched by mixing both time and resources and intrapersonal categories by analyzing how perceived outcomes on certain social groups can manipulate the cost of voting for these groups. The psychological aspects of the intrapersonal category could be best understood as voters must overcome psychological cost in order to commit an action that does more good than the cost does to themselves. This is the idea that in order to obtain a “greater good” the decision maker would need to endure cost (Soutschek and Tobler 2018). In the scope of this, further research on the psychological variables could look to uncover what type of expected outcomes from elections can stir such action in voters. Questions that could be asked in this research include are certain elections perceived as a necessary cost for a great good, do certain candidates stir action, and do certain social groups do better jobs at incurring the cost?

Conclusion

After reviewing the literature on the topic of the cost of voting, analyzing it through the lens of modern theory, and categorizing it into simplified units, a few concluding statements can
be made. Firstly, the amount of literature bias towards the time and resource categories seems clear. As discussed above, this could have a lot to do with how research must be conducted on each of the subjects, but if the evolution of election science research follows a trend, then it would be easy to conclude that adequately mixing variables of cost should show more impactful measures than those measured alone. While I believe research must continue to be conducted on time and resources, as the importance of understanding how our laws and regulations can impact the ability of citizens to participate in democracy, it would be unjust to ignore the psychological and sociological factors voters inherently face. By creating further research that is geared towards understanding these lesser-known fields, we may be able to create a far deeper understanding of voters past how much gas it may take to visit a poll center. Another conclusion that can be drawn is that the number of variables used in election science literature can safely be called expansive. The need for a simplified categorized system is there as the number of variables, all measuring different levels of cost can become very convoluted when attempting to understand the entire scope of election turnout research. With these new categories, there can be easier base-level understanding of the impacting variables on turnout while more specific nitty-gritty variables can still exist. Finally, the last conclusion that can be made is the election science literature on cost of voting is extremely vast. The different articles used in this review almost all have different definitions, variables, and ideas on what “cost” really is. This makes it extremely difficult to understand what exactly is impacting voters and a recommendation for further research would be to do the same as this paper has and attempt to simply the cost of voting variable further.
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* All references indicated with * are not cited in text but are used in the data set.