

The Effects of Education on Voting Behavior

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Abstract

In this study, we investigate the effect of school education on people’s civic participation behavior, voting. With the data set by National Longitudinal Survey of Youth, we analyze the marginal effect of 1-year education on whether people vote or not. Then, we use a novel model by Tenn (2007), which measure such a marginal effect with a quasi-experiment, to investigate the actual causal effect of more education on voting.

1 Introduction

1.1 Motivation Economists often argue for government intervention in education for concerns of market failures, Dee (2004). One source of such failure is the positive externalities of education in changing peoples’ political behavior, as it is often theorized that education not only equips citizens with the cognitive skills needed for effective political participation but also improves citizens’ interest and involvement in political process, Milligan, Moretti, and Oreopoulos (2004). We would like to explore this second channel of externality by examining if education cause people to be more likely to vote. It is largely uncontested that education attainment is positively correlated with propensity to vote. To capture the causal relationship between education and voter turnout, we will compare two groups of individuals with one-year differences in both age and education. With a logit framework employed, we will be able to identify the causal effect of one year of education on voter turnout.

1.2 Literature Review Various attempts have been made to establish a causal relationship between education and voter turnout but still yielded inconclusive results. The identification challenge in identifying the causal effect of education on voter turnout is that unobserved factors that co-determine voting behavior and education acquisition may exist.

One alternative strategy to solve this problem is to establish a quasi-experiment with appropriate assumptions. Tenn (2007) compares individuals who are 1 year apart from each other in both ages and education attainment and limits the attention to the younger people who will attain another year of education the next year. However, the data used in Tenn (2007) does not report the grades of college, and attrition reasons could not be identified. So, these two shortcomings may cause biased results. Thus, in our paper, we would like to revisit this problem with another appropriate data set, the National Longitudinal Survey of Youth (NLSY97).

2 Research Design

2.1 Data In our paper, we use the National Longitudinal Survey of Youth (NLSY97) data set. Starting with a group of approximately 9,000 teenagers, Bureau of Labor Statistics (BLS) interviewed them regularly after 1997 to acquire the information about their education, personal income,

political attitude, etc. The variables which we are interested in, such as whether they vote or not in the American Presidential Election and education year and major, are recorded in this data set.

2.2 Econometric Model To understand the voting behavior cross the U.S., we firstly revisit and compare some classical studies about the impact of longer education on people’s civic participation, voting. In these papers, researchers analyze the marginal effect of 1-year education on whether people vote or not. Most of these papers, however, only use cross-sectional regressions because of the limitation of their data sets. In our work, we capture the possible time-variance of people’s education and run regression as follow,

$$\text{Pr}_{it} = \Lambda(\lambda \text{Edu}_{i,t} + \beta' \text{Controls}_{i,t} + \text{Year FE} + \text{State FE})$$

where i represents for individual and t stands for the year of the observation. The variable of interests is $\text{Edu}_{i,t}$, which represents for the total year of education of individual i at time t . The controls, according to the previous literature, include personal income, the dummy variable for gender, as well as two sets of fixed effects including year and state. For comparison, we will still use the OLS regression.

Second, to investigate the causal effect of education on people’s voting behavior, the next part of our research design is largely based on Tenn (2007). To establish the quasi-experiment, we first divide individuals into different groups by 1 year of age and 1 year of education. We will employ logit regression because whether an individual vote or not is a binary variable,

$$\text{Pr}_{it} = \Lambda(\lambda_1 \text{Edu}_{i,t} + \lambda_2 \text{Student} + \alpha \text{Selection Bias}_{\text{group}_i} + \beta' \text{Controls}_{i,t})$$

where Selection Bias is to capture the differences in unobserved characteristics in each group. To identify the causal effect of education on voter turnout, we assume that the unobserved characteristics are similar between groups. That is, there is no selection bias in groups that are only 1 year of age and education differences. Thus, we could deduce the marginal effect of 1 year of education on voter turnout.

2.3 Research Plan The timeline is as follows:

- Week 1, 4.4 – 4.10: data cleaning and grouping;
- Week 2, 4.11 – 4.17: modeling and reporting initial results; checking and comparing with references;
- Week 3, 4.18 – 4.24: addressing possible problems occur in last week, and organizing the whole paper;
- Week 4, 4.25 – 4.30: finalizing the results and the formal final project.

References

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