HOW STATE POLITICAL CONTROL AFFECTS SCHOOL CHOICE OPTIONS

Spencer Katzman
December 12, 2023

Abstract

The debate over public school choice has become increasingly political. The conventional wisdom is that Republicans support school choice and Democrats oppose it. This paper asks whether that support extends to legislative efforts in states where a single party controls both the governorship and the legislature. The presence of traditional public-school alternatives in a state is measured by the percentage of students enrolled in traditional public schools in that state. The hypothesis is that Republican (Democrat) controlled states offer more (less) school choice and thus will have lower (higher) traditional public-school enrollments. Multiple regression analysis is used to test three related models that causally link political control and school choice. The models vary based on corrections for multicollinearity and inclusion/omission of outliers. In the end, it is found that Republican control actually leads to statistically significant increases in traditional public-school enrollments and Democrat control is statistically insignificant in terms of enrollments. These findings refute our hypotheses and suggest that despite political posturing on school choice, any efforts to sway politicians through donations and political activity seemingly do not affect school choice legislation and thus may be squandered resources.

Literature Review

The debate over public school choice is relatively new and research is still emerging. Traditionally, it has been argued using Tiebout's (1956) theory that citizens will respond to poor public schooling by moving to a better school district. For example, Husted and Kenny (2002) point out that there are 117 different school districts counties in California and that opportunities for movement to private and charter schools is easy in high density areas. Still, there is far less opportunity in lower density areas and moving can be difficult for poorer families because of mobility frictions. First proposed by Fischel (2006), the homevoter hypothesis also challenges the idea of parents changing school districts. Fischel argues that homeowners will instead vote for representatives who support school choice because improving school options increases their home values. Dehring and Depken (2008) and Ngyuen and Yinger (2011) both provide support for the homevoter hypothesis by showing that school quality is capitalized into housing prices, thus giving homeowners a reason to support enhanced schooling options rather than relocating.

Kenny's (2005) paper, "The Public Choice of School Choice" provides the closest support for my causal assumptions that state political leanings are the main determinate of traditional public-school (hereafter, TPS) alternatives. He investigates the cross-state variation in success of voucher referenda and voucher bills in California, Florida, and in the United States Congress and finds that referenda only passed in more Republican leaning states. He also finds that conservative Republican states were more likely to pass charter school legislation than moderate Republican states, but both were more likely to bring such issues to a vote than Democrat leaning states. Kenny also finds that unions were more likely to oppose voucher proposals.

Similar to, but not the same, as the models proposed here, Kenny uses the Americans for Democratic Action (ADA) score as his independent variable representing the political leanings of a given state. My research expands on Kenny's in two major senses. First, he only controls for big versus small cities (using a binary variable) and private school enrollment whereas I control for many of the demographic characteristics of a state because ignoring important demographic information would likely lead to omitted variable bias. Second, my independent variables are a stronger indication of a causal relationship because a party must control the state government in order to make laws, his use of ADA data gets at this but does not indicate if a party actually controls the lawmaking process; mine does.

Slungaard (2022) provides support for my choice of TPS enrollment percentage as the dependent variable, proxying for TPS alternatives. She examines charter school impact on TPS enrollments in Massachusetts and North Carolina and finds that the presence of charter schools reduces TPS enrollment, particularly that of white students. Although I do not focus on charter schools specifically as a TPS alternative, Slungaard's work does lend credence to my conjecture that TPS enrollments are an acceptable proxy for TPS alternatives. Specifically, it suggests that more schooling alternatives decrease TPS enrollments.

A host of literature substantiates my choice of control variables, which, because my hypotheses are conditional on my control variables, is crucial to examining the true relation between the dependent and independent variables. Hamilton and McCauley (1991) provide a model of choice between public and private schools. Their use of average income supports its inclusion as a control variable in my model. Although they have a different focus, Schneider et. al. (1997) examines how having greater choice over schooling creates incentives for parents to engage in activities that build social capital. Their work also substantiates my use of race as an

important control variable and points to factors like parent education levels and average length at residences as possible controls if I can expand my analysis using district level data.

In line with Kenny (20005), Stoddard and Corcoran (2007) and Conaway et. al. (2016) substantiate the idea that unions oppose TPS alternatives. Conway et. al. points out a clear example of the principal-agent problem evidenced by the Georgia 2012 statewide charter school referendum where Democrat voters supported charter schools despite Democrat politicians consistently opposing charter school legislation because of teacher union influence. Corcoran and Stoddard (2011) analyze three failed charter referenda in the state of Washington and found that teacher unions were less supportive of charter schools and led to the failure. Gokcekus et al. (2004) examines campaign contributions by the American Federation of Teachers and National Education Association unions. They find that although Republicans are more likely to vote for school vouchers, a Republican member of the House of Representatives who receives more funding from these unions is less likely to vote for a pro school choice amendment to "No child left behind" Act of 2001 than a Republican representative that receives less funding from these unions.

The above evidence of union opposition to school choice has several implications for the models herein. First, it identifies federal and state differences in political support of TPS alternatives and points to the possibility that such differences exist across states as well. Mine will be the first research that looks at all states in the same study. Second, it highlights the importance of including union strength in a state as a control variable because union donations can affect Republican support for alternatives, not just Democrat support. Therefore, I include a Right-To-Work binary control variable as a measurement of the teacher union strength in a state as that might affect whether legislation is passed.

Finally, several studies suggest additional control variables for my study if I can extend it to the district level. Ware and Teeples (1975) establish that current TPS enrollments can be projected by data on live births in a region, housing generation rates, and past TPS enrollments. Stonstelie (1979) examines the impact of California's Proposition 13 on Los Angeles County TPS enrollments and found that they were highly dependent on levels of TPS spending and school quality which vary greatly within states across districts. Husted and Kenny (2000) show states that are less flexible in terms of public determination of educational spending are less effective. Given these results, I am currently looking for this data, particularly information concerning state TPS budgets and average state school quality to serve as additional controls.

Theory

Conventional wisdom suggests that Republicans support school choice and Democrats oppose it. The question is whether this is mere political posturing, or if the parties actually enact legislation supporting their positions once in power? This study examines whether a party enacts their school choice promises once they have control of a state in terms of seating the governor and gaining a legislative majority. This question contributes to academic research by bringing together the disciplines of political science and education economics. Specifically, it allows a look past the political talking points concerning school choice to see if the prevailing points of view have legislative merit.

At the core of this analysis is the relationship between state political control and school choice legislation and there are several reasons to believe it is causal. First, it takes a united state government to pass controversial legislation and Republicans and Democrats are divided on the issue of school choice. Republican ideology tends to rest on individual freedoms when it comes to education and therefore, it is theorized that Republican-controlled states are more likely to pass legislation that allows for TPS alternatives. Conversely, Democrat ideology focuses on the

ability of TPS to function based on returns to scale and thus, it is theorized that Democrat-controlled states are less likely to provide TPS alternatives. Second, the literature review established that Democrat politicians are more closely aligned with teacher unions and those unions tend to oppose public-school alternatives for self-preservation reasons. That is, by eliminating competition for students, teacher jobs are more secure. Union support thereby encourages Democrat state legislators to block school choice legislation.

Examination of this theory is important in that substantial resources are spent on both sides of the battle over school choice and donors should be interested in the impact of their resource expenditures. Substantiation of the theory will signal that their resources are being used wisely and achieving the expected outcomes. But even if the theory is refuted, the information will be useful evidence for donors that their resources are being squandered and that politicians are not fulfilling their promises.

Data[1]

The data described in this section were selected for several reasons. I personally downloaded all data after detailed internet searches. The dependent variable represents the percentage of students in a state that enrolled in TPS and serves as a proxy for school choice alternatives. The idea is that the more alternatives available, the smaller the percentage of students attending TPS. Data on TPS enrollments in a state from 2023 come from EdChoice and are represented in the analysis as a percentage (as opposed to a decimal value). These values ranged from a minimum of 53.2% in Florida to a maximum of 93.2% in Wyoming with variation as displayed in Figure 1.

---

[1] All data was operationalized, coded, and tested using R, which was also used to compile the final data file, CompleteDataSet.csv.

**Figure 1: Variation in Dependent Variable**
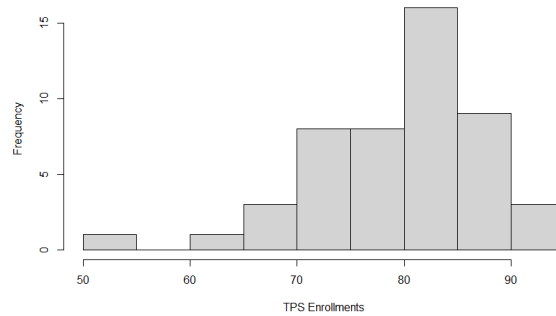
Independent variables were chosen to represent the political control of the states. The hypotheses are that Republican leadership is more likely to legislate alternatives to TPS and Democrat leadership is less likely to do so. If correct, these hypotheses suggest that political leadership in a Republican-controlled state should help explain lower TPS enrollments in that state because students have more available options. Similarly, enrollments in democrat-controlled states should have higher TPS enrollments as students have fewer options. Raw data were collected from the National Conference of State Legislatures concerning the party of the sitting governor in 2023 and the party controlling the state legislature in 2023. These data were operationalized by constructing two binary variables, X_{Rep} and X_{Dem} (note that a third binary variable for a split state is not needed because of the idea of dummy coding). X_{Rep} is assigned a value of '1' if both the governor and controlling legislative party are Republican and '0' if otherwise. X_{Dem} is similarly constructed and thus a split state government is represented when both X_{Rep} and X_{Dem} are assigned '0'.[2] Figure 2 displays the variability of *Rep* and *Dem*.

---

[2] Nebraska was omitted from the study because it has unicameral/non-partisan legislature and thus it was impossible to quantify the state as being under Republican or Democrat control.

Figure 2: Variation in Independent Variables
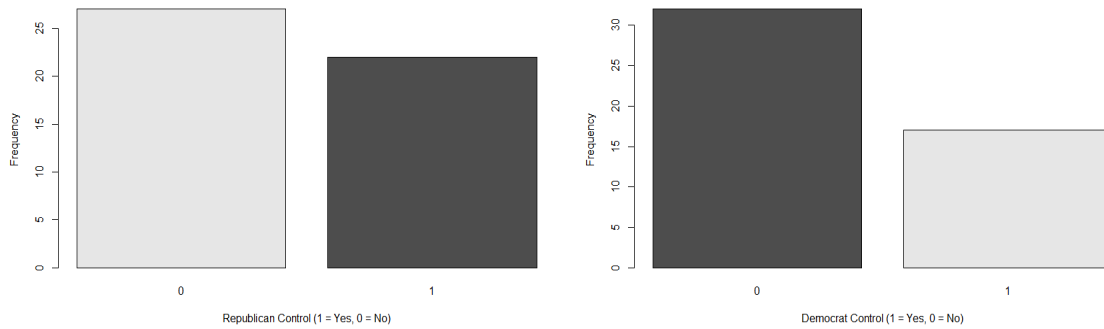
The control variables in the model include information on a state's racial composition, average age, per capita income, population, and whether it is a right to work (RTW) state.[3] These specific characteristics were selected based on a review of the relevant literature and general hypotheses about what factors should influence the choice to attend TPSs. They are:

RACE: The percentage of Blacks and Hispanics in a state's 2017 population are represented by the continuous variables X_{Blk} and X_{Hsp}. The use of race as a control is suggested by the literature review (Schneider et al., 1997 and Gokcekus, 2004). These data were obtained from the Governing.com and are presented in percentage form. Black population percentages range from 0.4% in Montana to 37.9% in Mississippi and Hispanic population ranges from 1.3% in West Virgina to 48.8% in New Mexico.

POPULATION: Estimated total state population in 2022 is represented by the continuous variable X_{Pop} and ranges from 576,837 in Wyoming to 39,538,245 in California. These data are from the Census Bureau

---

[3] It is worth mentioning that if this study is expanded to the district school level, a finer partition of the demographic information is available through the Census Bureau here. This will allow for additional control variables such as Live birth rates, housing generation rates, and past TPS enrollments (Stonstelie, 1979), as well as the flexibility of TPS spending identified as an important factor by Husted and Kenny (2000) .

age page. *Pop* is measured in millions and is included to control for the possibility that the size of a state might make TPS alternatives more, or less, possible.

AGE: The percentage of a state's 2020 population that was 18 or older is represented by the continuous variable X_{Age} that ranges from 72.4 in Utah to 82.3 in Vermont. These data were also collected from the Census Bureau age page. *Age* is included as a control since more young people might engender more political action regarding schooling options.

INCOME: Per capita state income from 2022 is represented by the continuous variable X_{Inc} which ranges from $46,370 in Mississippi to $84,561 in Massachusetts. These data were downloaded from the St. Louis Federal Reserve Bank and *Inc* is measured in thousands. It is used as a control since the literature review reveals that more affluent families send their children to private schools, thus lowering public school enrollment percentages (Hamilton and McCauley, 1991).

RTW: 2023 Right to Work status in a state is represented by the binary variable X_{RTW}. X_{RTW} was constructed using data from the National Conference of State Legislatures page. X_{RTW} is coded to take a value of '1' if the state has Right to Work protections legislated and a '0' if not. It is included as a control because it is well known that unions tend to oppose TPS alternatives and states without RTW tend to have stronger teacher unions (Corcoran, 2007 and Conaway et al., 2016).

Tests for multi-collinearity and outliers were performed on the eight *X* variables above. The Variance Inflation Factor (VIF) was greater than 1.5 for almost every variable and the Pearson covariance matrix had several entries with absolute value greater than 0.4, up to 0.74.[4] Finally, Cook's Distance estimates showed that Alaska, Florida, and New Mexico were substantial outliers. This seems to be because Florida's (obs. 9) TPS enrollment is 12% below the next lowest state, New Mexico's (obs. 30)

---

[4] VIF values and the Pearson Covariance matrix can be found in Appendix A.

Hispanic population is 9.4% above the next highest state, and many of Alaska's (obs. 2) unique aspects set it apart from other states.

Figure 3: Cook's Distances
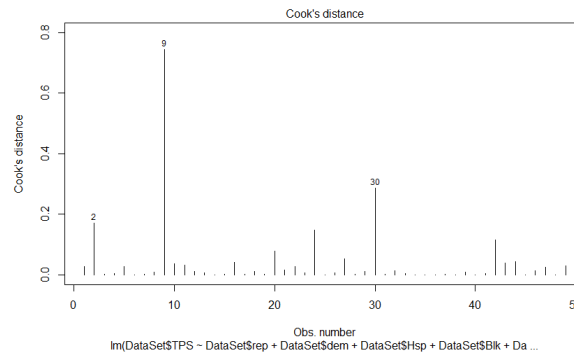
Hypotheses

The theory presented above generates two hypotheses regarding the causal effects of state political control on TPS alternatives. The first regards the idea that Republican control leads a state to provide more alternatives to TPS. The second concerns the idea that Democrat control leads a state to provide fewer alternatives to TPS. Formally, the hypotheses are:

Hypothesis 1: Republican control of a state leads to more TPS alternatives.

(*Alt. Hypothesis 1*: Republican control does not lead to more TPS alternatives.)

Hypothesis 2: Democrat control of a state leads to fewer TPS alternatives.

(*Alt. Hypothesis 2*: Democrat control does not lead to fewer TPS alternatives.)

These hypotheses suggest the dependent and independent variables needed in the models. The dependent variable is the 2023 percentage of students enrolled in state TPS as it proxies the availability of TPS alternatives. That is, more (less) TPS alternatives correspond to lower (higher) TPS enrollments. Independent variables were chosen to represent the political control of

the states in 2023, be it Republican, Democrat, or split and are represented using binary variables operationalized as discussed in the next section.[5]

The multiple regression statistical model proposed in the next section will have slope coefficients of β_1 for the independent variable representing Republican control and β_2 for that representing Democrat control. Thus, the formal statistical hypotheses can thus be stated as:

$$H_1: \beta_1 < 0 \quad \text{and} \quad H_2: \beta_2 > 0$$

$$H_0: \beta_1 = 0 \qquad\qquad H_0: \beta_2 = 0$$

Hypothesis 1 is based on the idea that Republicans favor School Choice and thus Republican control in a state will lead to lower TPS enrollment percentages. This amounts to β_1 being negative. The idea behind *Hypothesis 2* is that Democrat control in a state will increase TPS enrollment percentages because Democrats oppose TPS alternatives. This amounts to β_2 being positive. Since these hypotheses involve inequalities, tests of the statistical significance of β_1 and β_2 will rely on one-tailed tests.

Proposed Methods

The proposed methods include comparisons of three different multivariate regression models, each used to test the casual relationships between state political control and TPS enrollments discussed above. These models differ based on corrections for multicollinearity and inclusion/removal of outliers. The rationale for using multi-variate regressions is that the data are very clean and of continuous and binary forms which are conducive to regression analysis. Also, the inclusion of the demographic control variables (discussed below) rules out other methods such as the Chi-square Test of Independence. Since the hypotheses involve inequalities, they will

---

[5] Nebraska will be omitted from the study because it has unicameral/non-partisan legislature and thus it is impossible to quantify the state as being under Republican or Democrat control.

be assessed using one-tailed tests of the regression slope coefficients on the two independent variables, Republican Control and Democrat control. R^2 and p-values will help assess the overall fit of the models by, respectively, assessing the percentage of variance in TPS enrollments explained by the independent and control variables and their joint significance. Finally, AIC and BIC criteria will be used to compare the complexity of the three models versus their fit.

The dependent variable data on TPS enrollments is from 2023 and were downloaded from EdChoice and are represented as a percentage (as opposed to a decimal value). The independent variable data on state political control were downloaded from the National Conference of State Legislatures and were operationalized by creating two binary variables, *Rep* and *Dem*. These independent variables take values of '1' if that party controls both the governorship and the legislature, and '0' otherwise. Control variables were also used in the models and include information on a state's racial composition, percentage of population over 18 years of age, total population, per capita income, and whether it is a Right to Work state. These specific characteristics were selected based on a review of the relevant literature and consensus about what factors should influence the choice to attend TPS.

Black and Hispanic percentages of the state populations were downloaded from Governing.com and are represented by the continuous variables *Blk* and *Hsp*. The percentage of the state's population (*Age*) over 18 was downloaded from the Census Bureau age page and is expressed in percent form (rather than decimal). State population data (*Pop*) are represented in millions and were downloaded from the same page as the *Age* data. Per capita state income data (*Inc*) were downloaded from the St. Louis Federal Reserve Bank and are scaled in thousands. Finally, data on Right to Work protections were downloaded from the National Conference of

and operationalized using the binary variable RTW that takes on a value of '1' if there are legislative Right to Work protections and '0' if not.

All the data discussed above were operationalized and coded using R, which was also used to run the three proposed models and tests thereof. Proposed Model 1 controls for variation in the data beyond that explained by political control by using all the control variables discussed above in the following regression equation:

$$Y = \beta_0 + \beta_1 X_{Rep} + \beta_2 X_{Dem} + \beta_3 X_{Blk} + \beta_4 X_{Hsp} + \beta_5 X_{Age} + \beta_6 X_{Pop} + \beta_7 X_{Inc} + \beta_8 X_{RTW}$$

To eliminate multicollinearity, proposed Models 2 and 3 remove *Dem*, *Pop*, and *RTW*, thus restricting the regression equation to:

$$Y = \beta_0 + \beta_1 X_{Rep} + \beta_3 X_{Blk} + \beta_4 X_{Hsp} + \beta_5 X_{Age} + \beta_7 X_{Inc}$$

Since *Dem* is eliminated from Models 2 and 3 to reduce multicollinearity, only *Hypothesis 1* will be tested for those models.

Results

Before presenting and discussing the regression results, I examine the boxplots of *Rep* and *Dem* versus TPS to gauge their relations ship. Figure 4 suggests that my hypotheses are incorrect. The relation between the control and no control boxplots shows an upward trend as the data shifts from no Republican control to Republican control. Likewise, similar boxplots for Democrat control and no control suggest that Democrat control shows a downwards trend as the data shifts from no Democrat control to Democratic control.
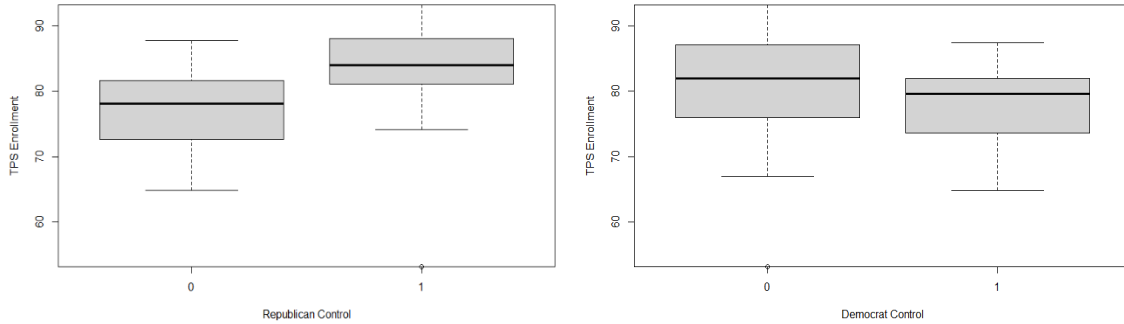
The regression results for the three models are presented in Table 1 and confirm what is observed in Figure 4.

Table 1: Coefficient Results of Regression Model

Variables	Model 1 Coefficients	Model 2 Coefficients	Model 3 Coefficients
Republican	5.805 (2.605)$^{++}$	3.801(2.258)*	7.848 (1.823)$^{+++}$
Democrat	3.368 (3.655)		
Hispanic%	-0.171 (0.123)	-0.241(0.097)**	-0.222 (0.094)**
Black%	-0.295 (0.116)**	-0.347 (0.104)***	-0.268 (0.080)***
Age:% $\geq$ 18	-0.548 (0.624)	-0.474 (0.581)	0.093 (0.481)
Population	-0.216 (0.137)		
Avg. Income	-.0007 (0.165)	-0.002 (0.121)	0.138 (0.101)
RTW	0.048 (3.190)		
Constant	125.874 (51.021)**	121.767 (46.141)**	66.206 (68.004)***
n	49	46	46
Multiple R^2	0.418	0.369	0.562
p-value (for F)	0.003122	0.001037	0.000002
AIC	332	330	283
BIC	351	343	296

Note: Standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$, two-tailed. $^{+++}$ $p < 0.01$, one-tailed

The R^2 for the three models ranges from 0.418 to 0.562 and improves with each model. The same is true for the p-values from the F-test. From these perspectives, the overall models perform well, and the data is a good fit. It is not surprising that Model 3 performs the best in under these two measures since it eliminates the outliers, thereby greatly reducing the variance in the data. Yet, this seems like a sneaky way

to claim the explanatory variables explain the variance in TPS enrollments in Model 3. Equally unsurprising is that AIC and BIC measures show a substantial improvement in Model 3 from Models 1 and 2. I mostly added Model 3 to show I knew how to do perform model comparisons.

Analysis of the independent variables allows the hypotheses to be tested. Unfortunately for the theory, the coefficient of *Rep* is positive and statistically significant in all three models. This leads to rejection of *Hypothesis 1* since an increase in *Rep* from 0 to 1 indicates a change to Republican control which is hypothesized to decrease TPS enrollment, not increase it. The *Dem* coefficient is statistically insignificant in Model 1, and therefore I also reject *Hypothesis 2* which may be evidence regarding Democrat opposition to school choice, or lack thereof, but also may simply be due to the multicollinearity problems that plague Model 1.

Although not important to the hypotheses, the control variable coefficients offer some meaning. The coefficients of *Hsp* and *Blk* are both negative and significant (except *Hsp* in Model 1) which supports the existing literature (Schneider et al., 1997 and Gokcekus et. al., 2004). The sign of the coefficient on *Age* varies across models which is unimportant since it is highly insignificant in them all. The sign of the *Inc* coefficient also varies across models which is also unimportant because it too is insignificant in each. Only included in Model 1, the *POP* coefficient is negative and insignificant. Finally, although the *RTW* coefficient is insignificant in Model 1, it is positive which may correspond to stronger unions leading to more focus on TPS education and less on school choice.

After running the regressions, the assumptions of linear regression were examined under each model. Multicollinearity was discussed above and many of the independent variables were highly correlated based on VIF values and the Pearson correlation matrix (see the Appendix) indicating that Model 1 did not adhere to the no multicollinearity assumption. Because of this, Models 2 and 3 were run without X_{Dem}, X_{Pop}, and X_{RTW} to eliminate collinearity. This appears to have worked as the VIF values for this combination of variables in Model 2 are all under 1.5 (Column 2, Table A1). Interestingly,

multicollinearity in Model 3 went up slightly relative to Model 2 although its VIF values were greatly decreased relative to those from Model 1 (Column 3, Table A1).

Homoskedasticity was examined by plotting the residuals against a model's fitted values. Figure 5 shows that there is no discernable pattern in Model 1. The graphs for Models 2 and 3 have a similar lack of pattern. Additionally, the square roots of standardized residuals were plotted versus fitted values for each model and the resultant line was fairly flat in each. Therefore, all three models satisfy the homoskedasticity assumption.

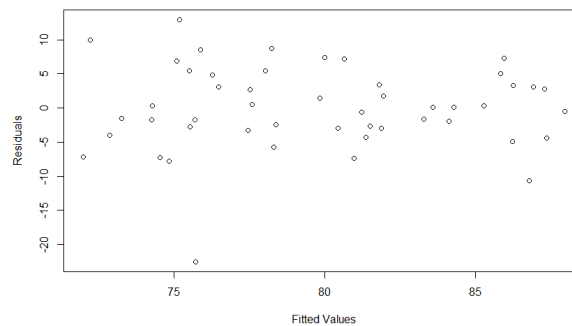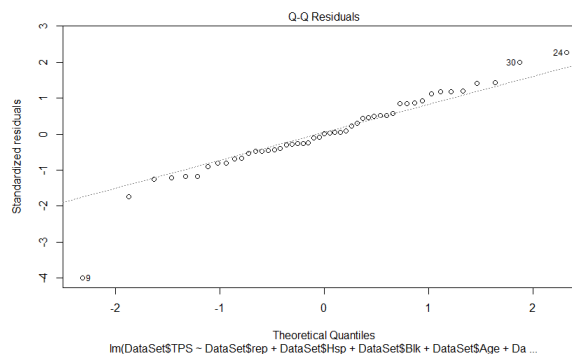**Figure 5: Model 1 Homoskedasticity Test**

Figure 6 displays the distribution of errors from Model 2 and indicates their normality as they are clustered around the 45-degree line. Plots are similar for Models 1 and 3, suggesting that their errors are normally distributed as well.

Figure 6: Model 2 Normally Distributed Errors Test

Finally, the linearity of parameters was examined by plotting each model's residuals verses fitted values. Figure 7 is from Model 2. The red line is very close to the dotted line representing zero average residuals, thereby confirming the linearity of parameters. Models 1 and 3 produce similar graphs, also satisfying the linearity of parameters assumption.

Figure 7: Model 2 Linearity of Parameters Test
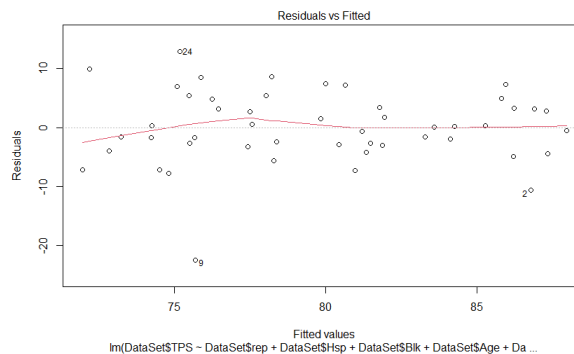
Limitations

A limitation to any analysis of school choice and its legislative implementation is that the issue is dependent on so many factors. Thus, any statistical analysis is likely not to include important explanatory information either because collection is too costly, or data simply doesn't exist. This generally limits the predictive power of school choice models and leads to omitted variable bias, casting doubts on coefficient estimates and their interpretations. These same limitations apply to this paper where the primary limitation is that only state level data was used rather than district level data. As such, important differences between affluent and poor districts, older versus younger districts, and local political control could not be leveraged.

Another limitation related to the state level data is that by focusing on states, the number of observations was capped at fifty (forty-nine once Nebraska was eliminated) and after including my dependent and control variables, this left just forty degrees of freedom in each

model. This begs the question of whether the inability of the statistical model to explain some of the variations in the data stems from the actual relationship between the variables or simply a lack of observations. Once again, this can be alleviated by using district level data from multiple states since more observations will be available.

Finally, the data concerning state governors and legislatures used is from 2023 but no information is included about when charter schools or magnet schools were introduced in a state and what the political landscape looked like at that time. This may have introduced time interval bias if party control shifted in the state over time. An expansion of this analysis to the district level should also include a panel data component accounting for any changes in political control. Although the statistical results in this paper refute the main theory, it is hoped that using district level panel data might reverse that conclusion. Unfortunately, the time constraints of the semester made collection of more detailed data impossible.

Conclusion

This study examines the theory that Republican controlled states are more likely to have more TPS alternatives than Democrat controlled states, and by proxy, lower TPS enrollments than Democrat controlled states. Multivariate regression results suggest that Republican control actually leads to higher TPS enrollments, and that Democrat control does not affect TPS enrollments, thus refuting the theory. Although p-values from F-tests suggest the joint predictive power of the explanatory variables, the models' R^2 values were all below 0.6, indicating that the models are incomplete. The next iteration of this research will be focused on district level school data which should add explanatory power. Perhaps, it might also reverse the current conclusions and provide support for the theory once there is a finer partition of school and political information.

References

Conaway, Brooke, Benjamin Scafidi, and E. F. Stephenson. 2016. "Parents, Homevoters, and Public School Employees: An Analysis of Voting Patterns in the 2012 Georgia Charter Schools Amendment Referendum." *Journal of School Choice* 10 (2): 249–69.

Corcoran, S. P., & Stoddard, C. 2011. Local demand for a school choice policy: Evidence from the Washington charter school referenda. *Education Finance and Policy,* 6(3), 323–353.

Dehring, C. A., Depken, C. A., & Ward, M. R. 2008. A direct test of the homevoter hypothesis. *Journal of Urban Economics*, 64, 155–170.

Fischel, W. A. (2006). Why voters veto vouchers: Public schools and community-specific social capital. *Economics of Governance*, 7(2), 109–132.

Gokcekus, Edward, Joshua J. Phillips, and Edward Tower. 2004. "School Choice: Money, Race, and Congressional Voting on Vouchers." *Public Choice* 119 (1/2): 241–54.

Hamilton, B.W., and M.K. Macauley. 1991. "Determinants and Consequences of the Private - Public School Choice." *Journal of Urban Economics* 29 (3): 282-294–294.

Husted, T. A. & Kenny, L. W. 2000. Evidence on the impact of state government on primary and secondary education and the equity-efficiency trade-off. *Journal of Law and Economics*, 43(1), 285–308.

Husted, T. A. & Kenny, L. W. 2002. The legacy of serrano: The impact of mandated equal spending on private school enrollment. *Southern Economic Journal*, 68(3), 566–583.

Kenny, Lawrence W. 2005. "The Public Choice of Educational Choice." *Public Choice* 124 (1/2): 205–22.

Nguyen-Hoang, P., & Yinger, J. 2011. The capitalization of school quality into house values: A review. *Journal of Housing Economics*, 20(1), 30–48.

Schneider, Mark, et al. 1997. "Institutional Arrangements and the Creation of Social Capital: The Effects of Public School Choice." *The American Political Science Review*, vol. 91, no. 1, pp. 82–93.

Slungaard Mumma, Kirsten. 2022. "The Effect of Charter School Openings on Traditional Public Schools in Massachusetts and North Carolina." *American Economic Journal: Economic Policy* 14 (2): 445–74.

Sonstelie, Jon. 1979. "Public School Quality and Private School Enrollments." *National Tax Journal* 32 (2): 343–53.

Stoddard, C. and Corcoran, S. P. 2007. The political economy of school choice: Support for charter schools across states and school districts. *Journal of Urban Economics*, 62(1), 27–54.

Tiebout, C. 1956. A pure theory of local government expenditures. *Journal of Political Economy*, 64(1), 16–24.

Ware, Herbert, and Thomas C. Teeples. 1975. "The Projection of Public School Enrollment." *Review of Public Data Use* 3 (3): 15.