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Response to Expert Report of Daniel A. Smith

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I. Background

On July 14, 2014, I was engaged by the Office of the Attorney General of the State of Ohio to provide my opinions on the analysis conducted by Dr. Daniel A. Smith as reported in his report filed on June 30, 2014. My report is limited to my evaluation of the appropriateness of the methodologies, the quality of its analysis, and the reasonableness of its inferences. I have also reviewed the relevant academic literature in an attempt to place Dr. Smith's report in proper context.

II. Key Claims of Dr. Smith's Report

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In his submission, Dr. Smith attempts to document that Ohio's African-American voters utilize early in-person (EIP) voting at rates that exceed that of white voters. Dr. Smith's primary analysis is based on the use of administrative voter files that allow Dr. Smith to compute EIP voting rates for each day of the early voting period. He uses data from 84 of 88 Ohio counties for 2012 and 5 Ohio counties in 2010.[1]   He supplements this analysis with survey evidence from the Current Population Study (CPS) November supplement.

Using these two different data sources and a variety of methodologies, Dr. Smith provides estimates showing that the EIP voting rate of blacks exceeds that of whites.[2] He finds that in 2012, approximately 20% of African-American voters cast an early in-person vote while only about 10% of white voters did so. Dr. Smith also provides evidence that black EIP voting rates were higher than that of whites on the days of the EIP voting period that SB 238 and Directive 2014-06 would eliminate. The daily racial gaps in EIP voting rate of up to 1.5% during the eliminated early voting days, but the largest gaps were the last two days of the early voting period, days that were later restored by the courts.

Dr. Smith does not directly claim that changes to the administration of EIP voting will reduce African-American electoral participation, the plaintiffs use his analysis to suggest that "thousands of Ohioans will be irreparably harmed by having their right to vote unlawfully abridged, and in many cases denied outright" (Plaintiff's Motion, page X).

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[1] Because the five counties used in 2010 are so unrepresentative of the state in terms of several factors such as racial composition, partisanship, urban density, I do not believe that inferences from the 2010 data about the effects of SB 238 and Directive 2014-06 statewide are valid. So I will focus on the results from 2012.

[2] Dr. Smith defines the EIP voting rate as the number of voters from a group who use EIP voting divided by the number of voters from that group who vote using any mode (p. 17, fn 23). This definition is problematic for evaluating the potential effects of changes in the EIP voting system on the overall participation of a group. As I discuss below, EIP voting may negatively impact overall participation rates. Therefore, curtailing EIP voting may reduce Dr. Smith's EIP voting rate solely through its impact of the denominator.

In response to Dr. Smith's report I address two broad issues. First, I discuss a number of methodological shortcomings related to his claim that black EIP voting rates are substantially larger than those of whites. Second, I address the second, more important, claim that changes to EIP voting procedures are likely to reduce the turnout of African-American voters.

III. Do Blacks Utilize EIP Voting more often than Whites?

In this section, I review evidence and arguments that Dr. Smith provides for his claim that black voters are more likely to cast early in-person ballots than are white voters. Each subsection discusses the drawbacks on his various approaches.

A. Regression Analysis

The first method for establishing differential EIP voting rates by race is regression analysis which is used to estimate the relationship between the EIP voting rate and the percentage of blacks in the voting age population (VAP) of each census block (hereafter "black VAP"). Dr. Smith estimates a positive relationship between these two variables indicating that there are greater levels of EIP voting in census blocks with a higher percentage of African-Americans. This analysis, however, raises two important concerns. The first is that the relationship is not very strong. For the 2012 election, the correlation between EIP voting rate and black VAP is low at .174.[3] This weak relationship implies that black VAP is not a very good predictor of EIP voting. This is apparent in Figure 1 where it is clear that there is huge variation

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[3] Page 14, footnote 19.

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in EIP rates for every level of black VAP.   Notably the correlation between EIP voting and

black VAP is even lower (.145) when the analysis is restricted to the days that would be

eliminated by SB 238 and Directive 2014-06 (prior to the reinstatement of the last two days of

the voting period).[4] These weak relationships imply that many factors beyond the racial

composition of the districts drives participation in early voting.

The second, and more significant, problem with Dr. Smith's regression analysis is that it

is difficult to make inferences about the black and white EIP voting rates from the estimated

relationship between the overall EIP rate and the black VAP. While it may be the case that the

EIP voting rates and black VAP correlate because blacks utilize EIP voting more than whites,

there are many other logical possibilities. For example, whites who live in racially mixed

neighborhoods may be more likely to utilize EIP voting than whites who live in homogeneous

white neighborhoods. Also recall that the EIP voting rate is defined by the number of EIP votes

divided by the total votes cast. Therefore, the relationship between the EIP rate and the black

VAP may be driven by changes in participation by election-day voters. If black voters in more

homogeneous blocks voted on election day less often, their EIP rates would rise as the black

VAP increased, even though their propensity to use EIP voting were unaffected.

This uncertainty over which inferences one can draw from aggregate data is known as the

"ecological inference problem." Among social scientists, it is well known that one can use

regression to obtain valid inferences about individual behavior from aggregate data only if

certain restrictive conditions are met. In the current context, these conditions require that a

voter's decision to use EIP voting rather than vote on election day is unaffected by the racial

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[4] Page 16, footnote 22.

composition of the census block.[5] Such an assumption is very strong. There are many reasons to suspect that decisions about electoral participation might be affected by the local racial context.[6] The inferences from regression may also be invalid if the participation decisions of voters are affected by factors that correlate with local racial heterogeneity. This is almost certainly true of factors such as age, education, income, and urban density. We would also be concerned about the validity of ecological inferences if voting behavior within a census block was affected factors related to the surrounding census blocks.

The assumptions required for regression to provide valid ecological inferences imply that if we were to aggregate up from the census block to a higher level of aggregation, we should still find a positive association between the EIP voting rate and the black VAP. To check whether this is the case, I have combined census data on turnout, race, and voting age population on Ohio's counties with the Dr. Smith's data on EIP usage in 2012 (Table 2). This allows me to compute the EIP voting rate for each county and compare it to the black VAP in each county. This relationship is demonstrated in Figure 1.   If the variation in EIP voting rates across census blocks were driven primarily by differential usage across races, we would expect to see that relation aggregate up to the county level. But that is not the pattern than Figure 1 reveals. Counties with higher black VAP tend to utilize EIP voting at lower rates on average. In fact, the negative relationship revealed in Figure 1 is stronger than the positive ones in Figures 1 and 2 of Dr. Smith's report.[7]

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[5] See Gelman et al (2001).
[6] See Barber and Imai (2014).
[7] When counties are weighted by turnout, the correlation between the EIP rate and black VAP is -.54. Dr. Smith reports turnout weighted correlations of .17 and .15 for Figures 1 and 2, respectively (Smith report, footnotes 19 and 22).

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Given these concerns about the robustness of the finding the relationship between EIP rates and black VAP and the difficulties of making proper inferences, Dr. Smith's regression analysis does not provide very strong evidence of differential rates in EIP usage between black and white voters.
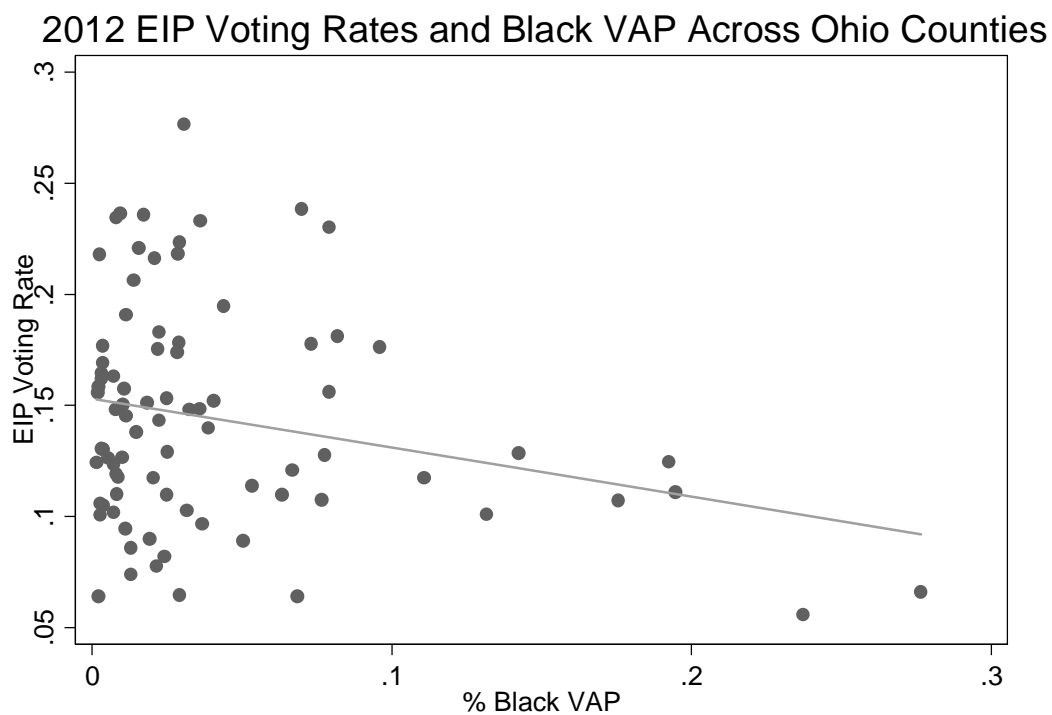
2012 EIP Voting Rates and Black VAP Across Ohio Counties

Figure 1

B. Homogeneous Block Analysis

Recognizing the limitations of his regression analysis, Dr. Smith supplements the analysis by estimating black and white EIP voting rates from homogeneous census blocks, i.e. ones where the black VAP is either 0% or 100%. This analysis, presented in Figures 3 and 9 in his report, shows that EIP voting rates are higher in blocks with 100% black VAP than in ones with 0% black VAP. From this analysis, he concludes that black EIP voting rates are higher than white EIP voting rates. This must logically be the case only for those homogeneous blocks. The analysis does not rule out the possibility that white EIP voting rates may be as high or higher than the black rates in more heterogeneous blocks. Since there are very large numbers of heterogeneous blocks, it is inappropriate to extrapolate the findings from homogeneous blocks to conclude that the black EIP voting rate exceeds the white rate statewide.

C. The Method of Bounds

In order to incorporate data from more heterogeneous census blocks, Dr. Smith uses a technique known as the method of bounds. The method of bounds uses observed data and accounting identities to place upper and lower bounds on some unobserved quantity of interest. The intuition behind this method is straightforward. Suppose we observe a block in which 20% of the votes cast were EIP, but we know that only 10% of the voters were white. A logical consequence is that the black EIP rate must be at least 10% (this would be the case if all whites voted early), but it can be no larger 20% (the case if all early votes were cast by blacks). So we

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would conclude that 10% is the lower bound of black EIP voting rates and 20% is the upper bound.

There are several problems, however, with this approach. First, the upper and lower bounds may be quite far apart and therefore provide very little information about the discrepancy between white and black EIP voting rates. This problem is most severe for heterogeneous blocks. Returning to the example above, suppose that 50% of the voters were white. Then if we observed an EIP rate of 20%, the lower bound for the black rate would be 0% (all early votes were cast by whites) and the upper bound would be 100% (all early voters were black). As a result of this problem, Dr. Smith limits his analysis to census blacks that are between 0 and 10% black VAP and those that are between 90% and 100% black VAP. So as in the analysis of perfectly homogeneous blocks, a very large number of blocks are discarded. If EIP voting behavior is different in the more heterogeneous blocks, the estimates of the statewide racial discrepancy in EIP voting rates will be mismeasured.

Finally, I have strong suspicions that the method of bounds was employed incorrectly in Dr. Smith's report. My example above assumes that we know the total number of votes cast by whites and blacks in each block. But of course, these voting rates are also unknown and also have to be estimated via the method of bounds. Dr. Smith's report does not contain information on how this additional step was accomplished, and his only citation is a work that does not deal with this complication.[8] The failure to correctly apply the method of bounds to estimating turnout rates by race will generally produce bounds that are too close together. In the appendix, I derive the proper set of bounds for the application to estimating the EIP voting rate. Using the correct formulas, I am unable to replicate Figure 4 of Dr. Smith's report. Instead, I find that for

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[8] Schuessler (1999).

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blocks at the .9 homogeneity cutoff, the bounds for the white and the black EIP voting rates overlap.

D. Survey Data

In addition to the aggregate census-block data, Dr. Smith reports the rate of EIP voting by race in Ohio computed from the Census Bureau's Current Population Study (CPS). In election years, the CPS November supplement asks respondents whether they voted and whether they cast ballots early or on election day and whether they voted in-person or by mail. Using these data for the 1656 respondents in Ohio in 2012, Dr. Smith reports that "19.55% of blacks reported voting EIP absentee ballots in Ohio, whereas 8.91% of whites in the state reported they voted EIP absentee ballots."[9] But as Dr. Smith concedes, the CPS does not ask when during the early voting period voters cast their ballots. So it is difficult to infer anything from this information about the impact of the recent legislative and administrative changes to early voting in Ohio.

IV. Will Changes in the Implementation of EIP Voting Differentially Affect Black Turnout?

While Dr. Smith is careful not to directly argue that SB 238 and Directive 2014-06 would reduce black turnout relative to whites, such a claim is implicit in his report and explicit in the plaintiff's motion. In this section, I argue that the academic literature on early voting provides very little support for that argument *even if blacks utilize EIP voting at rates great than whites.*

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[9] Dr. Smith cites the following url for a claim that black EIP voting rates have exceed whites nationally since 2008. http://www.census.gov/hhes/www/socdemo/voting/publications/p20/2012/tables.html. But the data to support that claim is provided in none of the tables linked from that page.

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I base my argument on two findings from the literature. First, I argue that academic studies have not supported for idea that EIP voting enhances turnout. In fact, studies usually generate the opposite conclusion. Second, I argue that studies examining variations in the implementation of EIP (including Dr. Smith's own work) fail to find an effect on aggregate turnout or black turnout.

A. Does Early In-Person Voting Enhance Turnout?

Determining whether the adoption or alteration of early in-person voting or any other election law has a casual effect on voter turnout is notoriously difficult. The scientific gold standard requires an experiment in which electoral laws were randomly assigned across jurisdictions so that researcher could measure the changes in turnout associated with each type of electoral law. Obviously, such an experiment is infeasible. Therefore, political scientists have used a variety of data and research designs to isolate the effects of early in-person voting. But despite this methodological triangulation, the literature contains very little evidence of a positive effect of EIP voting on participation.

One approach to estimation of the impact of EIP voting is to use aggregate data on voter participation at the state or county level to compare participation in states that allow early voting with those that do not.   In one such study, Gronke et al (2007) use state-level presidential and mid-term election turnout from 1980 to 2004 to estimate the effects of a variety of convenience voting procedures. They estimate that EIP voting *reduces* turnout by about 2%.   The estimate, however, is not very precise and is therefore not statistically distinguishable from zero. Burden et al (forthcoming) find that EIP reduces county-level participation in the 2004 and 2008

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presidential elections by 0.7% and 3.0% respectively.   The estimate for 2008 is statistically

significant. An issue of concern is that these studies the estimates may be driven by cross-state

variation in the use of EIP procedures. This feature would produce spurious correlations and

incorrect inferences if states with either high or low turnout rates were more likely to adopt EIP

voting. Therefore, other studies attempt to utilize only the information about changes in EIP

voting within states. Using this approach, Fitzgerald (2005) also finds a negative, but statistically

insignificant, effect of a state adopting EIP voting.   Burden et al find that states that adopted EIP

voting between 2004 and 2008 witness a statistically significant drop in turnout of greater than

2%. Notably none of these aggregate studies finds a *positive* relationship between EIP voting

and turnout. They differ only in terms of the magnitude and statistical significance of an

estimated negative relationship.

A second approach to uncovering the relationship between EIP and turnout is to use

individual-level data on decisions to vote early, on election day, or not at all. Burden et al

(forthcoming) use data from the Current Population Study (CPS) to estimate whether individuals

who live in states that allow EIP voting were more likely to vote in the 2004 and 2008

presidential elections. Because the CPS includes information on a very large set of demographic

characteristics, Burden et al are able to account for many of the most important determinants of

voting participation such as age, education and income. Their main finding is that individuals in

states that allow EIP voting have a lower likelihood of voting by 3 to 4 percentage points. This

result is very consistent with the studies based on aggregate data.

In summary, the popular idea that early voting boosts turnout finds very little support in

the academic literature. In fact, most studies find the opposite – that EIP reduces aggregate

turnout.

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C. What is the Impact of Reducing the Duration of the Early Voting Period?

The question in this litigation is not about the complete elimination of EIP voting but simply the reduction in the duration of the early voting period. Like the question of the impact of adopting EIP voting, the academic literature casts doubt on the idea that reducing the window of EIP voting would have a large impact on the size or composition of the electorate.

In an early study, Stein (1994) uses exit polls from the 1994 Texas gubernatorial election to compare early and election-day voters. His primary finding is that there are few if any demographic differences between the two sets of voters. In particular, he finds little evidence of difference in racial composition or educational attainment. The two groups differed by age, and low income voters were a bit more likely to vote early though Stein says "this difference was not substantively large enough to warrant serious attention." The key differences were that early voters were more partisan, more ideologically committed, and more interested in politics. As decades of research have shown that these are the characteristics of the highest propensity voters, it seems unlikely that those are the voters who would drop out of the electorate if the early voting period were reduced.

Burden et al also address this question utilizing data from the CPS where they examine the decision of voters to vote early, vote on election day or not at all. They find "that early voters comprise a population that, based on demographics, is more likely to vote than the population of voters that cast their ballots on election day." In other words, their model predicts that the typical early voter is likely to switch to voting on election day if early voting were eliminated.

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To more directly address the question of reducing the number of EIP voting days, Burden et al examine the relationship between the duration of EIP voting and presidential turnout in counties for the 2004 and 2008 elections. Consistent with their finding that EIP depresses turnout overall, they find that shortening the EIP window would *increase* turnout by about a percentage point.

A particularly pertinent study of the impact of reducing the duration of EIP is that of the plaintiffs' experts (Herron and Smith 2014). In their study, they consider the impact of the reduction in the Florida's EIP window from two weeks to eight days that occurred between the 2008 and 2012 presidential elections. The eliminated days included the first five days and the Sunday before election day. Using the state's voter files from each of these elections, they are able to estimate what percentage of voters who cast votes during each day of the 2008 EIP voting period cast a valid vote in 2012 (either early or on election day).   Their results presented in Figure 6A are striking.[10] For the first five eliminated days (the change most analogous to Ohio's revisions), well over 80% of the 2008 early voters returned to cast valid votes in 2012. These rates exceed the rate at which 2008 early voters from the period in which the windows overlapped who returned in 2012.[11]   These findings suggest that the overwhelming majority of those who cast votes on the eliminated days in 2008 simply adjusted by choosing an alternative date. Because Ohio has maintained a much longer EIC window than Florida, it is reasonable to assume that similarly situated Ohio voters will have an even easier time adjusting.

A second finding reported in Figure 6A also undermines a key claim from the Smith expert report and plaintiff's motion suggesting that African-Americans will be disproportionately

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[10] Herron and Smith 2014, page 16.

[11] Unfortunately, Herron and Smith do not report how many of the 2008 election day voters cast ballots in 2012. This figure would indicate whether early voters are more persistent voters than election day voters. Such a finding would also cast doubt on the existence of large effects of shrinking the early voting window.

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likely to be hindered by the reduction of the EIP window. But Figure 6A illustrates that of those 2008 early voters who cast votes during an eliminated day, black voters were more likely to cast a valid ballot in 2012. It appears that many black voters switched to election day. While Herron and Smith finds that EIP voting rates among African-Americans fell by over 4 percentage points after the EIP window was reduced, the black share of the electorate ticked slightly upward between 2008 and 2012 (comparison of Tables 2 and 3, pages 5 and 6). These findings are evidence against any effect of the changes on black turnout.

V. Conclusion

In his expert report, Dr. Smith argues that statistical evidence derived from the Ohio voter file suggest that blacks in Ohio cast a larger percentage of their votes during the early election than do whites. Based on this finding, Dr. Smith concludes that "blacks residing in Ohio will be disproportionately affected by the reductions in EIP absentee voting" (page 32).

As I argue above, the evidence for these claims is not strong. First, the correlation between   EIP voting rates and black VAP is not strong at the census block level. At higher levels of aggregation such as the county, the weak positive correlation is replaced by a stronger negative one. Second, the inferences that one may draw from the correlation EIP voting and black VAP are tenuous. Dr. Smith's attempted corrections using homogenous blocks and the methods of bounds omit information about thousands of Ohio voters and therefore may not provide a reasonable estimate the statewide racial discrepancy in EIP voting rates. Third, there is strong evidence that the method of bounds was misapplied and that the actual results are not consistent with a substantial racial gap in EIP voting rates.

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Even if the claim of a differential usage of EIP voting were on a firmer footing, the

evidence that the reductions of EIP voting would reduce black voting participation relative to

whites is non-existent. The political science literature suggests that EIP voting does not increase

voter turnout -- most studies reach the opposite conclusion. More specifically, the evidence

shows that reductions in the window of EIP voting does not reduce turnout.

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Appendix: Application of the Method of Bounds

The method of bounds uses observed data and accounting identities to place upper and lower bounds on some unobserved quantity of interest. The canonical application involves estimating turnout rates for different races from aggregate data. To illustrate suppose that we observe only the turnout rate for some census block T (as a percentage of voting age population). Let X be the percentage of the census block's voting age population that is black (therefore 1- X are non-black). But we do not observe the turnout rate for blacks B and the turnout rate for non-blacks N. Without any additional assumptions, we know that the following identity must hold:

$$BX + N(1\text{-}X) = T$$

But if we solved for B, we would obtain $B = (T – N (1 - X))/X$. However, this expression includes the unknown quantity N. But we can place bounds based on all the logically possible values of N. For example, if N = 1 (all non-blacks turned out), then the minimum possible value of B is the greater of 0 or $(T + X – 1)/X$. Assuming no non-blacks turned out (N=0), we can obtain an upper bound of B which is the lesser of 1 or T/X.

Dr. Smith's application deviates from this standard application in a number of important ways. His quality of interest is the EIP rate for blacks and whites. As discussed above, his measure of the EIP rate is the number of EIP votes cast divided by the total number of votes cast by any method. So let T^E now be the aggregate EIP rate for a census block which is observed. Let B^E be the EIP voting rate for blacks and N^E be the rate for non-blacks. But the accounting identity

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that links B^E and N^E to T^E is quite different than the one discussed above.   Because B^E and N^E

are measured as fractions of total turnout for each group, the accounting identity becomes:[12]

$$B^E \cdot B \; X + N^E \cdot N \; (1 - X) = T^E \cdot T$$

Thus, the method of bounds produces bounds on the quantity B^E B, not B. But B is unknown

and can only be bounded. But we can use the bounds for B to compute the proper bounds for B^E.

If we use the lower bound for B from above, we can obtain the following upper bound for B^E:

$$(T^E \cdot T)/(T - X + 1)$$

Similarly, we can use the upper bound estimate of B to get the correct lower bound for B^E:

$$(T^E \cdot T - X + 1)/T$$

Unfortunately, Dr. Smith does not provide enough information to determine whether he in fact

used these formulas. But it is easy to infer that it was highly unlikely that he did. For example,

consider the bounds plotted in Figure 4.   Unfortunately, the exact numbers for Figure 4 (page 20

of his report) were not provided but by using a ruler, I can estimate that the lower and upper

bounds of the black EIP voting rate for 90% black VAP blocks are .157 and .200, respectively.

Therefore, if the correct bounds were used, the following must be true (since X = .9):

$$(T^E \cdot T)/(T - .1) = .200 \tag{eq. 1}$$

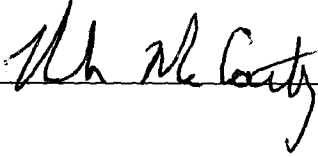$$(T^E \cdot T - .1)/T = .157 \tag{eq. 2}$$

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[12] The right hand side of the equation is the number of early votes divided by total VAP. The first term on the left computers to the number of black early votes as a proportion of total VAP and the second is the number of non-black early votes as a percentage of VAP.

Dr. Smith does not report T (the turnout rate) for 90% black VAP blocks, but using a ruler I estimate the black dot on the 90% black VAP range reflects $T^E = .192$. Using this figure, one can easily verify that eq. 1 can be true only if $T = 2.5$ and eq. 2 can be true only if $T = 2.85$. Since T is a turnout rate it must be less than 1.0. So these are impossibly large numbers suggesting that the reported bounds are incorrect. If a more realistic value of T were used such as .7, the bounds would be .05 and .22 suggesting that the reported bounds are far tighter than the true bounds.   Moreover, the bounds for the black EIP rate and the bounds for the white rate for the 90% blocks would overlap.   Therefore, one would not be able to say that the black EIP rate exceeds that of whites with certainty.

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I declare under penalty of perjury under the laws of the United States that the forgoing is true and correct to the best of my knowledge.

Dated: July 23, 2014 _____

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Faculty Chair, PhD Program, Woodrow Wilson School, 2002-2004.

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Books

Political Bubbles: Financial Crises and the Failure of American Democracy (with Keith Poole and Howard Rosenthal). 2013. Princeton University Press.

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Named an "Outstanding Academic Title" by *Choice* in 2007.
Critics Roundtables: 2005 APSA, 2006 MPSA
Reviews: *American Prospect, Perspectives on Politics*, *Chicago Tribune*, *American Review of Politics*, *Economic History Net, Independent Review*, *The Week, Journal of Economic Issues¸ Journal of Sociology and Social Welfare, The Independent Review*, *Political Science Quarterly*

Monographs

The Realignment of National Politics and the Income Distribution (with Keith T. Poole and Howard Rosenthal). 1997. American Enterprise Institute Studies on Understanding Economic Inequality.

Journal Articles

"A Primary Cause of Partisanship? Nomination Systems and Legislator Ideology" (with Eric McGhee, Seth Masket, Boris Shor, and Steven Rogers) *American Journal of Political Science* (early view in October 2013)

"The Ideological Mapping of American Legislatures" (with Boris Shor). 2011 *American Political Science Review* 105(3):530-551.

"A Bridge to Somewhere: Mapping State and Congressional Ideology on a Cross-Institutional Common Space" (with Boris Shor and Christopher Berry). 2010. *Legislative Studies Quarterly* 35(3): 417-448.

"Does Gerrymandering Cause Polarization?" (with Keith Poole and Howard Rosenthal) 2009. *American Journal of Political Science* 53(3):666-680.

"Presidential Vetoes in the Early Republic: Changing Constitutional Norms or Electoral Reform." 2009. *Journal of Politics* 71(2): 369-384.

"Bureaucratic Capacity, Delegation, and Political Reform" (with John Huber). 2004. *American Political Science Review* 98(3): 481-494.

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"The Appointments Dilemma." 2004. *American Journal of Political Science* 48(3): 413-428.

"Political Resource Allocation: The Benefits and Costs of Voter Initiatives," (with John G. Matsusaka). 2001. *Journal of Law, Economics, and Organization.* 17(2): 413-448.

"The Hunt for Party Discipline" (with Keith Poole and Howard Rosenthal). 2001. *American Political Science Review*. 95(3):673-687.

"Cabinet Decision Rules and Political Uncertainty in Parliamentary Bargaining" (with John Huber). 2001. *American Political Science Review.* 95(2):345-360.

"The Politics of Blame: Bargaining before an Audience" (with Timothy Groseclose) 2000. *American Journal of Political Science*. 45(1):100-119.

"The Time to Give: PAC Motivations and Electoral Timing" (with Lawrence Rothenberg). 2000. *Political Analysis*. 8(3):230-259.

"Coalitional Maintenance: Politicians, Parties, and Organized Groups" (with Lawrence Rothenberg). 2000. *American Politics Quarterly*, 28(3):291-308.

"Proposal Rights, Veto Rights, and Political Bargaining." 2000. *American Journal of Political Science*, 44(3):506-522.

"Presidential Pork: Executive Veto Power and Distributive Politics." 2000. *American Political Science Review*, 94(1):117-129.

"Advice and Consent: Senate Response to Executive Branch Nominations 1885-1996" (with Rose Razaghian). 1999. *American Journal of Political Science,* 43(3):1122-43.

"An Empirical Spatial Model of Congressional Campaigns" (with Keith T. Poole). 1998. *Political Analysis,* 7(1):1-30.

"Presidential Reputation and the Veto." 1997. *Economics and Politics*, 9(1):1-26.

"Commitment and the Campaign Contribution Contract" (with Lawrence Rothenberg). 1996. *American Journal of Political Science*, 40(3): 872-904.

"Veto Power and Legislation: An Empirical Analysis of Executive-Legislative Bargaining from 1961-1986" (with Keith T. Poole). 1995. *Journal of Law, Economics, & Organization*, 11(2):282-312.

Book Chapters and Invited Contributions

"The Causes and Consequences of Polarization" (with Michael Barber) in *Negotiating Agree in Politics* eds. Cathie Jo Martin and Jane Mansbridge.

"Why Hasn't Democracy Slowed Rising Inequality?" (with Adam Bonica, Keith Poole, and Howard Rosenthal). 2013. *Journal of Economic Perspectives.* 27(3): 103-24.

"Complexity, Capacity, and Capture" in *Preventing Capture* eds. Daniel Carpenter, Steven Croley, and David Moss. Cambridge University Press, 2013.

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"The Political Economy of Immigration Incorporation into the Welfare State" in *Outsiders No More? Models of Immigrant Political Incorporation* eds. Jacqueline Chattopadhyay, Claudine Gay, Jennifer Hochschild, Michael Jones-Correa, Oxford University Press, 2013.

"Political Fortunes: On Finance and Its Regulation" (with Keith Poole, Thomas Romer, and Howard Rosenthal). 2010. *Daedalus* Fall: 61-73.

"Measuring Legislative Preferences." *Oxford Handbook of Congress* eds. Eric Schickler and Frances Lee. 2011.

"The Politics of the Pop: the U.S. Response to the Financial Crisis and the Great Recession" In *Coping with Crisis: Governmental Reponses to the Great Recession* eds. Nancy Bermeo and Jonas Pontusson. 2012.

"The Political Economy of Inequality and Redistribution" (with Jonas Pontusson). 2009. Brian Nolan, Weimar Salverda, and Tim Smeeding eds. *Handbook of Economic Inequality*. Oxford University Press.

"The Policy Consequences of Political Polarization." 2007. Paul Pierson and Theda Skocpol eds. *The Transformation of the American Polity* Princeton University Press.

"Does Bicameralism Matter?" (with Michael Cutrone). 2006. Donald Wittman and Barry Weingast eds. *Handbook of Political Economy*.

"Models of Vetoes and Veto Bargaining," (with Charles Cameron). 2005. *Annual Review of Political Science* 7:409-435.

"Bureaucratic Capacity and Legislative Output," (with John Huber). 2006. *The Macropolitics of Congress*. eds. E. Scott Adler and John Lapinski.

"Hitting the Ground Running: The Timing of Presidential Appointments in Transition," (with Rose Razaghian) in *Presidential Power: Forging the Presidency for the 21st Century.* eds. Martha Joynt Kumar, Robert Y. Shapiro, and Lawrence R. Jacobs. New York: Columbia University Press.

"Congress and the Territorial Expansion of the United States" (with Keith Poole and Howard Rosenthal) in *New Directions in Studying the History of the U.S. Congress*. eds. David Brady and Mathew McCubbins. Stanford: Stanford University Press.

Reviews and Comments

"The Political Roots of Inequality." *The American Interest*. 2013. Summer (May/June):68-74.

Review of Cass Sunstein *Going To Extremes: How Like Minds Unite and Divide.* 2011. *Political Science Quarterly*. 126(2):328-329.

"The Limits of Electoral and Legislative Reform in Addressing Polarization." 2011. *University of California Law Review* 99:359-372.

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Review of Benjamin Page and Lawrence Jacobs *Class Wars: What Americans Really Think About Economic Inequality.* 2010. *The Forum* 8(2): article 10

Review of Sean Theriault *Party Polarization in Congress*. 2009. *Political Science Quarterly* 124(3):551-552.

Review of Barbara Sinclair *Party Wars: Polarization and the Politics of National Policymaking*. 2007. *Political Science Quarterly* 122(1):159-150.

"Congressional Studies and Political Economy" *The Political Economist* Volume XIII, Issue 3 Fall 2006.

Comment on Melissa Cully Anderson and Nathanial Persily "Regulating Democracy Through Democracy: The Use of Direct Legislation in Election Law Reform." 2005. *University of Southern California Law Review* 78(4):1035-1040.

Review of Keith L. Dougherty *Collective Action under the Articles of Confederation*, 2002. *Political Science Quarterly* 117(1):173-174.

Review of Patricia Heidotting Conley *Presidential Mandates: How Elections Shape the National Agenda*. 2001. *Presidential Studies Quarterly,* p. 747-749.

Opinion Pieces

 "Hate Our Polarized Politics? Why You Can't Blame Gerrymandering." *Washington Post* October 26, 2012. http://articles.washingtonpost.com/2012-10-26/opinions/35500270_1_polarization-districts-independent-voters

"The Price of Principle" *Huffington Post* July 20, 2010. (with Keith Poole, Thomas Romer, and Howard Rosenthal).

"McCain for President?: A Liberal Conservative Oscillation Cements His Maverick Reputation." *San Diego Union Tribune* August 31, 2008 (with Keith Poole and Howard Rosenthal) http://www.signonsandiego.com/uniontrib/20080831/news_lz1e31mccarty.html

"Obama for President?: Moderate and independent voters still must be convinced" *San Diego Union Tribune* August 24, 2008 (with Keith Poole and Howard Rosenthal) http://ww.signonsandiego.com/uniontrib/20080824/news_lz1e24obama.html

"Neither Candidate Likely to Reduce Rancor" *Politico,* July 24, 2008 (with Keith Poole and Howard Rosenthal) http://www.politico.com/news/stories/0708/12013.html

Blog: http://nolanmccarty.com

Occasional contributor: http://themonkeycage.org

Other Work in Progress

"Regular Order in Appropriations: Does It Matter?"

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"Regulation and Self-Regulation of a Complex Industry."

"Welfare and Paternalism" (with Stu Jordan).

"Methodological Issues in Bridging Ideal Points" (with Boris Shor and Chris Berry).

"Voting, Income Inequality, and Polarization" (with Jonas Pontusson and Teppei Yamamoto).

Courses Taught

Doctoral Level

Bureaucratic Politics. Princeton University.
Analysis of American Political Institutions. Princeton University.
Democratic Processes. Columbia University
Political Methodology Sequence. Columbia University
Colloquium on Political Organizations and Interest Groups. Columbia University
Research Controversies in American Politics. Columbia University
Mathematics for Political Science. Columbia University
The Politics of Inequality in the U.S. and Western Europe. Princeton University
Game Theory and Political Theory. Columbia University
Formal Theory I. Princeton University.

Master's Level

Legislative Politics. Princeton University. (Spring 2003)
Advanced Econometrics and Public Policy. (Spring 2003)
Business, Government, and Society. University of Southern California
Business and Its Nonmarket Environment. University of Southern California

Undergraduate

Democracy. Princeton University.
Polarized America: Polarization, Inequality and the Future of American Politics.
        Princeton University.
American Politics. Princeton University.
The Development of American Political Institutions. Princeton University.
The Politics of Reform. Columbia University
Decline of the American Party System? Columbia University
Introduction to American Government and Politics. Columbia University
Public Finance. Carnegie Mellon University

Professional Activities

Conference Participation

American Economic Association (2002)

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American Political Science Association (various years)
Challenges in Political Economy, Harvard University (2002)
Comparative Political Economy Workshop, Harvard (2006)
Designing Democratic Institutions, LSE (2008)
Eric M. Mindich Encounter with Authors, Center for Basic Research in the Social
        Sciences, Harvard University (2005) (for *Polarized America*)
Encounter with the Authors, Center for Basic Research in the Social Sciences, Harvard
        University (1999) (participant)
Emory University Conference on Institutions and Law-Making (2013)
European Political Science Association (2011-2013)
History and Congress Conference, Columbia University (2001,2002)
History and Congress Conference, Berkeley (2010)
History and Congress Conference, Brown University (2011)
History and Congress Conference, Stanford University (1999,2004)
History and Congress Conference, University of Georgia (2012)
Impact of Direct Democracy, University of Southern California and University of
        California at Irvine (2005)
IGIER/PIER Conference on Political Economics, University of Pennsylvania (2002)
Macro-Politics of Congress, University of Colorado (2001)
Midwest Political Science Association (various years)
National Bureau of Economic Research Summer Institute (2011)
Northeastern Political Science Association (2002)
Policy History Conference (2012)
Political Accountability Conference, Princeton University (2002)
Political Institutions and Economic Policy, Harvard University (2002, 2012)
Political Institutions and Economic Policy, Princeton University (2013)
Public Choice World Congress Plenary Speaker (2012)
Public Choice Society (various years)
Priorat Workshop on Theoretical Political Science (2013)
Russell Sage Social Dimensions of Inequality Conference (2003)
Social Science History Association (1998)
Society for Political Methodology Summer Meetings (1997-1999)
Southern California Political Economy Association (1995)
Standing Group on Political Economy of the ECPR (2009)
Stanford Institute of Theoretical Economics (1995)
State of the Parties: 1996 and Beyond, Ray C. Bliss Institute for Applied Politics (1997)
University of George Elections Conference (2008, 2012)
Transformations of American Politics, Harvard University (2003,2004)
W. Allen Wallis Political Economy Conference, Rochester University (1996,2002)

Invited Workshops

Academia Sinica (Taiwan) (2013)
California Institute of Technology, Department of Humanities and Social Sciences (1992)
Center for the Advance Study in the Behavioral Sciences (2005)

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Columbia University, Department of Political Science (1994, 1996, 2009)
Harvard University, Department of Government (1998)
Harvard University, Center for American Political Studies (2006)
Hoover Institution, Stanford University (2000, 2005)
Instituto Tecnológico Autónomo de México (2002)
London School of Economics and Political Science (2009)
Michigan State University, Department of Political Science (2002)
New York University, Department of Politics (1998, 2001)
New York University, School of Law (2002)
Northwestern University, Department of Political Science (2003)
Northwestern University, Managerial Economics and Decision Sciences (2010)
Nuffield College, Oxford University (2009)
Ohio State University (1993, 2007)
Princeton University (1992, 1998, 2000)
Stanford University Graduate School of Business (1992,1994,1995,1999)
Stanford University Law School (2005)
Universidad Extranada de Bogota (2000)
University of California at Berkeley, Department of Political Science (2000,2004)
University of California at Berkeley, Goldman School (2007)
University of California at Los Angeles, Department of Political Science (1995,1999)
University of California at San Diego, Department of Political Science (2000)
University of Chicago, Department of Political Science (2005)
University of Essex, Department of Government (2009)
University of Essex, Political Economy (2009)
University of Georgia (2010)
University of Kentucky, Department of Political Science (2000)
University of Minnesota, Department of Political Science (2006)
University of Oregon, Department of Political Science (1996)
University of Pittsburgh, Department of Political Science (2007)
University of Rochester, Department of Political Science (1995,1996,1998,1999)
University of Southern California, Marshall School of Business (1993, 2000)
Washington University, Department of Political Science (1999)
Yale University, Department Political Science (1992, 2002)
Yale University School of Management (1993)

Referee Service

Academic Press, *American Economic Review*, *American Journal of Political Science*, *American Political Science Review, American Politics Quarterly, American Sociological Review,* Berkeley Electronic Press, *British Journal of Political Science, Business and Politics,* Cambridge University Press, Columbia University Press, *Comparative Political Studies, Economic Inquiry*, *Economics and Politics*, *Electoral Studies, European Economic Review, European Journal of Political Research, Governance, International Studies Quarterly, Journal of Economic Theory*, *Journal of Law and Economics, Journal of Law Economics and Organization, Journal of Institutional and Theoretical Economics, Journal of Political Economy, Journal of Politics, Journal of Public Economics, Journal*

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of Public Economic Theory, Journal of Human Capital, Journal of Theoretical Politics, *Legislative Studies Quarterly,* MIT Press, National Science Foundation, Oxford University Press, *Party Politics, Political Analysis, Political Behavior, Political Research Quarterly*, *Political Science Quarterly*, Princeton University Press, *Public Administration Review, Public Choice, Rand Journal of Economics, Review of Economics and Statistics,* Russell Sage Foundation Press*, Social Choice and Welfare, Social Problems,* University of Chicago Press, University of Michigan Press, *World Politics.*

Outside Professional Activities

Founding Editor-in-Chief, *Quarterly Journal of Political Science*
Council member, *Midwest Political Science Association* (2009-2012)
Editorial committee, *Annual Review of Political Science*
Executive committee, Section on Political Economy, American Political Science
     Association (2004-2007)
Chair, U.S. Subcommittee of APSA Taskforce on Negotiations.
Program co-chair, 2005 Midwest Political Science Association Meetings.
Editorial board, *Political Science Research and Methods*
Editorial Board, *American Journal of Political Science*
Editorial Board, *Legislative Studies Quarterly*
Section Head, Political Economy, American Political Science Association Conference,
     2002.
Instructor, *Political Game Theory*, European Consortium of Political Research Summer
     School, Ljubljana, Slovenia (2009 and 2010)
Instructor, National Science Foundation Program on Empirical Implications of
     Theoretical Models, University of Michigan (2006)
Instructor, National Science Foundation Program on Empirical Implications of
     Theoretical Models, Harvard University (2002)
Instructor, National Science Foundation Program on Empirical Implications of
     Theoretical Models, Washington University, St. Louis (2004, 2006)
Section Head, Parties and Interest Groups, Midwest Political Science Association, 2003.

Professional Memberships

American Political Science Association
Midwest Political Science Association
European Political Science Association

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