

Voting Equipment and Residual Votes on Ballot Initiatives: The 2006 Election in New Jersey

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February 28, 2007

All 21 counties in New Jersey switched to electronic voting machines (DREs) in recent years. Nineteen of the counties selected “full-face” DREs in which the entire ballot appears on the screen at once (in a layout that tends to mimic the old lever voting machines that used to be common in New Jersey). The other two counties (Salem and Sussex) chose “scrolling” DREs in which voter scrolls through the ballot with no more than one or two contests visible on the computer screen at one time.

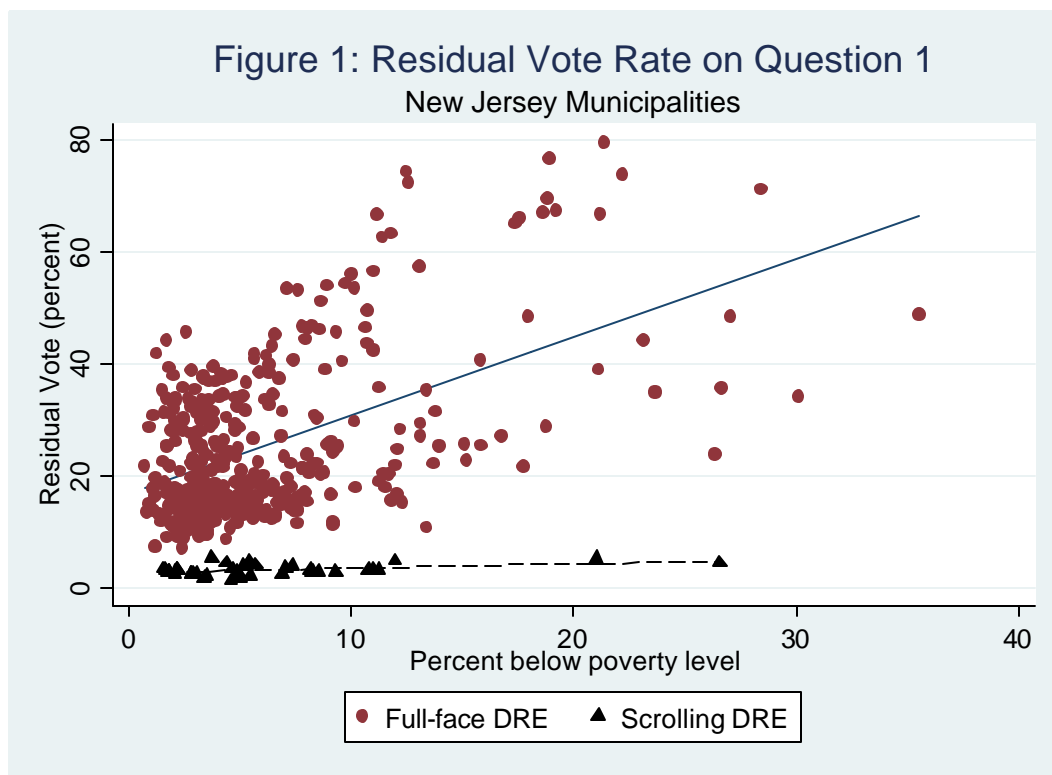
In the 2006 general election, there were four statewide contests on the ballot: (1) the U.S. Senate race between Robert Menendez and Tom Kean, Jr; (2) a constitutional amendment to allocate part of the state’s sales tax revenue to property tax relief; (3) a constitutional amendment to increase the proportion of state corporate tax revenues devoted to recreation and land conservation; and (4) a constitutional amendment to devote more of the state’s gas tax revenues to the transportation system. The three amendments were part of a tax reform package passed by the state legislature.

One study examining the 2004 election finds that residual votes seem to be more common on full-face DREs than on scrolling DREs, especially on ballot initiatives that tend to be placed near the bottom of the ballot (Kimball and Kropf 2006). The full-face ballot is more likely to overwhelm voters with information, leading some to fail to complete the entire ballot. In addition, on the full-face layout ballot initiatives tend to be placed in locations where voters are more likely to miss them. The data in Table 1 indicate a similar pattern in the 2006 general election in New Jersey. The residual vote rate on the three constitutional amendments was almost five times higher on full-face DREs than on scrolling DREs. The U.S. Senate race was expensive and competitive and garnered a lot of media attention, which tends to mitigate the effects of voting equipment and ballot design on residual votes. Nevertheless, the residual vote rate in the Senate contest was still more than one percentage point higher on the full-face DREs than on the scrolling DREs.

Table 1
Residual Vote Rates on in New Jersey by Voting Equipment
2006 General Election

Contest	Residual vote rate on scrolling DREs	Residual vote rate on full-face DREs
U.S. Senate	1.4%	2.9%
Public Question 1	5.8%	28.4%
Public Question 2	6.1%	29.3%
Public Question 3	5.8%	29.8%

The following figures demonstrate an interaction between the voting equipment and the demographic profile of local communities. Figure 1 plots the residual vote rate for the first constitutional amendment for municipalities in New Jersey with at least 50 voters. [Note: I am still waiting on municipal election returns from four counties that used full-face DREs, so the data in the figures below are somewhat incomplete. However, I don't expect the patterns to change much when all data are available.] In municipalities using scrolling DREs (the triangles in Figure 1), residual vote rates are relatively low and unrelated to a municipality's poverty level. In contrast, the residual vote rate is considerably higher in municipalities using full-face DREs (the circles in Figure 1) and tends to fall disproportionately on poor communities. Note how high the numbers go on the vertical axis: in some municipalities using full-face DREs more than half of the voters failed to cast a valid vote on the constitutional amendment.



A similar pattern holds when comparing the ethnic and racial composition of communities. As Figure 2 indicates, in municipalities with full-face DREs, the highest residual vote rates tend to occur in places with high concentrations of Hispanic voters. As Figure 3 shows, high residual vote rates on full-face DREs tend to occur in municipalities with high percentages of African-Americans. By comparison, the residual vote rate in municipalities using scrolling DREs does not appear to increase in places with large concentrations of African-Americans.

The same patterns in the first three figures also appear when examining the other two constitutional amendments on the ballot in New Jersey in 2006. All three amendments passed comfortably, with the “Yes” side gathering at least 59% of the vote in each contest. However, it is probably fair to conclude that the people who voted on the three amendments were not representative of all New Jersey voters in 2006 (at least in terms of income, race, and ethnicity).

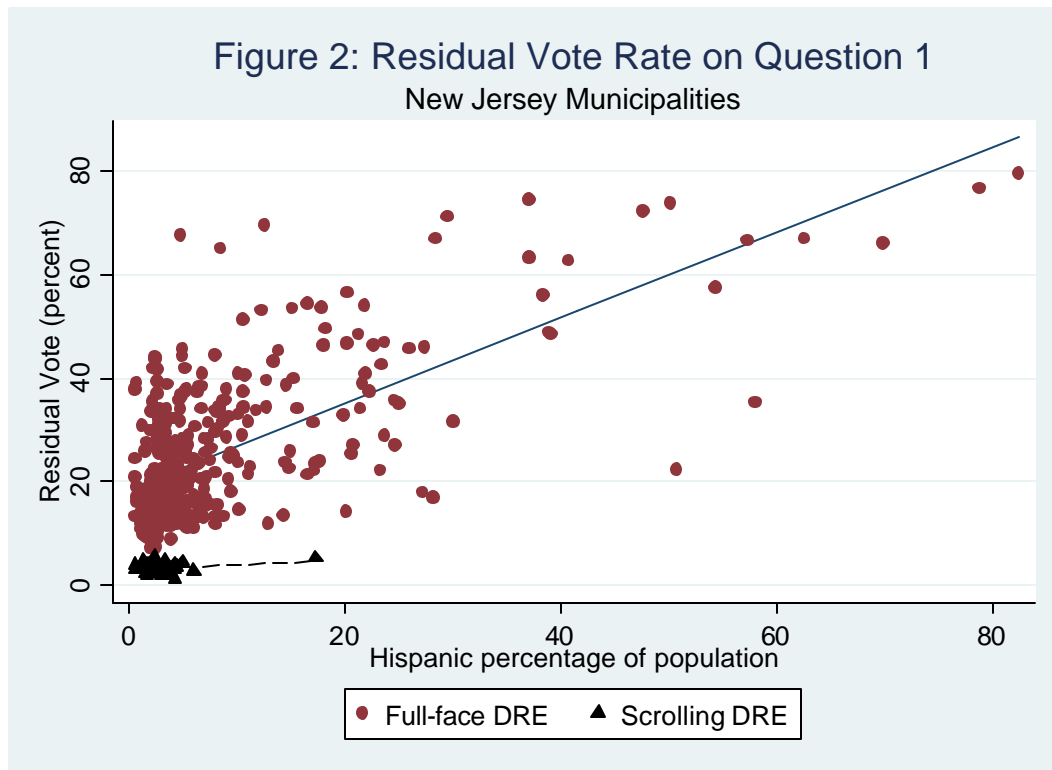
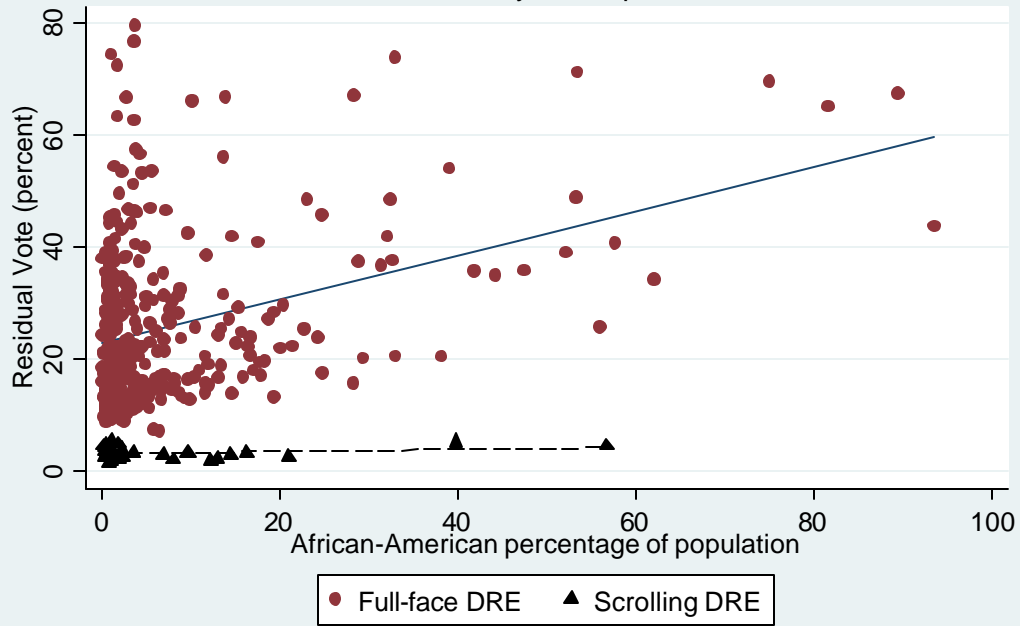


Figure 3: Residual Vote Rate on Question 1
New Jersey Municipalities



References

Kimball, David C., and Martha Kropf. 2006. "Ballot Initiatives and Residual Ballots in the 2004 Presidential Election." Paper presented at the annual meeting of the Southern Political Science Association, Atlanta, January 2006.