

Voting Patterns By Race in Allegheny County, 1999-2000

**A report prepared by
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1. Introduction:

I was retained to conduct an analysis of current voting patterns by race in Allegheny County. The nature of secret ballots prevents any form of individual level data that could be used to breakdown racial patterns in election results. For this reason statistical techniques are needed to infer individual behavior. The primary techniques used here include homogeneous voting district analysis and ecological regression. These techniques are used to estimate the voting behavior of separate racial groups in the population from voting district level election results matched to demographic data for the same set of districts. Homogeneous voting district analysis compares the voting results from groups of voting districts, which are clearly distinct in terms of racial composition of the population. This report will break down the results for voting districts, which are measured from census data to be 90% or greater African American and compare those results to the group of districts which have 10% or fewer African Americans. Ecological Regression is a more comprehensive statistical technique that is often used to determine the extent to which the voting patterns in a jurisdiction are polarized along racial lines. The programs used primarily in this analysis were SAS V. 8.0 for statistical analysis including regressions. Additional software used to prepare data for the statistical analysis and present results includes Microsoft Excel.

2. Credentials

My expertise for this report derives from my work as a staff economist with a particular research focus on the Pittsburgh region. At the University Center for Social and Urban Research at the University of Pittsburgh (“UCSUR”), I am a staff economist and responsible for econometric modeling of the Pittsburgh regional economy. I am also liaison to the Pennsylvania State Data Center (“PaSDC”) as part of UCSUR’s role as a research affiliate of the PaSDC. My work includes analysis of regional demographics and the Pittsburgh regional economy and forecasting trends in both fields. My curricula vita is included as section 15 of this report.

3. Data

The data used in this analysis come from two primary sources. Information on the demographics of individual voting districts in Allegheny County comes from the 2001 Pennsylvania Legislative Reapportionment Commission (“PLRC”), which has an office in Harrisburg, Pennsylvania¹. The PLRC is the mandated body responsible for reapportionment of Pennsylvania State General Assembly and Senate Districts. Their data includes demographic data for voting districts including racial breakdowns of the population. The data produced by the PLRC is an adjusted version of data the U.S. Census Bureau is mandated to produce as part of Public Law 94-171 to aide in political reapportionment. The Census and PLRC produced data both show the breakdown by major racial group of the population within each voting district in the county. Also included in the data is a breakdown by 2 major age groups of the population: the population age 18 and over, the voting age population (“VAP”) and the population under age 18. For the analysis described in this report, the proportion African-American is defined as the ratio of the population age 18 and over who also describe themselves as being African American and do not describe themselves as also belonging to any other racial groups to the total population age 18 and over.

Election results for individual voting districts were compiled from the Allegheny County Department of Elections via their home page on the World Wide Web².

4. Methodology:

Homogeneous Voting district Analysis

A simple method for estimating voting behavior by race is to examine "homogeneous" voting district within Allegheny County. In a voting district that is entirely of one race, all of the votes cast in that voting district can be attributed to that racial group. For example, if there is a voting district with only African American residents and voters in that voting district cast 80 percent of their ballots for the African American candidate and 20 percent for the non-African American candidate in a given election, then we know that 80 percent of the African American voters voted for the African American candidate. It is not often the case that voting districts are composed entirely of one race. For this reason, voting districts are generally considered homogeneous if over 90 percent of the voting age population residing in the voting district is members of the same racial group. After identifying voting districts that are overwhelmingly one-race, the level of participation and the votes cast for different candidates in the voting district or a group of voting districts where all of the voters are white are compared to voting districts in which all or almost all of the voters are members of a specific minority group. The figures derived from these homogeneous voting districts serve as estimates of the behavior of all the respective group members in that political jurisdiction. A limitation for

¹ 2001 Pennsylvania Legislative Reapportionment Committee Information: Senate Box 203079, State Capital, Harrisburg, PA 17120-3079, phone: 717-705 9906. Executive Director: Charles O'Connor Jr.

² <http://www.county.allegheny.pa.us/elect/index.asp>

homogeneous voting district analysis is that it cannot always be used, especially when there do not exist voting districts with high concentrations of particular racial groups. In many political jurisdictions there may be an absence of voting districts that can be considered homogeneous. A second disadvantage of homogeneous voting district analysis is that estimates are normally based on a small, possibly unrepresentative sample of the electorate: only the behavior of the voters (or potential voters) residing in homogeneous areas is examined. The electoral behavior of those residing in heterogeneous, or more "integrated" areas is ignored. It is possible that voters who do not live in racially homogeneous voting districts vote differently than voters who live in segregated areas. In most political jurisdictions, however, only a small percentage of the voting districts will be homogeneous.

Ecological Regression Analysis

A standard method for determining voter behavior, bivariate ecological regression analysis, is used to determine the behavior of groups when only aggregate data is available. The adjective "ecological" refers to the type of data employed in the analysis. When the data reflects aggregates of individuals, such as voting districts, rather than observations of separate individuals, the analysis is called "ecological." The technique is called "bivariate" ecological regression analysis because only two variables are used: the racial composition of the voting districts and the votes cast for particular candidates. The first step of the regression analysis is to plot points on a graph. The horizontal, or X axis, of the graph represents the percentage minority population in each voting district (the independent variable) and the vertical axis, or the Y axis, represents the percentage of voters in each voting district casting ballots for a given candidate (the dependent variable). Every voting district in the jurisdiction is placed within the graph (called a scattergram or scatterplot) according to its scores on these two coordinates.

Regression analysis provides a statistical means of describing and summarizing the relationship depicted on the graph between the two variables by calculating the formula for the line that best fits these data points. The "regression line" is the straight line that fits the points the "best," meaning no other straight line could be drawn such that the combined distances (or deviations) between each of these points and the line would be less than they are for this regression line. It is possible to use the regression line to provide estimates of, for example, the percentages of African-Americans and white voters supporting any given candidate. These estimates are based on the "intercept," the point at which the line crosses the Y axis, and the "slope." The intercept is the point at which X (percent African American) = 0, that is, the point at which there are no African Americans in a voting district. The value of Y (votes for a given candidate) at this point represents the percent of non-African Americans that supported the candidate.

The slope coefficient indicates how much the support for a given candidate varies with the racial composition of the voting district - that is, the extent the scores for a dependent variable can be expected to change in response to changes in the scores for an independent variable.

The other point that is of interest to us is the point at which $X = 100$, that is, the point at which 100% of the voting district is African American. The value of Y at this point will be our estimate of the percentage of African Americans that supported the candidate being considered. We find the value of the "right intercept" by adding the "left intercept" to 100 times the slope of the line.

One way of measuring just how well the line fits the points is the correlation coefficient. The correlation coefficient, which is reported as " r ," is a measure of how consistently the scores for the dependent variable (the percentage of voters supporting a given candidate) vary with the independent variable (the African American proportion). As such the coefficient is a measure of the degree of linear association between the variables; it indicates the extent to which data points fall on a straight line. The correlation coefficient varies in size from 0 to 1.0: the closer the points fall to the line, the closer r is to 1.0 and, conversely, the greater the distance the points are from the line (i.e., the less linear the relationship), the closer the value of r will be to 0. When r is 0, there is no relationship between the variables; the points on the scattergram form a vague cloud. When r is 1.0, the relationship is perfect, all the points fall on a perfect straight line. Correlation coefficients will be either positive or negative. If the percentage of voters supporting a candidate in the various voting districts increase as the African American population in these voting districts increases, then there is a positive relationship between the two variables. (A positive correlation coefficient indicates that the relationship is a direct linear relationship: as the percentage African Americans increases, the percentage of votes cast for a given candidate also increases.) If the percentage of voters supporting a candidate tends to decrease as the African American percentage of the population increases, then the relationship is negative. (A negative correlation signifies an inverse linear relationship: the higher the percentage of African Americans in the voting district, the less votes that voting district cast for a given candidate.) Although a high value of r is a necessary prerequisite for us to have confidence in our estimates, it is important to recognize that high correlations are possible even though very few African Americans voted for the African American candidate. A high r merely indicates that the observed relationship between race and voting patterns is consistent across voting districts (and linear in nature).

Two-equation Technique for Estimating Voting Behavior by Race

The method described above for producing estimates of voting behavior by race is actually a simplified example of the analysis conducted in this case. In the analysis described above, two different denominators for the variables plotted are used: the denominator of the independent variable (the racial composition of the voting district - i.e., percent African American voting age population) is total voting age population; the denominator of the dependent variable (percent of the vote received by a given candidate) is total votes cast. Doing the analysis using different denominators can result in erroneous estimates because this approach assumes that the turnout rates of minorities and whites are essentially identical.

The two-equation method produces two regressions and combining the results. The independent variable for both regressions is the African American percentage of the voting age population of the voting district. The dependent variable for the first regression is the percentage of the voting age population that cast a ballot for a given candidate, Candidate A. The dependent variable for the second regression is the percentage of the voting age population who cast a ballot for any of the other candidates other than Candidate A. The two equations would yield estimates of (a) the percentage of African American voting age population voting for Candidate A and (b) the percentage of African American voting age population voting for candidates other than Candidate A. The percentage of African American voters voting for Candidate A can then be calculated as (a) divided by (a) plus (b).

Voter Participation Analysis

Also included in this report is an analysis of patterns of voter participation by race for recent elections in Allegheny County. This analysis included primarily a scatterplot presentation of voter participation, defined as the percentage of the voting age population that cast a vote in each election, for each voting district. This scatterplot will present each voting districts rate of voter participation along with its racial composition. This visual tool will allow for a direct analysis of any divergences in the voter participation rate between racial groups in the population.

5. Elections Analyzed for this Report

Seven separate elections are analyzed here to determine the racial breakdown of voting patterns in the county. These include the following elections:

1. Allegheny County Recorder of Deeds – General Election November 2001
2. Allegheny County Prothonotary General Election November 2001.
3. Allegheny County Chief Executive – General Election November 1999.
4. Allegheny County Chief Executive – Democratic Primary Election November 1999.
5. Allegheny County Council District 13 – Democratic Primary Spring 2001.
6. City of Pittsburgh Mayor – Democratic Primary Spring 2001.
7. Allegheny County Court of Common Pleas – General Election November 1999

The elections for Allegheny County Recorder of Deeds and Allegheny County Prothonotary are both from the November 2001 General Election for Allegheny County.

Both of these positions are row offices in county government. They both also represent the only two open seats among county row office for that particular election cycle in that there was no incumbent running for either seat. Also included are both the Democratic Party primary and general election for the Allegheny County Chief Executive in 1999. Only the Democratic primary was included in this report. Pennsylvania conducts a 'closed' Primary in that only registered members of the Democratic or Republic Parties can vote and can only vote from among the candidates within each party. Comparison of demographic data to participation in primaries would indicate that the most of Allegheny County African Americans are registered as Democrats. The lack of African Americans in the Republican primary made a separate analysis of the Republican Party primary impossible. Also included in this analysis is the election for County Council District 13 from the Spring 2001 Primary Election. There was no incumbent running for this position. There was no Republican Primary due to the fact that there was no registered Republican Candidate and so only the Democratic primary was analyzed here. The Democratic primary for the Mayor of Pittsburgh from May 2001 is also included here for comparison because of its relatively high profile. This is the only non-county race included.

6. Results:

The ecological regression techniques used in this report allow for a breakdown of support for candidates within different racial groups. The results in the following table are a summary of the candidates supported by African American voters and non-African American voters along with the actual winners of each election.

In 3 of the 5 executive branch elections analyzed, the African American supported candidate won the election in which they were running. This group includes the 2001 General Election for Recorder of Wills, 2001 General Election for Prothonotary, and the 1999 Democratic primary for Allegheny County Chief Executive. The one legislative branch election studied was the 2001 Democratic Party primary Election for County Council District 13. In this election the African American candidate: Brenda Frazier, won without the majority support of non-African American voters in the district. In the election for the Democratic primary for the Mayor of the City of Pittsburgh the election here shows that African American voters split their vote to a degree indistinguishable from 50-50. Non-African Americans supported the winner of the election: Tom Murphy. 23.3% of the City of Pittsburgh voting age population is measured by the census to be African American. The size of the African American population and the closeness of the race would indicate that African American could have altered the result of the election if they have voted in a large majority for the other candidate: Bob O'Connor.³

Only in one race, the 2001 General Election for Allegheny County Chief Executive, was it determined that the candidate supported by a clear majority of African Americans lost the election. Detailed results for each of these races are included in sections 7 through 13 of this report.

In the three general elections studied, African Americans supported the Democratic candidate overwhelmingly -- 97.5% or more, as estimated from the ecological regression analysis. Within the Democratic Party primary, African Americans are significantly less unified. The Democratic Party for Mayor of Pittsburgh is a case in point where African American voters seem to have split their vote nearly equally between the major candidates. African American voters' support for winning candidates ranged from 50% to over 90%. Within the elections analyzed, race may be less of a determinant of support from African American voters than is party affiliation. African American candidates cannot be assured of the overwhelming support of their own race's voters in primaries: while Brenda Frazier received 70.8% and Kim Clark received 94.3% of the African American vote, Eugene Berry received significantly more support among non-African Americans as compared to African Americans (44.9% vs. 10.9%).

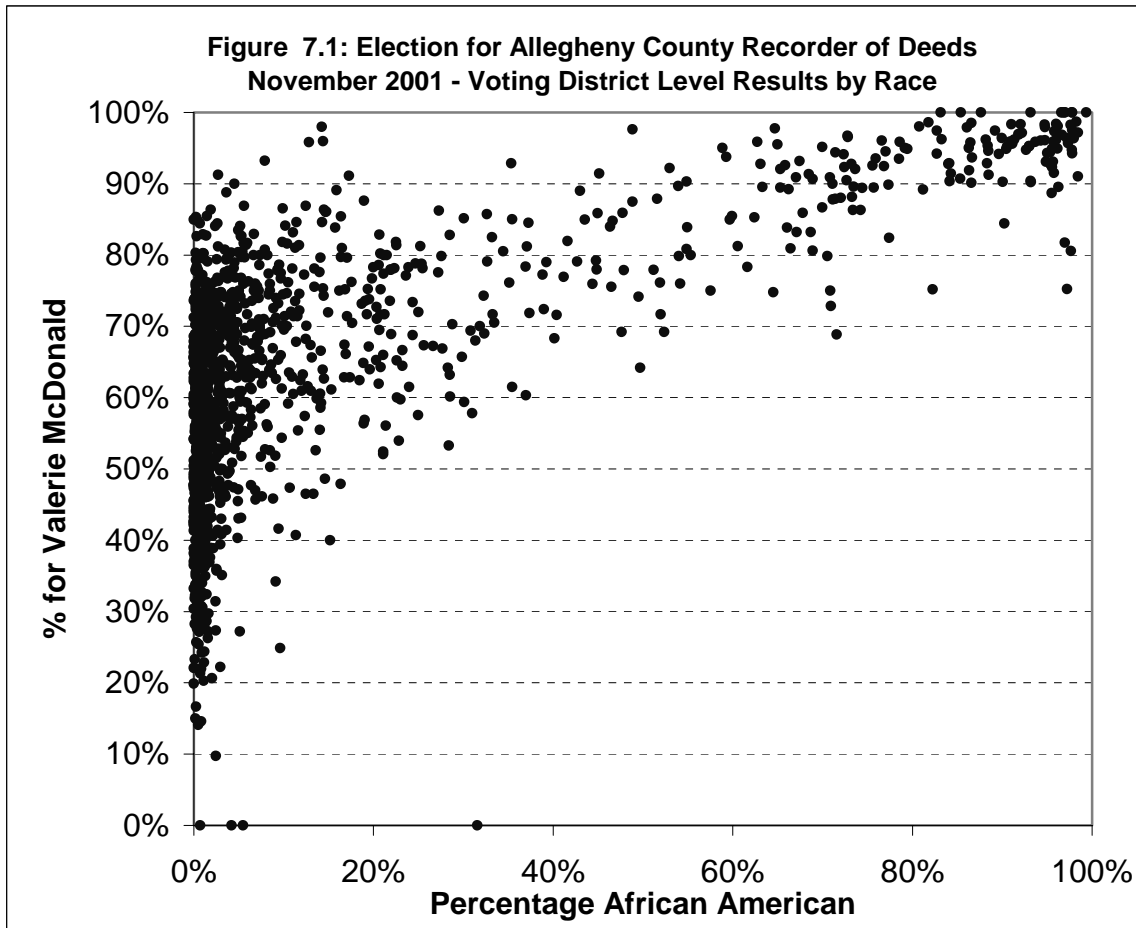
³ The ecological regression analysis shows that Tom Murphy was supported by non-African American voters by 53.7 to 46.3% or a 7.4% gap. With African Americans making up 23.3% of the Pittsburgh population, to offset this gap they would have had to vote with majority of 66% or greater for Bob O'Connor to change the result of the election.

Table 6.1 Summary of Ecological Regression Analysis: Voting Results by Race, Executive Branch Elections

	African American supported Candidate	Non-African American Supported Candidate	Winner	Groups supporting Winner
November 2001 General Election for Allegheny County Recorder of Deeds	Valerie McDonald	Valerie McDonald	Valerie McDonald	Both Groups
November 2001 General Election for Allegheny County Prothonotary	Michael Lamb	Michael Lamb	Michael Lamb	Both Groups
Spring 1999 Democratic Party Primary Election for Allegheny County Chief Executive	Wecht	Wecht	Wecht	Both Groups
November 1999 General Election for Allegheny County Chief Executive	Wecht	Roddey	Roddey	Non African Americans Only
Allegheny County Council District 13 Spring 2001 Democratic Party Primary	Frazier	Other Candidates	Frazier	African Americans Only
City of Pittsburgh Mayor May 2001 Democratic Party Primary	Split 50/50	Murphy	Murphy	Non-African Americans

7. Analysis of Election for Allegheny County Recorder of Deeds, November 2001

The November 2001 General Election for Allegheny County Recorder of Deeds had two candidates on the ballot. Valerie McDonald is an African American and was the endorsed Democratic party candidate. Becky Barrett-Toomey was the endorsed Republican Party candidate. Neither candidate was the incumbent officeholder. Valerie McDonald won the election and is the current Recorder of Deeds for Allegheny County. Figure 7.1 is a scatterplot that shows the results of this election. The figure breaks down the results for each voting district by the percentage voting for Valerie McDonald on the vertical axis along with the racial group demographics of each individual voting district, which is measured along the horizontal axis of the figure. Both the homogeneous district analysis and the ecological regression indicate that Valerie McDonald was supported by both a majority of the African American voters and a majority of the non-African American voters.



Homogeneous Voting district Analysis

Table 7.1 summarizes the results of the Homogeneous Voting district Analysis for the 2001 General Election for Allegheny County Recorder of Deeds.

Table 7.1 Election Results by Racial Grouped Voting Districts November 2001 General Election for Allegheny County Recorder of Deeds		
	Votes for McDonald (%)	Votes for Toomey (%)
Voting Districts 90% or more African-American	4,227 (95.6%)	196 (4.4%)
Voting Districts 10% or less African-American	95,247 (55.9%)	75,100 (44.1%)
All other voting districts	25,386 (76.3%)	7,867 (23.7%)

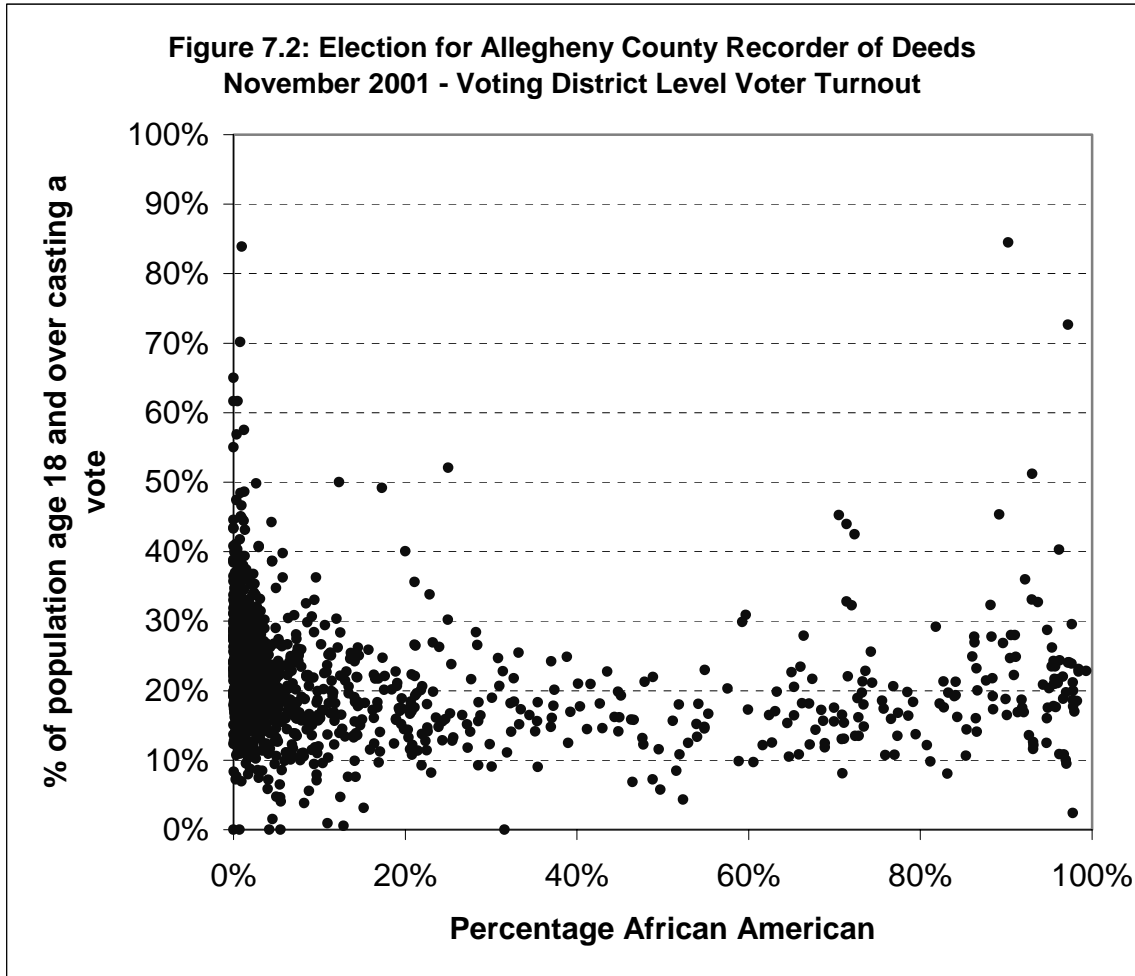
Ecological Regression Analysis

Table 7.2 is the voting pattern by racial group as estimated from ecological regression techniques.

Table 7.2. Voting Patterns by Racial Group Nov. 2001 General Election for Allegheny County Recorder of Deeds		
	Valerie McDonald	Becky Barrett- Toomey
African American Voters	100%	0%
Non African American Voters	58.0%	42.0%

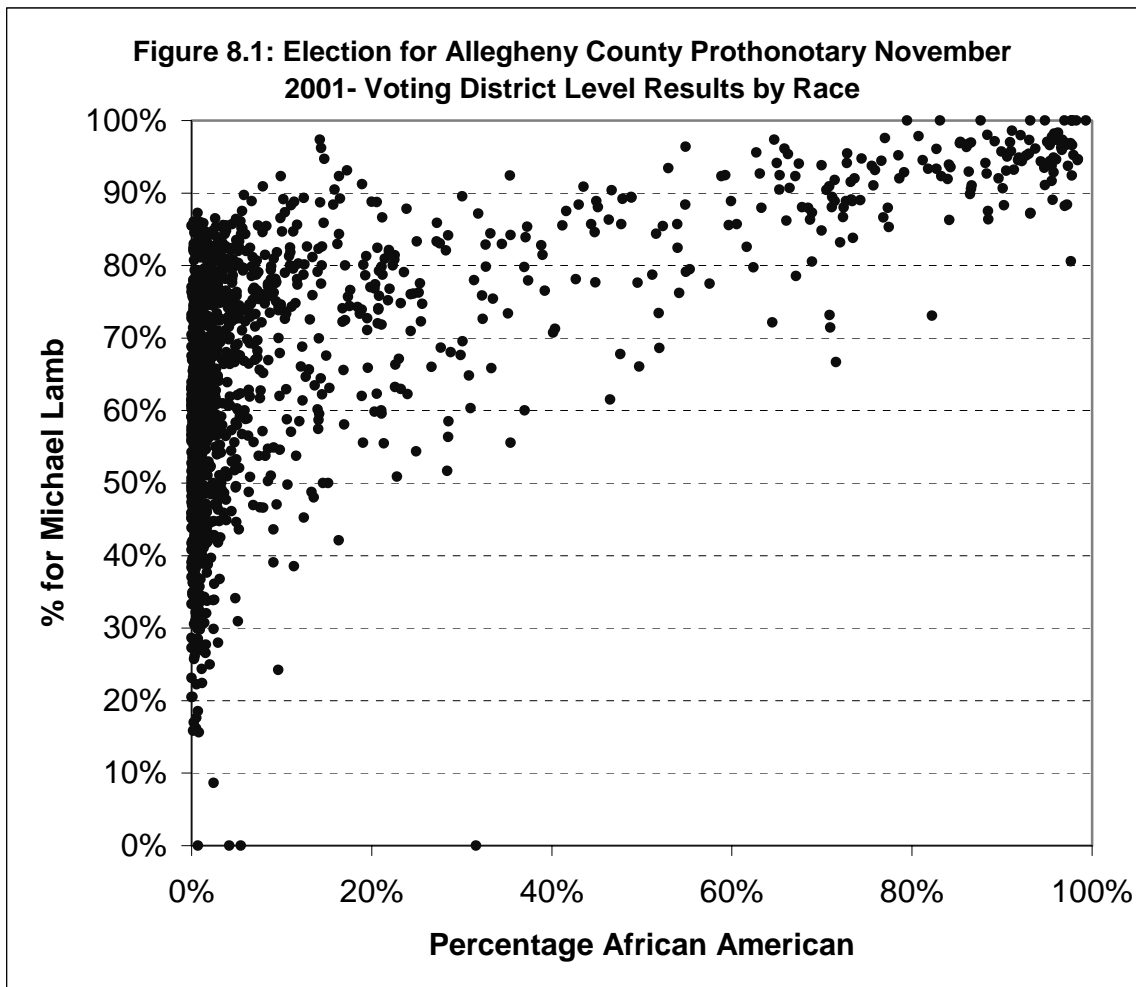
Voter participation analysis

Figure 7.2 is a scatterplot of voter participation for the November 2001 General Election for Allegheny County Recorder of Deeds. The figure breaks down the total number of votes cast in each voting district as a percentage of the total population age 18 and over, which is measured on the vertical axis, along with the racial group demographics of each individual voting district which is measured along the horizontal axis of the figure.



8. Analysis of Election for Allegheny County Prothonotary, November 2001

The November 2001 General Election for Allegheny County Prothonotary had two candidates on the ballot. Michael Lamb was the endorsed Democratic party candidate. Timothy Hoffman. Neither candidate was African American and neither candidate was the incumbent officeholder. Michael Lamb won the election and is the current Prothonotary for Allegheny County. Figure 8.1 is a scatterplot that shows the results of this election. The figure breaks down the results for each voting district by the percentage voting for Michael Lamb on the vertical axis along with the racial group demographics of each individual voting district, which is measured along the horizontal axis of the figure. Both the homogeneous district analysis and the ecological regression indicate that Michael Lamb was supported by both a majority of the African American voters and a majority of the non-African American voters.



Homogeneous Voting district Analysis

Table 8.1 summarizes the results of the Homogeneous Voting district Analysis for the 2001 General Election for Allegheny County Prothonotary.

Table 8.1 Election Results by Racial Grouped Voting Districts November 2001 General Election for Allegheny County Prothonotary		
	Votes for Lamb (%)	Votes for Hoffman (%)
Voting Districts 90% or more African-American	3176 (95.4%)	153 (4.6%)
Voting Districts 10% or less African-American	69,375 (41.4%)	98,302 (58.6%)
All other voting districts	6,793 (22.5%)	23,453 (77.5%)

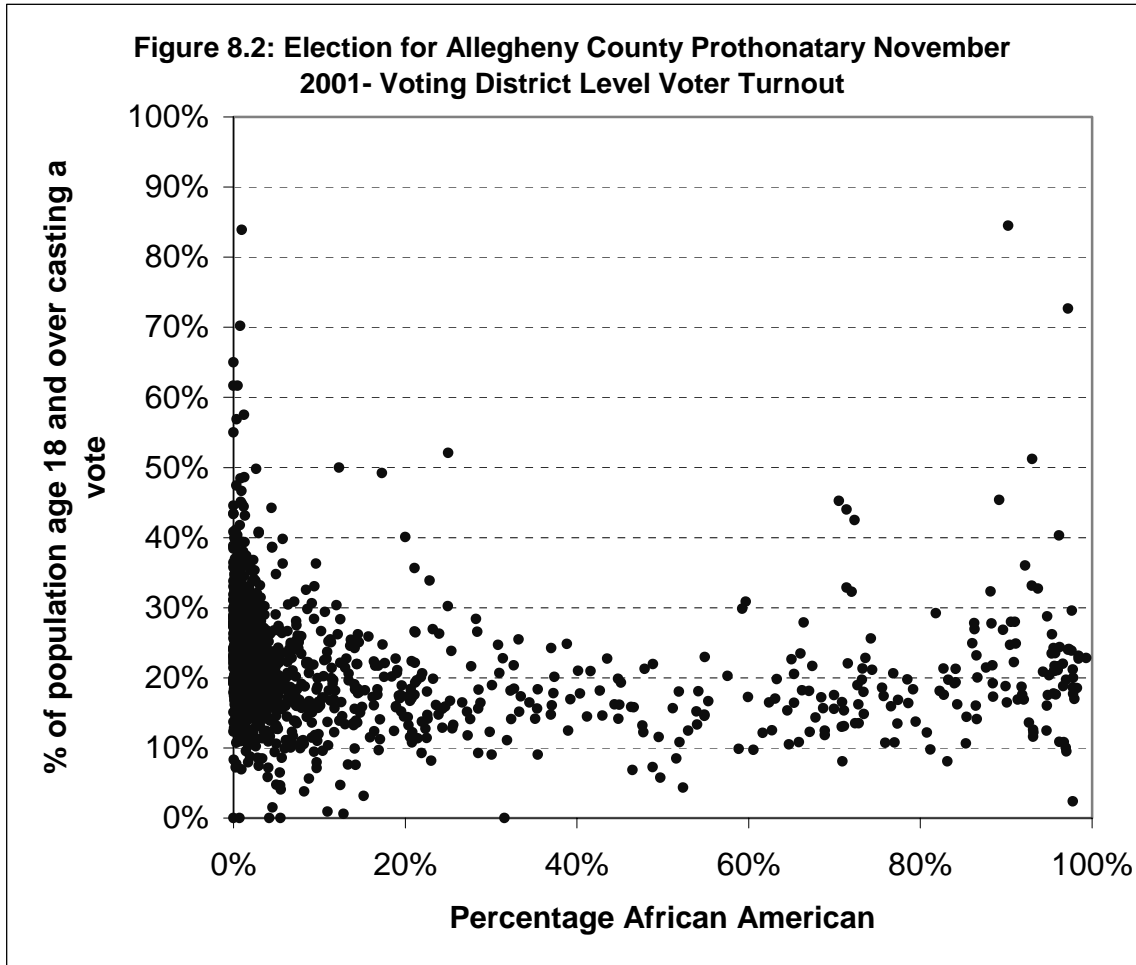
Ecological Regression Analysis

Table 8.2 is the voting pattern by racial group as estimated from ecological regression techniques.

Table 8.2: Voting Patterns from Ecological Regression Analysis November 2001 General Election for Allegheny County Prothonotary		
	Michael Lamb	Timothy Hoffman
African American Voters	100%	0%
Non African American Voters	60.6%	39.4%

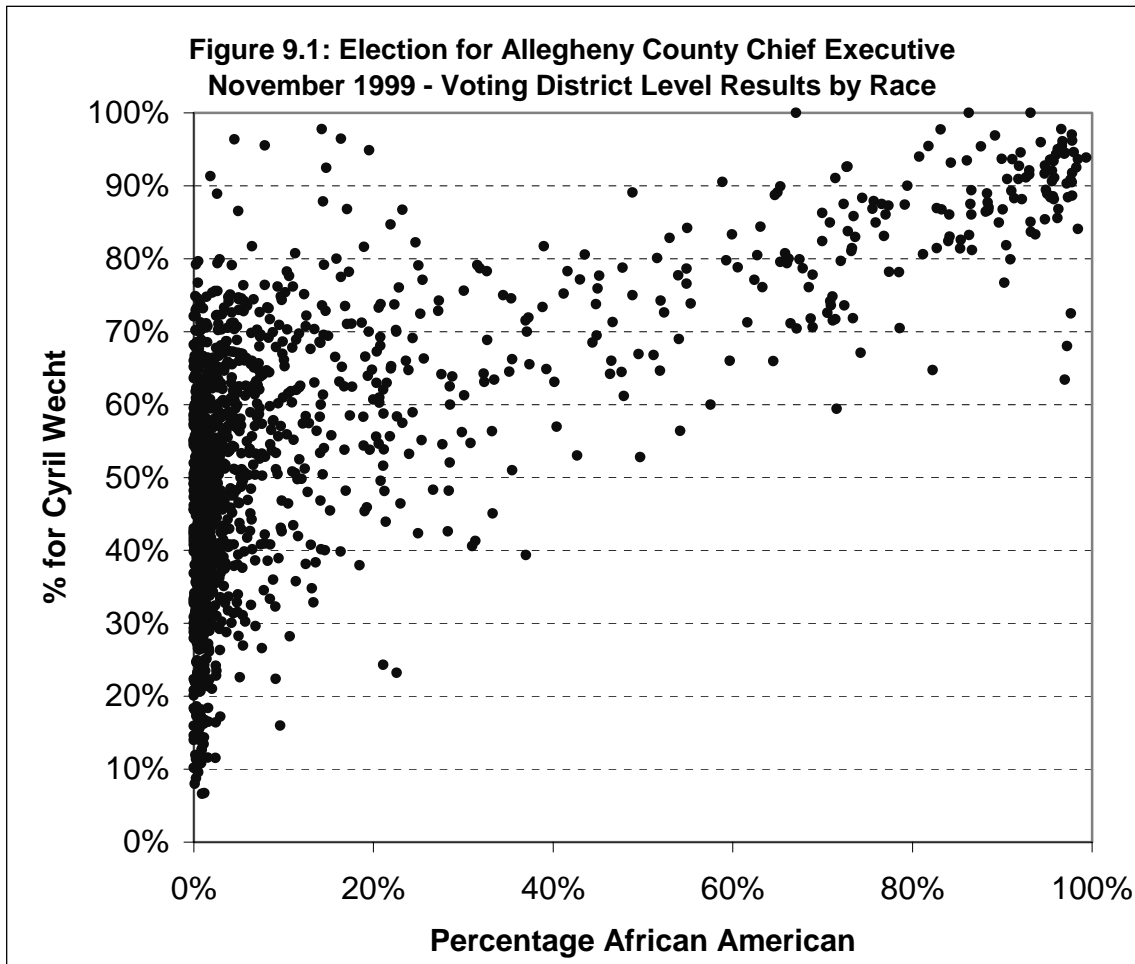
Voter Participation Analysis

Figure 8.2 is a scatterplot of voter participation for the November 2001 General Election for Allegheny County Prothonotary. The figure breaks down the total number of votes cast in each voting district as a percentage of the total population age 18 and over, which is measured on the vertical axis, along with the racial group demographics of each individual voting district which is measured along the horizontal axis of the figure.



9. Analysis of Election for Allegheny County Executive – November 1999

The November 1999 General Election for Allegheny County Chief Executive had two candidates on the ballot. Cyril Wecht was the endorsed Democratic party candidate. Jim Roddey was the endorsed Republican Party candidate. Neither candidate was the incumbent officeholder as the position of Chief Executive was a newly created position. Jim Roddey won the election and is the current Allegheny County Chief Executive. Figure 9.1 is a scatterplot that shows the results of this election. The figure breaks down the results for each voting district by the percentage voting for Cyril Wecht on the vertical axis along with the racial group demographics of each individual voting district which are measured along the horizontal axis of the figure.



Homogeneous Voting district Analysis

Table 9.1 summarizes the results of the Homogeneous Voting district Analysis for the 1999 General Election for Allegheny County Chief Executive.

Table 9.1 Election Results by Racial Grouped Voting Districts November 1999 General Election for Allegheny County Chief Executive		
	Votes for Wecht (%)	Votes for Roddey (%)
Voting Districts 90% or more African-American	8,410 (90.8%)	648 (9.2%)
Voting Districts 10% or less African-American	128,393 (44.6%)	159,218 (55.6%)
All other voting districts	37,149 (67.1%)	18,241 (32.9%)

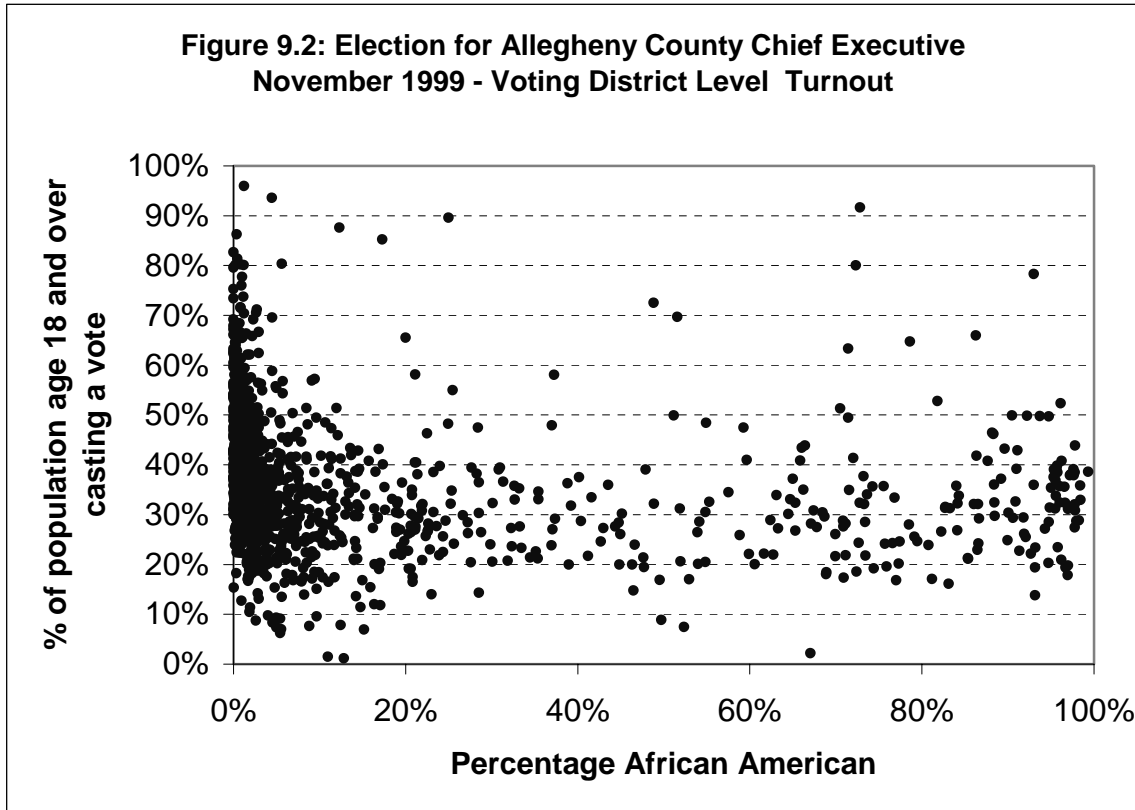
Ecological Regression Analysis

Table 9.2 is the voting pattern by racial group as estimated from ecological regression techniques.

Table 9.2: Voting Patterns from Ecological Regression Analysis November 1999 General Election for Allegheny County Chief Executive		
	Cyril Wecht	Jim Roddey
African American Voters	97.5%	2.5%
Non African American Voters	47.2%	52.8%

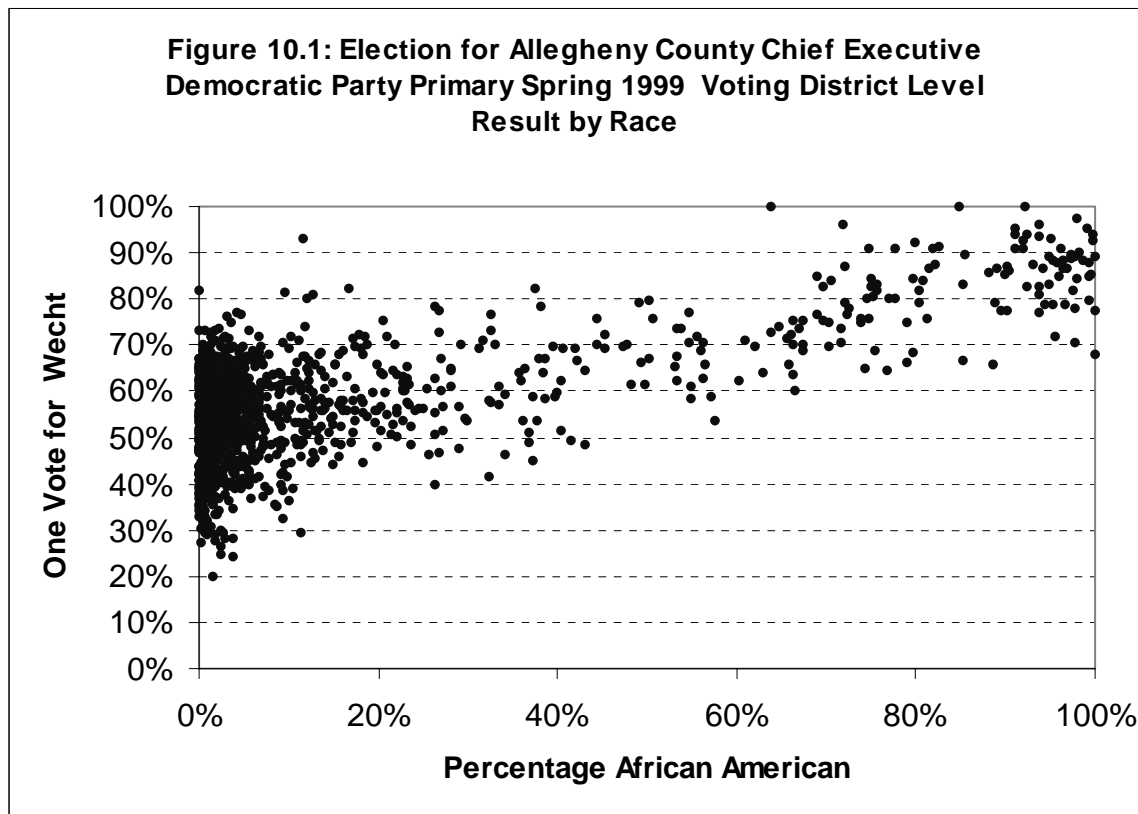
Voter Participation Analysis

Figure 9.2 is a scatterplot of voter participation for the November 1999 General Election for Allegheny County Chief Executive. The figure breaks down the total number of votes cast in each voting district as a percentage of the total population age 18 and over, which is measured on the vertical axis, along with the racial group demographics of each individual voting district which is measured along the horizontal axis of the figure.



10. Democratic Primary for County Executive – Spring 1999

The Spring 1999 Democratic Party Primary Election for Allegheny County Chief Executive had two candidates on the ballot. Michael Dawida and Cyril Wecht. Neither candidate was the incumbent officeholder as the office of Chief Executive was a newly created position. However Michael Dawida was one of three incumbents on the Allegheny County board of Commissioners, which was the executive branch of Allegheny County government to that point. Cyril Wecht won the election and was the Democratic nominee in the November general election for Allegheny County Chief Executive. Figure 10.1 is a scatterplot that shows the results of this election. The figure breaks down the results for each voting district by the percentage voting for Michael Dawida on the vertical axis along with the racial group demographics of each individual voting district, which is measured along the horizontal axis of the figure.



Homogeneous Voting district Analysis

Table 10.1 summarizes the results of the Homogeneous Voting district Analysis for the 2001 Democratic Party Primary Election for Allegheny County Chief Executive.

Table 10.1 Election Results by Racial Grouped Voting Districts Spring 1999 Democratic Party Primary Election for Allegheny County Chief Executive		
	Votes for Wecht (%)	Votes for Dawida (%)
Voting Districts 90% or more African-American	4,049 (86.4%)	638 (13.6%)
Voting Districts 10% or less African-American	72,749 (55.9)	63,865 (44.1)
All other voting districts	22,553 (65.8%)	11,744 (34.2%)

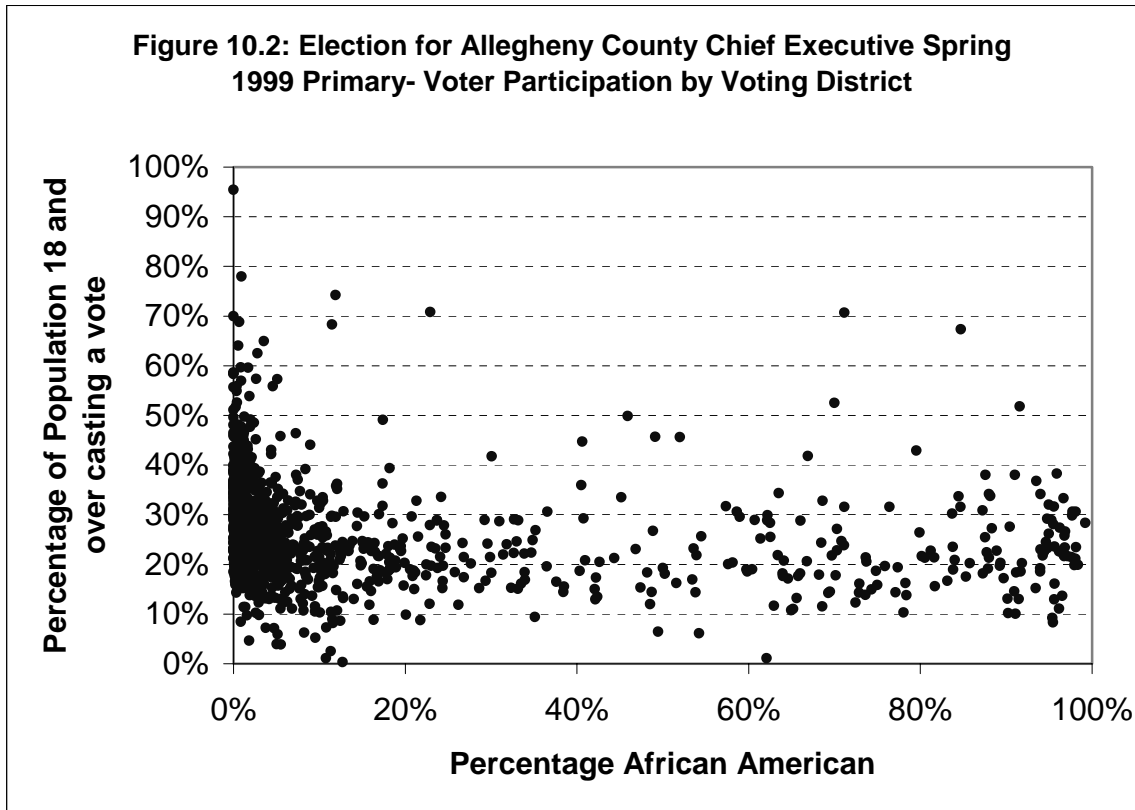
Ecological Regression Analysis

Table 10.2 is the voting pattern by racial group as estimated from ecological regression techniques.

Table 10.2: Voting Patterns from Ecological Regression Analysis. November 1999 Democratic Party Primary Election for Allegheny County Chief Executive		
	Mike Dawida	Cyril Wecht
African American Voters	11.0%	89.0%
Non African American Voters	47.6%	52.4%

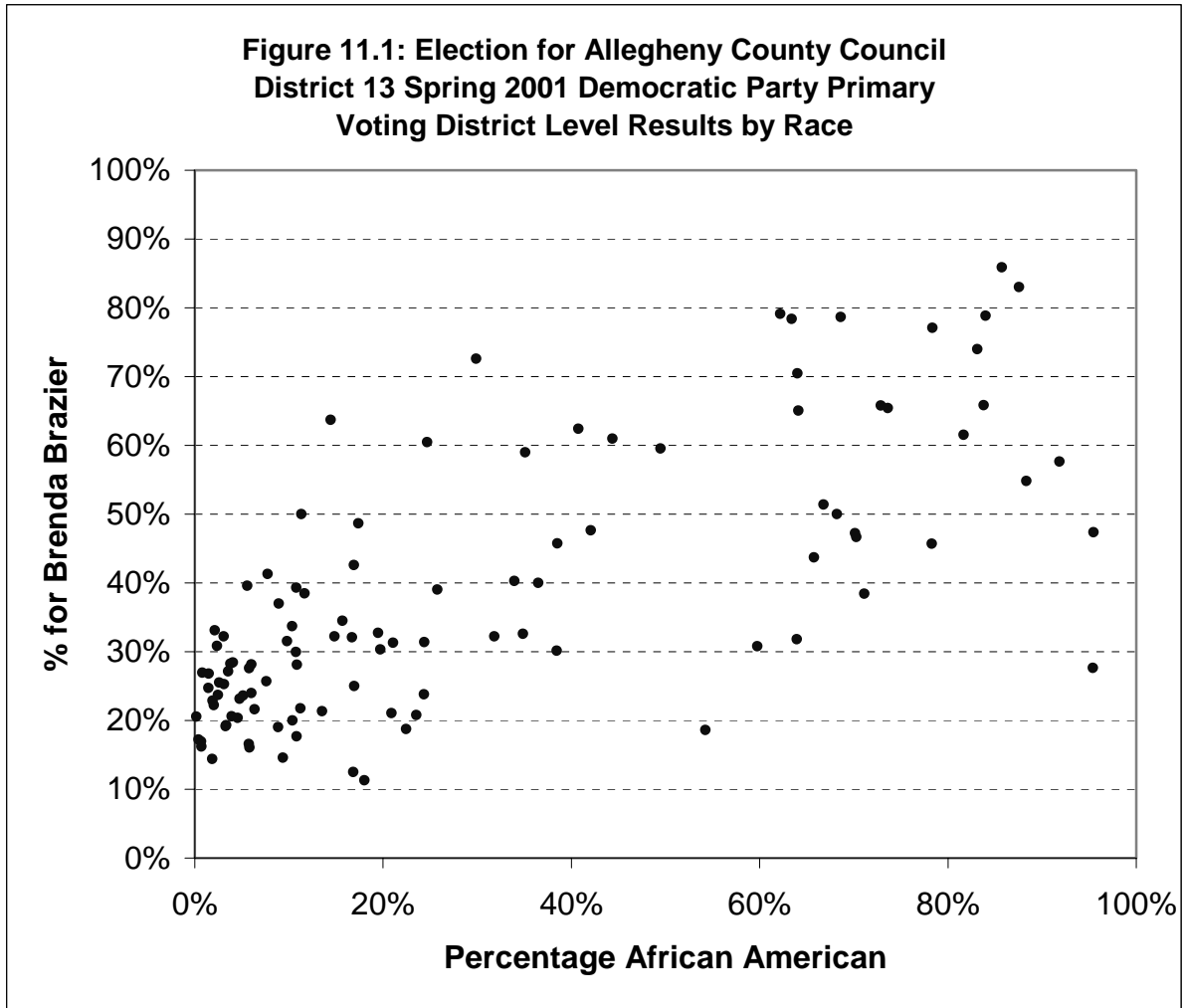
Voter Participation Analysis

Figure 10.2 is a scatterplot of voter participation for the Spring 1999 Primary Election for Allegheny County Chief Executive. The figure breaks down the total number of votes cast in each voting district as a percentage of the total population age 18 and over, which is measured on the vertical axis, along with the racial group demographics of each individual voting district which is measured along the horizontal axis of the figure. Note that this figure is for participation in either party primary, Democratic or Republican.



11. Allegheny County Council District 13, Spring 2001 Primary

The Spring 2001 Democratic Party Primary Election for Allegheny County Council District 13 had five candidates on the ballot. Brenda Frazier was one of the five candidates and is African American. Brenda Frazier won the election with a plurality and is currently serving as the Allegheny County Council District 13 representative. Figure 11.1 is a scatterplot that shows the results of this election. The figure breaks down the results for each voting district by the percentage voting for Brenda Frazier on the vertical axis along with the racial group demographics of each individual voting district, which is measured along the horizontal axis of the figure.



Homogeneous Voting district Analysis

Table 11.1 summarizes the results of the Homogeneous Voting district Analysis for the 2001 Primary Election for Allegheny County Council District 13.

Table 11.1 Election Results by Racial Grouped Voting Districts Spring 2001 Democratic Party Primary Election for Allegheny County Council District 13		
	Votes for Frazier (%)	Votes for other Candidates (%)
Voting Districts 90% or more African-American	82 (42.7%)	110 (57.3%)
Voting Districts 10% or less African-American	1,379 (24.9%)	4,161 (75.1%)
All other voting districts	3,494 (45.6%)	4,161 (54.4%)

Ecological Regression Analysis

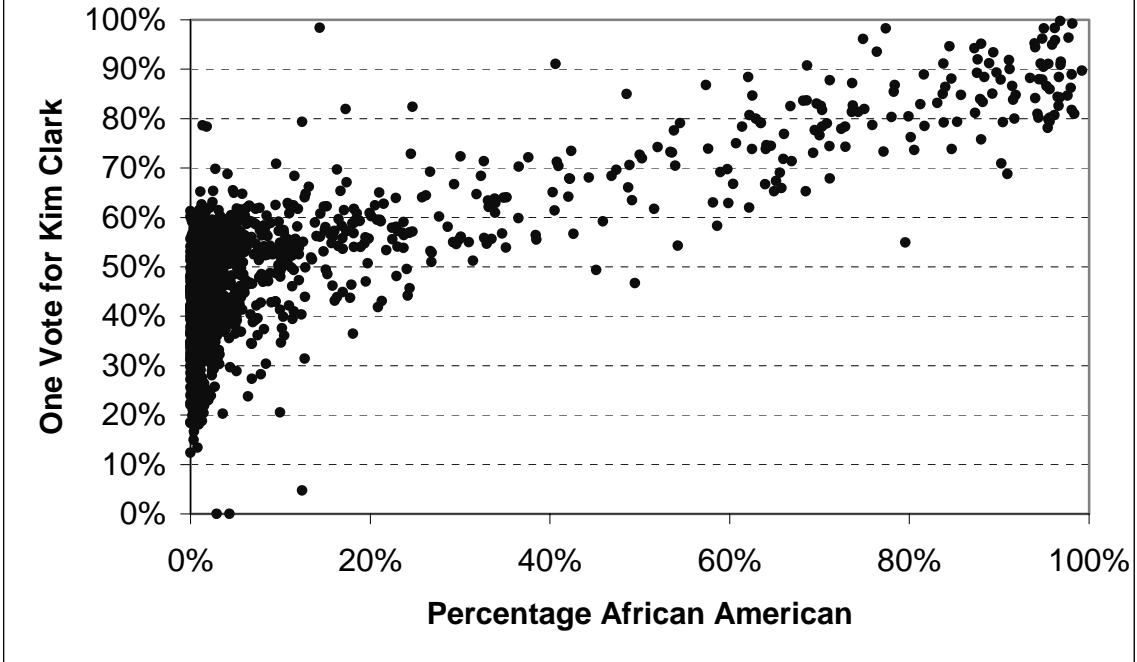
Table 11.2: Voting Patterns from Ecological Regression Analysis. Spring 2001 Democratic Party Primary Election for Allegheny County Council District 13		
	Brenda Frazier	Other Candidates
African American Voters	70.8%	29.2%
Non African American Voters	23.8%	76.2%

12. Analysis of Election for Allegheny County Court of Common Pleas November 1999 – Voting for Kim Clark

The November 1999 General Election for the Allegheny County Court of Common Pleas had 12 candidates on the ballot. Voters were asked to vote for up to 6 of the candidates for the 6 open seats at that time. Two of the candidates: Kim Clark and Eugene Berry were African American candidates. The analysis in this section is focused primarily on the voting patterns that can be assigned to these two candidates. Section 12 will focus on the voting patterns pertaining to Kim Clark while section 13 will look at the voting patterns pertaining to Eugene Berry. Figure 12.1 is a scatterplot that shows the results of this election. The figure breaks down the results for each voting district by the percentage voting for Kim Clark on the vertical axis along with the racial group demographics of each individual voting district, which is measured along the horizontal axis of the figure. It is important to note that because of the multi-candidate nature of this election, along with the lack of individual voting data, it is more difficult to break down the voting patterns for individual candidates. For this section and the section that follows, the results should be considered approximate. The raw election results were adjusted to account for the multiple votes that could be cast by each voter. It is assumed for the sake of this report that voters cast an equal number of votes for Common Pleas court candidates.⁴

⁴ From the 1999 General Election, a ratio of the total votes cast for all Court of Common Pleas candidates to the total votes cast for County Chief Executive was 4.42. This would imply that voters on average voted for less than the total of 6 candidates that they were allowed to vote for. This ratio was used to adjust election results for this section of this report. Where the ratio of votes cast for Court of Common Pleas varies across the county, some error may be introduced into the percentage breakdowns determined in this section.

**Figure 12.1: Election for Allegheny County Court of Common Pleas
November 1999 - Voting District Level Result by Race**



Homogeneous Voting district Analysis

Table 12.1 summarizes the results of the Homogeneous voting district analysis for the 1999 General Election for Allegheny County Court of Common Pleas as pertains to Kim Clark.

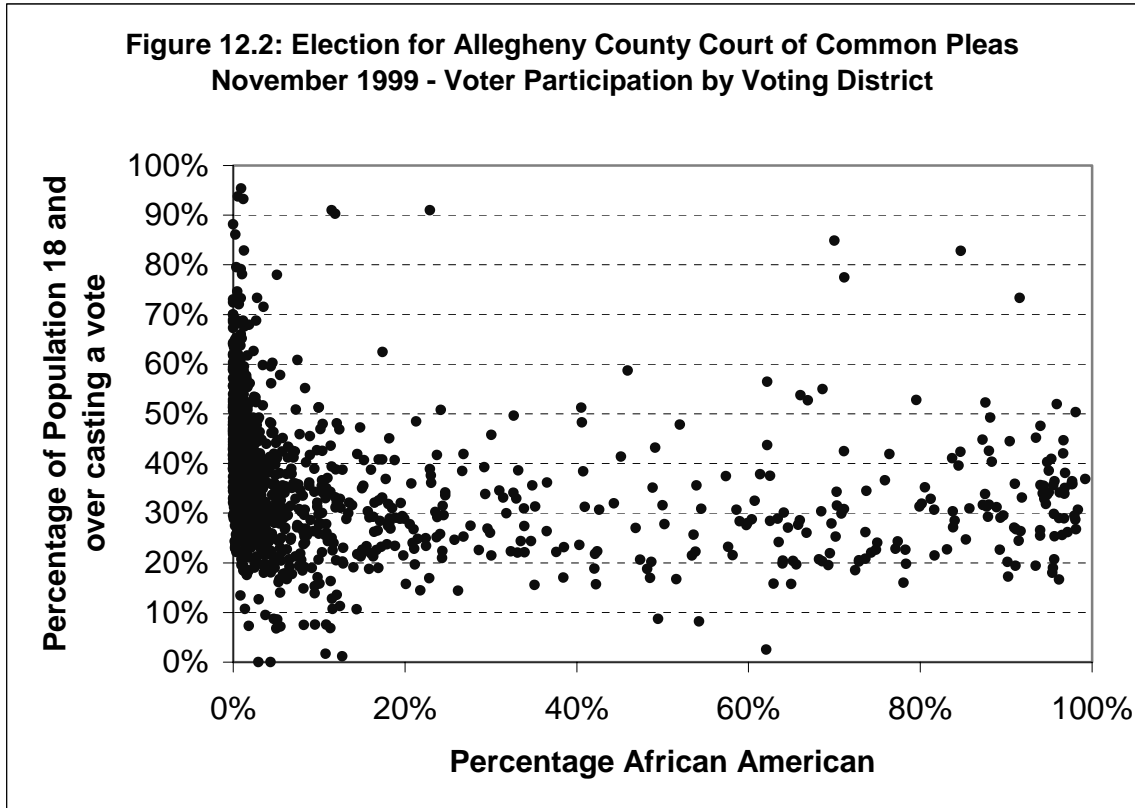
Table 12.1 Election Results by Racial Grouped Voting Districts November 2001 General Election for Allegheny County Court of Common Pleas		
	Vote for Clark (%)	No votes for Clark (%)
Voting Districts 90% or more African-American	6,186 (90.0)	679 (10.0)
Voting Districts 10% or less African-American	49,901 (37.3)	83,546 (62.7)
All other voting districts	52,026 (56.7%)	39,711 (43.3%)

Ecological Regression Analysis

Table 12.2: Voting Patterns from Ecological Regression Analysis. November 1999 General Election for Allegheny County Court of Common Pleas.		
	1 vote for an Kim Clark	No Votes for Kim Clark
African American Voters	94.3%	5.7%
Non African American Voters	42.6%	57.4%%

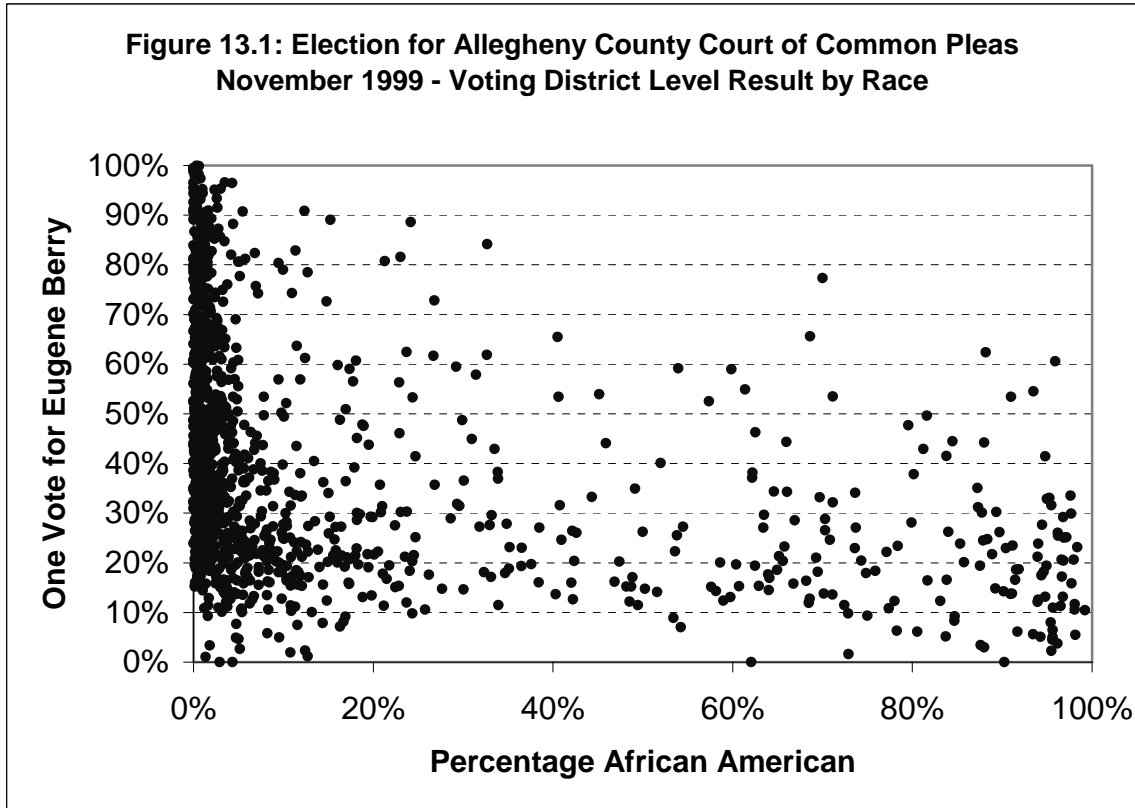
Voter Participation Analysis

Figure 12.2 is a scatterplot of voter participation for the November 1999 General Election for Allegheny County Court of Common Pleas. The figure breaks down the total number of votes cast in each voting district as a percentage of the total population age 18 and over, which is measured on the vertical axis, along with the racial group demographics of each individual voting district which is measured along the horizontal axis of the figure.



13. Analysis of Election for Allegheny County Court of Common Pleas November 1999 – Voting for Eugene Berry

See section 12 for a narrative explanation of the November 1999 election to the Court of Common Pleas for Allegheny County. Figure 13.1 is a scatterplot that shows the results of this election as it pertains to Eugene Berry. The figure breaks down the results for each voting district by the percentage voting for Eugene Berry on the vertical axis along with the racial group demographics of each individual voting district, which is measured along the horizontal axis of the figure.



Homogeneous Voting district Analysis

Table 13.1 summarizes the results of the Homogeneous Voting district Analysis for the 1999 General Election for Allegheny County Court of Common Pleas.

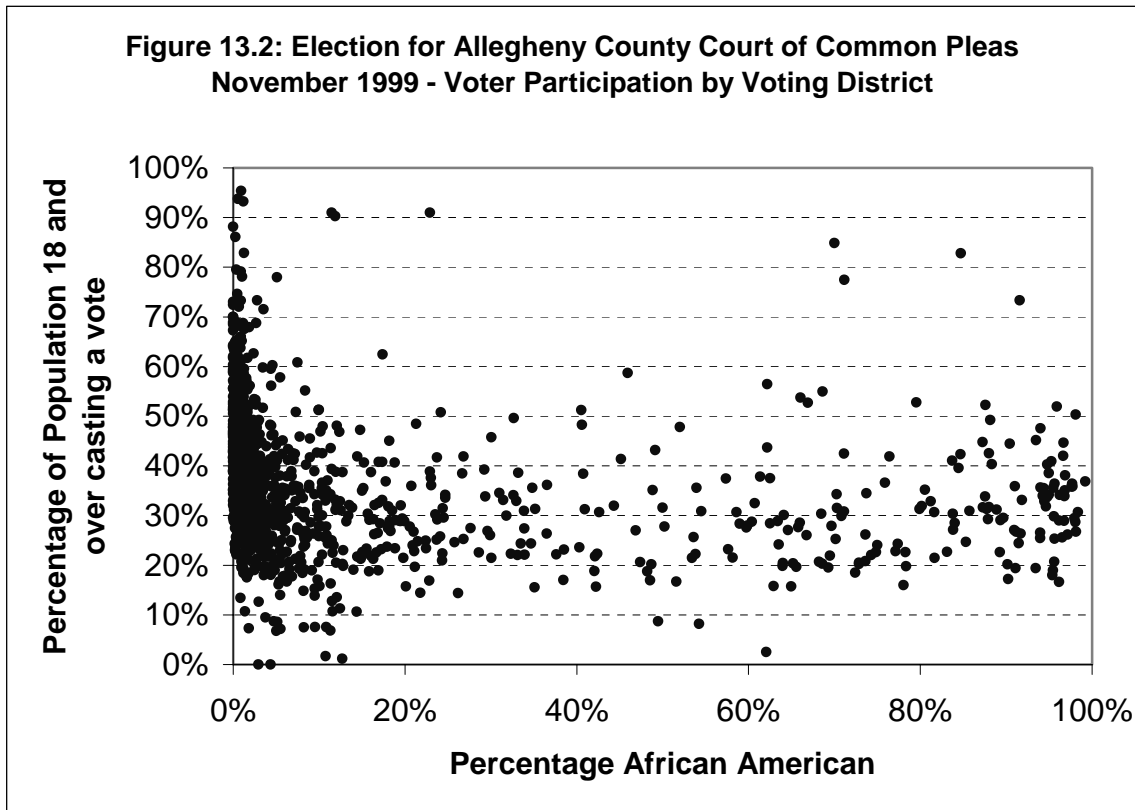
Table 13.1 Election Results by Racial Grouped Voting Districts November 2001 General Election for Allegheny County Court of Common Pleas		
	Vote for Berry (%)	No votes for Berry (%)
Voting Districts 90% or more African-American	987 (14.3%)	5,878 (85.7%)
Voting Districts 10% or less African-American	48,197 (36.1%)	85,280 (63.9%)
All other voting districts	22,999 (25.1)	68,738 (74.9)

Ecological Regression Analysis

Table 13.2 is the voting pattern by racial group as estimated from ecological regression techniques.

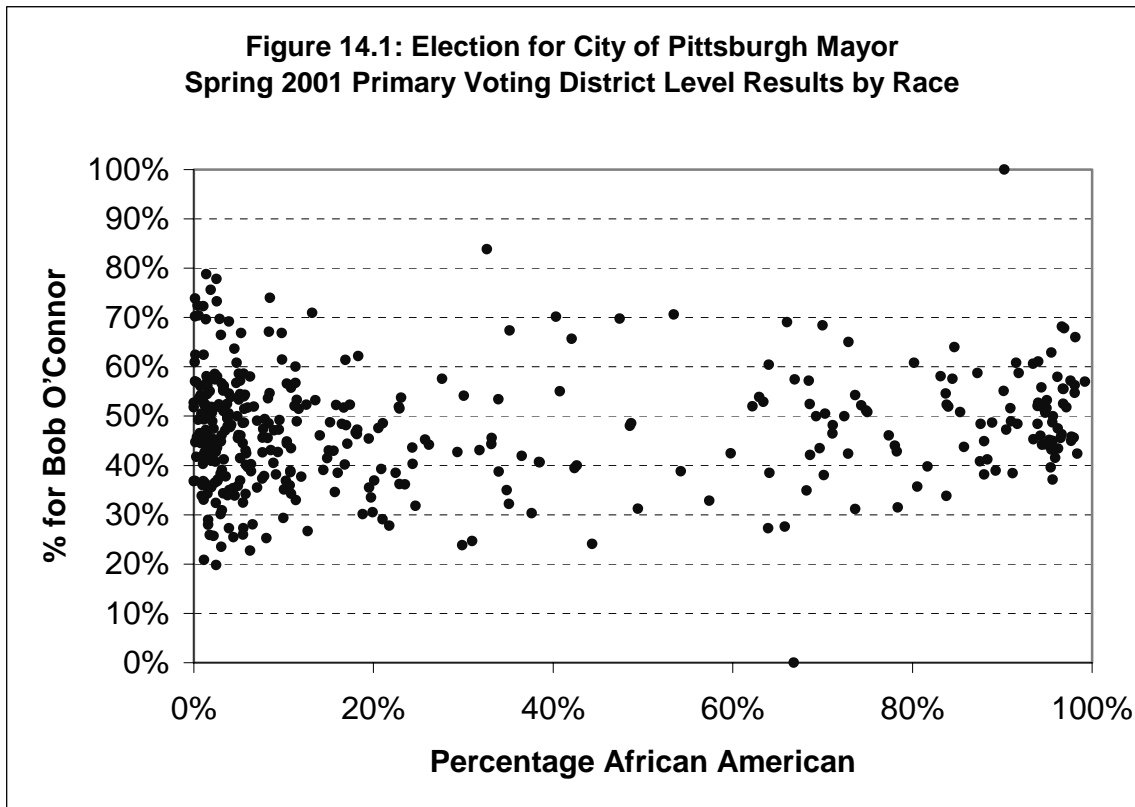
Table 13.2: Voting Patterns from Ecological Regression Analysis. November 1999 Democratic Party Primary Election for Allegheny County Council District 13		
	1 vote for Eugene Berry	No Votes for Eugene Berry
African American Voters	10.9%	89.1%
Non African American Voters	44.9%	55.1%%

Voter Participation Analysis



14. City of Pittsburgh Mayor – Primary 2001

The Spring 2001 Democratic Party Primary Election for the Mayor of the City of Pittsburgh had two candidates on the ballot: Tom Murphy and Bob O'Connor. Tom Murphy was the incumbent. Tom Murphy won the election and was the Democratic nominee in the November general election. Figure 14.1 is a scatterplot that shows the results of this election. The figure breaks down the results for each voting district by the percentage voting for Bob O'Connor on the vertical axis along with the racial group demographics of each individual voting district, which is measured along the horizontal axis of the figure.



Homogeneous Voting district Analysis

Table 14.1 summarizes the results of the Homogeneous Voting district Analysis for the 2001 Democratic Party Primary Election for Mayor of Pittsburgh.

Table 14.1 Election Results by Racial Grouped Voting Districts Spring 2001 Democratic Party Primary Election for Mayor of Pittsburgh		
	Vote for O'Connor (%)	Votes for Murphy (%)
Voting Districts 90% or more African-American	3,021 (50.8%)	2,295 (38.6%)
Voting Districts 10% or less African-American	18,757 (47.8)	19,409 (49.4)
All other voting districts	10,126 (45.4)	10,915 (48.9)

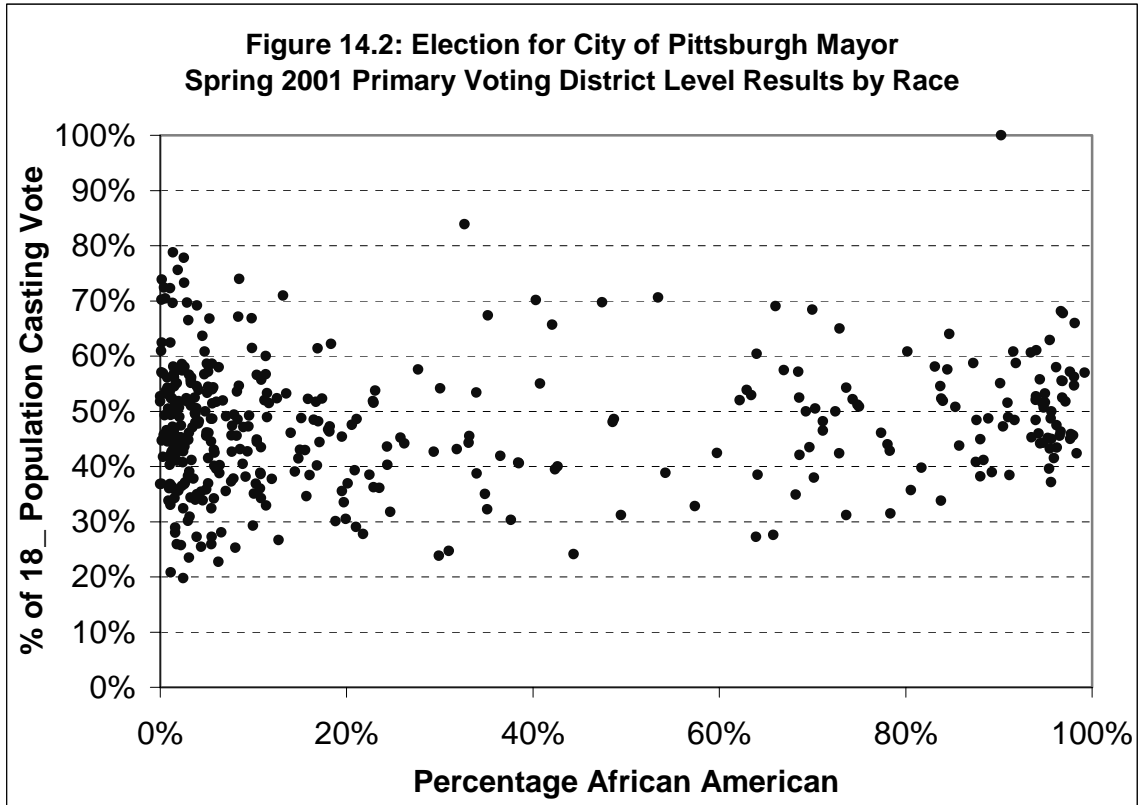
Ecological Regression Analysis

Table 14.2 is the voting pattern by racial group as estimated from ecological regression techniques.

Table 14.2 Election Results by Racial Grouped Voting Districts Spring 2001 Democratic Party Primary Election for Mayor of the City of Pittsburgh		
	Bob O'Connor	Tom Murphy
African American Voters	50.0%	50.0%
Non African American Voters	46.3%	53.7%

Voter Participation Analysis

Figure 14.2 is a scatterplot of voter participation for the Spring 2001 Primary Election for Mayor of the City of Pittsburgh. The figure breaks down the total number of votes cast in each voting district as a percentage of the total population age 18 and over, which is measured on the vertical axis, along with the racial group demographics of each individual voting district which are measured along the horizontal axis of the figure.



14. CV for Christopher Briem

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EDUCATION

PRINCETON UNIVERSITY,

BSE in Electrical Engineering, June 1990
Concentration in Signals, Systems and Communications

COLUMBIA UNIVERSITY, School of International and Public Affairs
Master of Public Administration, May 1993

UNIVERSITY OF PITTSBURGH

Ph.D candidate (ABD), Department of Economics, 1995-present
Currently on leave of absence.
Fields: Urban and Regional Economics, Labor Economics, International
Economics, Macroeconomics

CURRENT POSITION

Economist

Center for Social and Urban Research, University of Pittsburgh
Program in Urban and Regional Analysis

PROFESSIONAL EXPERIENCE

Lehman Brothers, Derivative Products Trading Floor, New York, NY
Consultant (Contracted by Matterhorn Associates), 10/93 - 8/94

Oliver, Wyman and Company, New York, NY
Consultant; 9/91 - 8/93

Congressional Budget Office, Washington, DC
Analyst - National Security Division 8/90 - 9/91
Specialized modeling costs of federal programs. Produced primary analysis for testimony given before congressional committees. Designed models to predict manpower, ship and aircraft requirements for the Department of Defense.

MILITARY EXPERIENCE

US Naval Reserve, December 1985 - present, Rank: Chief Petty Officer
Reserve unit: Military Sealift Command, Northern Persian Gulf Det. 105
Specialization: Quartermaster - Navigation and Surface Operations

PAPERS AND PRESENTATIONS

Publications

The Navy Can Not Be Their Last Resort, U.S. Naval Institute Proceedings, February 2001

Conference Papers

The Effect of Local Fiscal Policy on Urban Wage Structure,

with Patricia Beeson and Lara Shore-Shepard, January 2000; presented at the American Economics Association Annual Meeting, Boston, MA, January 6, 2000

Dynamics of Growth and Restructuring in the Pittsburgh Metropolitan Region,

with Frank Giarratani and Vijai Singh, presented at the conference: *Structural Change, Tertiariation, Development Potentials and Structural Policy: Ruhr area - Pittsburgh - Luxembourg - Lille in Comparison*, sponsored by the Ebert Foundation, Duisburg Germany, August 22-24, 1999

The Effect of Local Fiscal Policy on Local Inequality,

with Patricia Beeson and Lara Shore-Shepard, December 1998; presented at the Applied Public Policy Analysis and Management Annual Research Conference, New York City, November 1, 1998

University Publications

Economic Impact of the Elderly in Allegheny County,

with Richard Shulz, in *State of the Region* published by the University Center for Social and Urban Research, University of Pittsburgh, December 10, 1998

Employment and Population Trends in Allegheny County Since 1990,

in *State of the Region* published by the University Center for Social and Urban Research, University of Pittsburgh, November 10, 1998

REMI Model Forecast for Allegheny County and the Pittsburgh Region and Policy Simulation Methods, December 1998;