

## **Low Voter Participation and Demographics in Travis County**

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### **Overview**

For a representative democracy to work as it is typically designed, the government must be able to measure the will of its citizens. Proportional voter participation is arguably the most efficient path to understand the will of a population. As such, any representative democracy should monitor voter participation – especially among minority groups that are more likely to be disenfranchised.

This study is intended to explore whether or not demographic segments of Travis County are under-represented in local government due to lower voter participation. The model for this study utilizes data organized by precinct, census block group and census tract – the finest resolution readily available.

The results of this study are displayed on five maps. The first map displays the spatial distribution of voter participation in Travis County. The remaining four maps each analyze the spatial relationship between low voter participation and median age, median household income, percentage of non-Anglo-American and percentage of residents with a bachelors degree or higher.

For this project I have defined low voter participation to be anything below 10 percent of the eligible voters in a precinct as averaged over 2006 to 2009.

### **Data Sources**

Precinct boundaries (2008 to 2009) were provided by the Travis County Tax Office. The precinct boundaries for 2006 to 2007 were digitized for this project (edit of 2008 precinct boundaries). Precinct boundaries were stable from 2008 to 2009 and from 2006 to 2007. Ethnicity and total population by precinct from the 2008 shapefile were utilized for all ethnicity analysis.

Voter participation numbers were culled from the County Clerk's election result reports (pdf) to Excel tables. The voter participation numbers were joined to the corresponding precinct shapefiles by precinct number.

Census tracts were acquired from the U.S. Census Bureau as a shapefile.

The number of residents within each census tract and the highest level of education completed were acquired from the City of Austin as an Excel file. The education data was joined by tract name to the census tract shapefile for this project.

2000 Census data was used for median household income and median age. The census block groups shapefile and median household income by block group were provided by Mary Beth Booth, Associate Professor of Geography at Austin Community College. Median household income data was joined to the block group shape file for this project.

## **Analysis**

To create a single shapefile of voter participation by precinct in Travis County from 2006 to 2009, the two precinct shapefiles were combined by union (creating some sub-precincts) and the mean voter participation for each polygon was calculated.

To compare voter participation and demographic data, each demographic to be analyzed was first divided into five classes (round numbers near natural breaks). Both the lowest classification and the next lowest were considered and ultimately combined for the final analysis.

The four maps comparing low voter participation and demographics were created by selecting the polygons with the demographic to be analyzed by attribute (combination of two lowest classes). Corresponding polygons (precincts and sub-precincts) in the 2006 to 2009 mean voter participation shapefile were then selected by location. From these, the precincts with mean voter participation below 10 percent were selected by attribute. When selecting by location, polygons that had their centroid in the selected area were chosen.

## **Results**

“Travis County 2006 to 2009 Voter Participation by Precinct” displays the overall spatial distribution of voter participation with a total of 1199 polygons (precincts and sub-precincts). 50 polygons had voter participation below 5% and 531 polygons had voter participation below 10% (including those with participation also below 5%).

“Voter Participation and Education” emphasizes the 174 polygons with voter participation below 10% and less than 30% of the population with a bachelor’s degree (32.8% of all polygons with voter participation below 10%).

“Voter Participation and Median Age” draws attention to the 228 polygons with voter participation below 10% and median age below 30 (42.9% of all polygons with voter participation below 10%).

“Voter Participation and Household Income” emphasizes the 205 polygons with voter participation below 10% and median household income below \$45,000 (38.6% of all polygons with voter participation below 10%).

“Voter Participation and Ethnicity” highlights the 218 polygons with voter participation below 10% and less than 50% of the population identified as Anglo-American (41.1% of all polygons with voter participation below 10%).

Analysis was performed to create the following data that was not ultimately included in the final maps. 22 polygons (precincts and sub-precincts) had voter participation below 5% and less than 15% of the population with a bachelor’s degree or above. 14 polygons had voter participation below 5% and median age below 25. 23 polygons had voter participation below 5% and median household income below \$30,000. 13 polygons had voter participation below 5% and less than 25% of the population identified as Anglo-American.

## **Conclusion**

Based on the results above, voter participation by precinct on the east side of Interstate Highway 35 is lower than voter participation on the west side of I-35. This is significant as I-35 is locally recognized as a physical boundary between areas of disparate socio-economic and racial attributes.

Within the precincts east of I-35 with voter participation below 10 percent, there are a high number where the population is less than 50% Anglo-American and a high number where less than 30% of the population has received a bachelor's degree or higher. A moderate number of these precincts also have median household incomes below \$45,000. This might suggest a certain amount of correlation between these demographics and low voter participation. However, when the entire scope of Travis County is considered in this study's resolution, none of these demographics appear to have a high correlation with low voter participation.

Overall, this study suggests that certain precincts in Travis County may be under-represented due to low voter participation. However, it fails to suggest or disprove a correlation between any of the chosen demographics and voter participation. Analysis of voter-level data could be utilized to prove or disprove a correlation, but was unavailable for this study.