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Globalization and Immigration:
How a Changing Demographic Landscape Influenced the 2016 Presidential Election

By

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Table of Contents

List of Tables

List of Figures

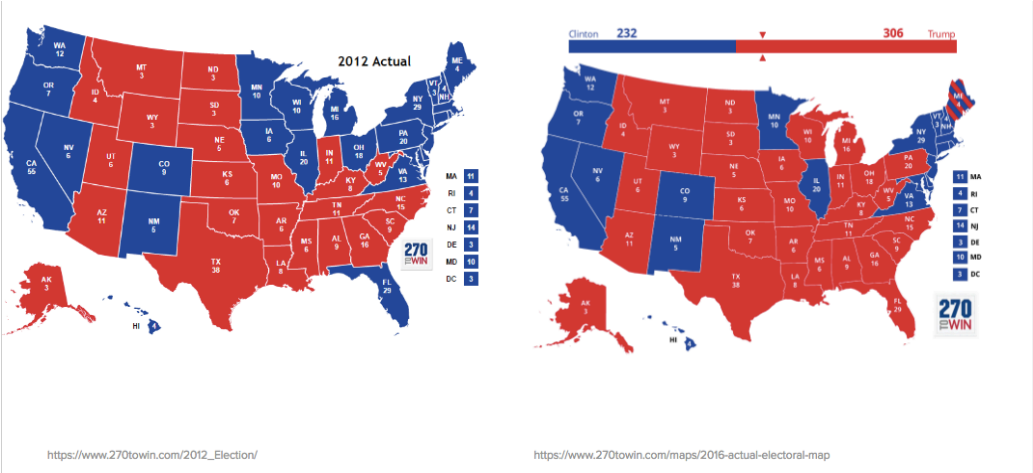
Abstract

The 2016 presidential election results varied significantly from many forecasts. The media proposes that the radically atypical candidacy of Donald Trump motivated pockets of the electorate to support the Republican Party more so than they had in past elections. This paper examines the following questions: Which traditional predictors of the election failed to foresee a Republican victory? If the traditional predictors were unsuccessful, can the results be explained using county level economic and demographic data? Is there evidence to support the media's proposed explanations of the results? By utilizing the Census Bureau's American Community Survey data, this paper examines some major economic and demographic determinants of the 2012 and 2016 election outcomes with a particular emphasis on the role of globalization and immigration. Further, this paper examines how changes in these county level features affected differences in county level support of the two Republican nominees. Thus, this paper finds that sociotropic economic perceptions remain as a significant determinant of voter behavior, even at the county level. Trump's campaign may have failed to muster more support in counties with a high concentration of secondary sector occupations and higher inflows of immigrants. However, the results support the media's conventional narratives that white Americans more heavily supported Trump, while educated Americans increasingly disapproved of the Republican nominee.

1. Introduction

The 2016 presidential election results stunned America. Until November 8th, 2016, many projections predicted a landslide victory for President Trump's Democratic opponent, with some forecasts placing Trump's odds of winning as low as one percent (Jackson and Hooper, 2016). Yet, the Trump campaign successfully rallied support through the use of hyper partisan rhetoric targeting some Americans' distaste for the country's perceived economic and social trajectory. While the rest of the country recovered from the latest recession, economic trends left some coal towns with double their 2008 unemployment rates (Ponczek, 2016). With the amount of Middle Eastern immigrants tripling since 1970, escalating demographic polarization brought white identity politics to the forefront of the presidential election. A sense of abandonment turned pockets of the country to opioids and other unhealthy alternatives, reversing a decades long trend of increasing life expectancy for middle class white Americans (Boddy, 2017). The stories surrounding the election suggest that individuals deemed unlikely voters blamed those whom they felt had wronged them: politicians, immigrants, and the socioeconomic elite.

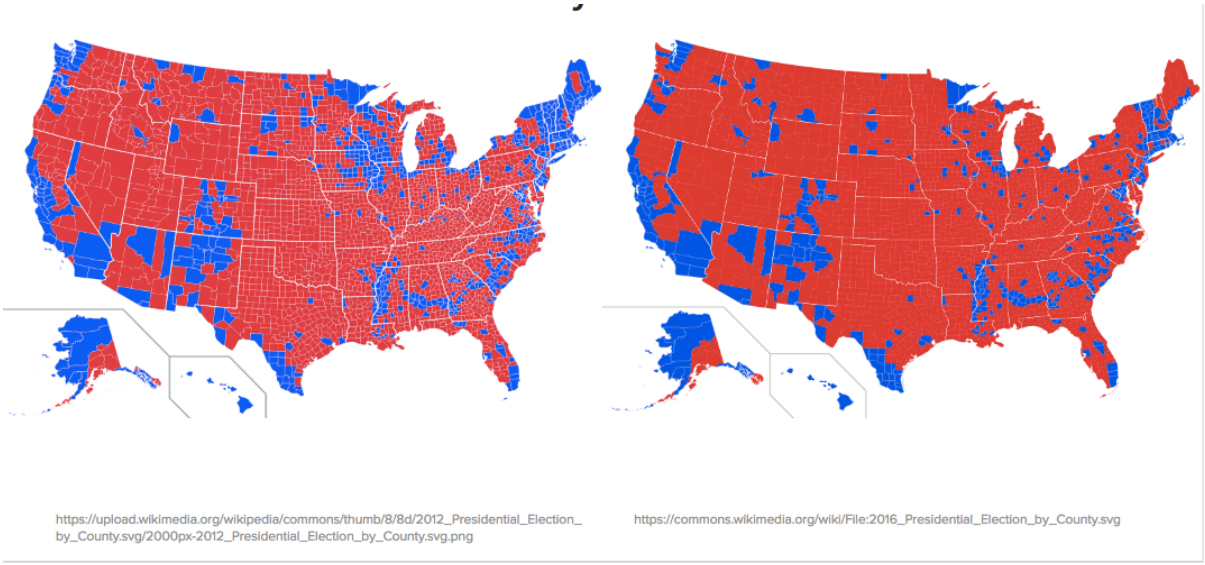
Figure A: State Level Presidential Election Results (2012 vs. 2016)



They made their unhappiness known at the polls by swinging key "blue wall" states in Trump's favor to win the election. This paper intends to explore the 2016 election results by answering the following questions: what led to the surprising election results? Which traditional predictors of the election failed to foresee a Republican victory? If the traditional predictors were unsuccessful, can the results be explained using county level economic and demographic data? Is there evidence to support the media's proposed explanations of the results?

Political scientists and economists have long been interested in understanding the determinants of voter behavior. This research examines the effect of county-level demographic variables on the presidential election outcomes in 2012 and 2016.

Figure B: County Level Presidential Election Results (2012 vs. 2016)



https://upload.wikimedia.org/wikipedia/commons/thumb/8/8d/2012_Presidential_Election_by_County.svg/2000px-2012_Presidential_Election_by_County.svg.png

https://commons.wikimedia.org/wiki/File:2016_Presidential_Election_by_County.svg

Within a theoretical framework emphasizing the socioeconomic effects of globalization and immigration, this research examines the ways in which changes in various demographics since the 2012 election influenced the presidential election results in 2016. Previous research

suggests that rational voters choose between candidates by considering whether a continuation in current policy or a shift towards the challenging party's political platform will maximize their own utility (Downs, 1957). Voters' choices are further influenced by the perceived popularity of the incumbent party and short-term fluctuations in economic indicators (Kramer, 1971). However, the results of the 2016 election varied quite significantly from many experts' expectation, under the existing theoretical framework.

For all intents and purposes, the 2012 presidential election represented a normal presidential election; a typical Democratic nominee and a typical Republican nominee represented the two main parties. The 2016 election featured a Republican nominee radically different than all previous major parties' nominees. Since the election, the media has focused on the ways in which Trump's candidacy motivated pockets of the electorate to vote in a manner contrary to expectation. Some common beliefs include: Trump appealed to manufacturing workers; Trump appealed to areas experiencing high levels of immigration through the use of anti-immigration rhetoric; Trump appealed to low income voters; and Trump appealed to white Americans who felt threatened by a diversifying America. The data and model presented in this paper intend to empirically test these beliefs and determine whether or not the 2016 election truly was a different type of election.

This paper argues that a significant amount of the variation in county level Republican support can be explained by examining counties' economic condition and demographic composition. Further, this paper argues that the variation in these factors between the 2012 and 2016 election explains a significant amount of the variation in Republican Party support within each county. Lastly, this paper argues that the effect of globalization and immigration on the 2016 election outcome significantly differs from the

conventional narrative portrayed by the media; in particular, the belief that the forces of globalization and immigration exacerbate the salience of economic determinants of voter behavior such that counties experiencing higher concentrations of immigrants and occupations outside of the service sector would more strongly support the Republican Party. In an increasingly transnational world, these individuals expressed their concern at the polls, which at least partially explains the partisan reshuffling of the last election.

The remainder of this paper is organized into five sections. Section Two discusses prominent theories of voter behavior and surveys previous research on determinants of election outcomes. Sections Three and Four discuss the composition of the dataset and the theoretical models used in the analysis. Section Five examines the empirical results of the empirical models and the evidence of a relationship between county level economic conditions and demographics and presidential election outcomes. Additionally, it examines how shifts in the demographic landscape influenced differences in Republican support at the county level. Finally, Section Six summarizes this research in this thesis and discusses the potential for further research.

2. Literature Review

2.1 The Principles of Economic Voting Theory

As mentioned above, political scientists and economists have long been interested in the determinants of voter behavior. Thus, extensive literature has focused on the economic determinants of voter behavior. As early as the mid-twentieth century, Downs (1957) discussed the underlying theory of voter choice within democratic societies. Essentially, Downs (1957) proposes that all rational voters calculate a current party differential[1] based on their utility income under the current administration compared to a retrospective estimate of utility under the governance of the opposition party. In a two-party system, the voter then prefers the party for which they believe their utility income would have been maximized. Kramer's (1971) findings also support the notion that voter choice is a rational decision between two choices rather than a particular response to short-term fluctuations in economic conditions.

Downs (1957) provides two other assertions pertinent to the results of the 2016 election. First, an even current party differential can lead to individuals either abstaining from voting or referencing their choice on previous party preferences. Second, the incumbent party cannot guarantee reelection by conforming to the will of the majority. Given the opposition's ability to refrain from establishing a position until after the incumbent's policies have taken hold, an incumbent party's downfall may come by way of lack of a strong enough consensus among the electorate. Opposition parties may strongly promote the view of

[1] The difference between the utility income a voter actually received in the current time period and the one a voter would have received if the opposition had been in power during the same time period. Calculated: $U^A{}_t - E(U^B{}_t)$, where $U^A{}_t$ is the utility income under the governance of party A in time period t and $E(U^B{}_t)$ is the expected utility income under the governance of party B in time period t (Downs, 1957).

minority opinion in order to mobilize a coalition of dissenters. In reference to the elections under consideration, the 2016 election experienced a twenty year low in voter turnout. Yet, President Trump's unorthodox stance on key issues mustered additional support from coalitions in key states such as Florida, which saw nearly one million additional votes cast as compared to the 2012 election (Wallace, 2016).

Early investigations into voter behavior lead to two prevailing theories: issue-priority and reward-punishment voting. The theory of issue-priority voter behavior assumes that political parties choose their political platform by following their ideological priorities. Thus, voters are less likely to vote against a political party if current economic conditions suggest the party's ideology more appropriately addresses the issues at hand (Kim, Elliott, Wang, 2002). For example, under the assumption that the Democratic Party prioritizes lowering unemployment rates, the electorate has less incentive to vote against a Democratic candidate during periods of high unemployment. A vote towards the alternative party may exacerbate the situation (Clarke et al., 1994). Alternatively, the Republican Party prioritizes stabilizing economic conditions. Thus, the electorate has less incentive to vote against a Republican candidate during periods of high inflation, as the Democratic Party may be viewed as being less willing, or even unfit, to address this macroeconomic issue (Clarke et al., 1994). On the other hand, reward-punishment theory addresses voter behavior from a dramatically different approach. This retrospective theory relies on the mainstream economic principle that the individual is a rational being. Essentially, individuals exercise their democratic power by rewarding (punishing) the incumbent political administration if they feel that their performance has been adequate (inadequate) through their choice at the ballot (Kim, Elliott,

Wang, 2002). These two theories are consistent in their dependence upon economic conditions as an influencer of voter behavior.

The influence of economic circumstances can be separated into two categories: egotropic and sociotropic conditions. Egotropic voters evaluate their personal finances, commonly referred to as pocketbook well being, before determining their party support. All things equal, voters are more likely to support an incumbent party if they believe their personal finances are better off as compared to those who perceive that their personal circumstance has worsened (Markus, 1988). Lau and Heldman (2009) find that declining economic conditions lead voters to further prioritize their own self-interest. Yet, under most circumstances, very few individuals meticulously calculate their own short-term material interests, but rather consider the influence of policy on those around them. These mixed results suggest that the influence of egotropic conditions on voter behavior needs further consideration.

Recurrently, the literature suggests that individuals are more likely to hold governments responsible for the collective (sociotropic) condition of the economy as opposed to their own personal finances. Hellwig (2001) believes that sociotropic conditions are nearly twice as influential as egotropic conditions on voter behavior. His findings suggest that after controlling for socioeconomic conditions, egotropic conditions did little to further explain the variation in election outcomes. In an investigation of the presidential elections from 1828 to 1924, Kramer (1971) found that incumbent parties failed to maintain power in eleven out of thirteen elections that occurred during times of overall economic decline. Kramer (1971) accordingly asserts that per capita real personal income is the most influential economic factor on election outcomes. After controlling for per capital real personal income,

the effect of unemployment and inflation was insignificant (Kramer, 1971). During midterm elections, a ten percent decrease in personal income costs the incumbent administration approximately four to five percent of Congressional votes. However, Kramer (1971) finds that while decreases in real personal income negatively affect incumbent parties, sociotropic economic conditions are less influential during presidential elections. Markus (1988) finds that a one percent increase in real disposable personal income yields a two and a half percent increase in the incumbents' vote share. However, Markus (1988) also finds that perceived changes in a voter's personal finances are robust in their effect on electorate decisions.

Further, Markus (1988) believes that the influence of national economic conditions depends on whether an incumbent president is standing for reelection. In an investigation of the 1980 presidential election, Hibbs, Jr. (1982) finds evidence to support that sociotropic economic conditions align with the reward-punishment theory. The Carter administration exhibited the worst cumulative real income and inflation records on date since the onset of the post-war era. Thus, rather than an ideological realignment, the election of Ronald Reagan demonstrates the electorate's dissatisfaction with Carter's economic shortcomings while in office. In turn, declining economic conditions, especially when coupled with low popularity, create the perfect storm for an incumbent's failure to be re-elected. Finally, Markus (1988) supports Downs (1957) assertion that presidential campaigns have the ability to influentially mobilize segments of the electorate. However, he finds that these effects are largely mitigated by long-run sociotropic conditions outside of a nominee's control.

2.2 The Influence of Globalization on Election Outcomes

This research intends to understand how increasing global connectedness has influenced the importance of the aforementioned traditional determinants of voter behavior. Much of

Timothy T. Hellwig's work explores the effects of globalization. Using a global perspective, Hellwig's research relies upon the fundamentals of the reward-punishment theory. Hellwig (2001) asserts that the stability and advancement of globalization is beyond the reach of any one domestic player. Thus, Hellwig (2007) challenges two potential hypotheses. The government constraint hypothesis suggests that greater exposure to the world economy reduces electoral accountability in the world's democracies. On the other hand, the government competence hypothesis suggests that greater exposure to the world economy either has no effect or enhances electoral accountability in the world's democracies. In order to test these hypotheses, Hellwig (2008) performs a micro level analysis of individuals' perception of the international economy, policy implications and voting outcomes. The findings support the global constraint hypothesis and suggest that economic perceptions matter less when voters believe that politicians are constrained by globalization. In turn, these findings suggest a diminished importance of the longstanding economic determinants of voter choice. Hellwig (2007) suggests that globalization reduces the effectiveness of the reward-punishment model in open economies. While individuals in closed economies continue to sanction national leaders in times of economic decline, individuals under open economies are less likely to reward or punish their domestic politicians due to economic performance. Essentially, the findings suggest that the salience of the economy diminishes as structures and institutions continue to further globalize due to voters' perception that the government has less ability to control economic conditions.

However, the influence of globalization on voter behavior is not consistent across all members of the electorate. Hellwig (2001) finds that those actively seeking work are less likely to vote for the incumbent party. A voter's occupation further influences the effect of

globalization on their perception of economic conditions. Traditional sectors, such as agriculture and manufacturing, are often threatened by the consequences of globalization. On the other hand, individuals participating in the service sector benefit from the increased availability of information that comes hand in hand with economic openness. Thus, the nature of an individual's work often plays a large role in their consideration of presidential nominees.

Jensen, Quinn, Weymouth (2017) focus directly on the effect of globalization within the United States and measure globalization in terms of international trade, measured as the change in U.S. trade balance as a percentage of GDP. Their analysis aligns with those of Hellwig; they find that incumbent party vote shares will increase in counties that have a large concentration of workers within the high-skilled tradable service sector and will decrease in areas where the majority of available work falls within the low-skilled manufacturing sector. However, these results are dependent upon an administration's stance on international trade. At the national level, incumbent parties lose (gain) vote share as imports (exports) increase, since individuals employed in the low-skilled manufacturing sector are particularly susceptible to competition from low-wage imports. In turn, individuals working in the tradable services and goods sector experience economic integration differently, as they are more dependent upon high-skilled labor. Thus, a nominee campaigning against an incumbent with an anti-globalist platform has the ability to incentive individuals in the low-skilled manufacturing sector to vote. A guarantee to decrease the U.S.'s trade gap protects these workers from foreign competition and raises their expected utility income under a globalist's governance.

Since 1990, professional and business services have nearly doubled while manufacturing employment has declined by nearly a third (Jensen, Quinn, Weymouth, 2017). Jensen, Quinn, Weymouth (2017) find that voters' reaction to trade exposure can be seen at the regional level. Increases in wage and employment volatility due to the globalization of production lead workers to feel economically insecure. Regions sense this vulnerability before job gain or loss is realized in the unemployment rate (Jensen, Quinn, Weymouth, 2017). Mughan, Bean, and McAllister (2002) found that right-wing parties are not ignorant of these perceptions of globalization. Their study shows that far right-wing parties often condemn established parties' subscription to the globalist economic agenda due to its suspected ability to erode the nation's political and cultural sovereignty through economic dependence. In turn, far right wing parties are able to build political platforms structured towards the defense of native workers from the threat of cheap foreign labor. Polarizing political rhetoric, especially towards globalization's ability to increase international mobility, can lead to the fear of refugees and illegal migrants in affluent democracies (Mughan, Bean, and McAllister 2002).

2.3 The Influence of Immigration on Election Outcomes

As a consequence of globalization, immigration further influences voter behavior during presidential elections. The effect of immigration manifests itself in regions where voters worry about the adverse effects of immigrants on their labor market and neighborhood amenities. Halla, Wagner, and Zweinmüller (2017) find four circumstances that strengthen the effects of immigration: high native unemployment rates, high labor market competition, highly educated native populations, and high inflows of immigrant children. Thus, the composition of the immigrant population entering an area influences voters' perception and

their voting decisions. Further, Halla, Wagner, and Zweinmüller (2017) argue that the geographic proximity of immigrants drives support for parties establishing a harsh anti-immigration policy. Nearly a tenth of the cross-community variation in voting decisions was explained by the inflow of immigrants (Halla, Wagner, and Zweinmüller, 2017). Mayda, Peri, and Steingress (2016) support these claims and find that increased immigration has a significantly negative impact on Republican nominees. By introducing a quadratic term to their analysis Halla, Wagner, and Zweinmüller (2017) find that the effects of immigration never level off. However, Mayda, Peri, and Steingress (2016) believe that very high levels of immigration eventually positively impact the Republican Party. They argue those native voters' political preference reaches a tipping point as the size of the immigrant population reaches levels at which immigration is perceived as an adverse and pertinent issue. Despite naturalized immigrants' inclination to vote against the Republican Party, the rate at which native voters ideologically shift towards right wing platforms outweighs their support, especially in areas with a large inflow of non-naturalized immigrants.

2.4 Empirical Analysis of Election Outcomes

Ultimately, this study attempts to understand the effects of the economic and demographic landscape on election outcomes at the county-level. Kim, Elliott, and Wang (2002) support the use of county-level data as they believe it allows for the exploration of a large cross-sectional dataset at the smallest possible spatial unit that can accurately depict the effect of macro-level economic variables. Their study focuses on the influence of spatial clustering and suggests that increasing spatial polarization at the two-party level has led to the concentration of core coalitions. The polarization of party ideologies will further increase the

importance of the Democratic party to areas with high levels of ethnic minorities and further the homogeneity of areas supporting Republican nominees. Kim, Elliott, and Wang (2002) find that low unemployment and low inflation have altered many voters' preference by reducing salience of economic variables on voter's choice. Lewis-Beck and Rice (1984) conduct their analysis through the use of naïve models. Naïve models rely very little on the sophisticated theory of voting; rather, these models freely explore a range of aggregate data, which allows for reflection on the determinants of individual voting behavior. However, their analysis suggests that the inclusion of national economic conditions as independent variables significantly increased the explained variation in election outcomes. Growth in gross national product six months prior to the election, as a control for global economic trends, coupled with presidential popularity, yielded the most accurate and useful results for forecasting presidential election outcomes.

Other studies (Brody and Sigelman, 1983; Abramowitz, 1988) introduce incumbent party popularity alongside economic variables to improve their models' ability to forecast election outcomes. Brody and Sigelman (1983) find that incumbent parties are held responsible for the popularity of their administration even when a president is not standing for reelection. Incumbent parties entering the election with a presidential approval rating greater than fifty percent can be expected to win reelection for their party (Brody and Sigelman, 1983). On the other hand, Abramowitz (1988) suggests that voters are significantly more likely to vote against the incumbent party if their tenure in office extends beyond two terms. While incumbent party popularity can easily be obtained at the national level, others use survey results to assess party identification and ideological alignment at the individual level.

Jessee (2010) utilizes a spatial utility model to analyze the effect of policy alignment and party identification on voting during the 2008 election. Rather than asking respondents to identify their self-perceived ideological alignment, Jessee (2010) surveys individuals on ten particular policy statements. Next, Jessee (2010) creates a variable that aligns an individual's responses with the platforms of the two 2008 nominees, Obama and McCain, on the same issues. At high levels of political information, Jessee (2010) finds that individuals are less likely to vote against a candidate that represents their own beliefs on key issues, even after controlling for party identification. However, partisan bias still exists when individuals have low levels of political information. Jessee (2010) argues that these individuals are more likely to vote in alignment with their party identification, even if the opposition party's nominee more closely aligns with their ideological position. Despite finding that ideology and party identification explain similar levels of variation in vote choice, Jessee (2010) calls into question the certainty of the ideological spatial utility variable within his own model. In turn, Lewis-Beck, Nadeau, and Elias (2008) question the overall effect of party identification on influencing voter behavior. Recently, a new theory has emerged that suggests an individual's party identification makes it such that their perception of economic conditions has little ability to explain their voter behavior. Lewis-Beck, Nadeau, and Elias (2008) find this result to be unfounded. Rather, after accounting for the time dimensions concerning the causality of economic perception, they find the impact of party identification's influence on economic perception to be largely exaggerated. Instead, their findings support the conventional wisdom that individuals' perception of the economy influences their party support (Lewis-Beck, Nadeau, Elias, 2008). They suggest that future researchers should strive to guarantee the exogenous nature of any partisan measures included in forecasting models.

Campbell (1992) looks beyond the individual and county level towards the state level. Campbell (1992) argues that forecasting state level election outcomes serves a practical significance, given that electoral votes are awarded based on state votes. In turn, Campbell (1992) includes national, regional, and state level variables in the model. Particular to each state, Campbell (1992) includes seven variables: deviation from national presidential vote in the previous two elections, the rate of economic growth in the state, and four variables estimating a states inherent ideological leanings. However, Campbell (1992) finds state level economic conditions to be an insignificant predictor of election results. Rather, two national level variables explained most of the variation in election outcomes – national trial-heat poll results and second quarter growth in the national economy. On the other hand, Klarner (2008) finds that state per capita personal income growth and its lag had statistically significant effects on presidential election outcomes at the state level. Feigenbaum and Hall (2015) support Campbell's (1992) and Klarner's (2008) arguments that localized economic shocks failed to prevent the reelection of incumbents during district level elections. Rather, an incumbent could maintain partisan control of a district by taking strong strategic positions on foreign-trade bills in the face of increasing import competition. These mixed results suggest the need for further investigation of state level and district level economic conditions ability to explain election outcomes. While these results provide alternative stances on other previous theoretical findings (Hellwig, 201; Kramer, 1971; Jensen, Quinn, Weymouth, 2017), they also provide empirical results at spatial levels more closely representative of the analysis presented in this paper.

While the previous literature has significantly influenced the direction of this research, many of the results presented focused on forecasting presidential election

outcomes. This paper instead aims to understand the determinants of the 2016 presidential election results and how those determinants have varied since 2012. Thus, the following represent the most important lessons from the previous discussion. First, declining economic conditions largely influence whether a candidate from an incumbent party will be reelected, especially when the nominee is not the incumbent president and experiences low levels of popularity (Hibbs, Jr., 1982). Next, while campaigns have the ability to motivate parts of the electorate, long run sociotropic economic conditions are largely outside of any nominee's control (Markus, 1988). Hellwig (2007) supports the global constraint hypothesis, which suggests that voters believe politicians are constrained by globalization and have less influence on economic conditions. Also, individuals experience the effects of trade exposure prior to its manifestation in the unemployment rate and these effects differ, depending on an individual's occupation (Jensen, Quinn, Weymouth, 2017). The effects of immigration potentially vary depending on the size of the immigrant population and the socioeconomic composition of each neighborhood under consideration (Halla, Wagner, and Zweinmüller, 2017; Jensen, Quinn, Weymouth, 2017). Finally, while an important strand of literature has focused on forecasting election outcomes using national economic data, there remains a gap in research that aims to explain election results using smaller regions of interest. This gap supports the use of county level economic and demographic data to explore voter behavior. Kim, Elliott, and Wang (2002) have considered county level data to be the smallest spatial unit of accurate information available that also provides a large number of cross-sectional observations. Their findings significantly influenced the construction of the dataset and empirical models presented in the following sections.

3. Data

The panel dataset used to analyze the effects of American demographics on voting behavior utilizes information from the 2012 and 2016 presidential elections and the U.S. Census Bureau's American Community Survey. Presidential election data was obtained from the Bucknell University Department of Digital Pedagogy & Scholarship. The department collects county level voting data including percentage of Republican votes, percentage of Democratic votes, and voter turnout. Additionally, the data includes indicator variables for a county's winning political party and whether the county flipped since the previous election. Finally, the political data includes an indicator variable for the year in which the election results occurred (Year = 1 if 2016, Year = 0 if 2012).

The United States' Census is a decennial survey that systematically collects information regarding the United States' population and other demographic features. During the years in which the decennial census is not administered, the Census Bureau utilizes supplemental surveys and statistical models to estimate annual figures. These estimates are reported as the American Community Surveys (ACS). The American Community Surveys are widely considered the only legitimate source of yearly demographic data for mid-sized populations. The research for this thesis utilizes the 2012 ACS 1-year estimates and 2016 ACS 1-year supplemental estimates. While the standard tables report on all U.S. counties with populations of at least 65,000, the supplemental tables lower the population threshold to 20,000 individuals. The dataset contains 2,595 total observations. The standard tables and supplemental tables describe 25.9 percent and 58.6 percent of all U.S. counties or their equivalents, respectively. The tables provide explanatory variables for the following categories: earnings, poverty, educational attainment, employment, geographic mobility,

health insurance, occupational status, population density, poverty, and race. Table A of the Appendix provides further explanation of each variable, as well as their source and mean.

4. Empirical Model

This study applies two empirical models to the dataset. The estimation methods used in the analysis include ordinary least squares (OLS) and fixed effects (FE) regression. The full OLS model can be found in the Appendix (Model A). This model allows for the interpretation of individual county level economic and demographic variables' effect on the percentage of votes cast for Republican nominees. Economic voting theory widely accepts the notion that economic downturns are associated with diminishing support for incumbent parties (Kramer, 1971). Thus, the model includes median earnings, unemployment rates, and poverty rates. As political scientists increasingly believe that social context reshapes an individual's political preference (Hellwig, 2001), these variables shed light on local perceptions of a country's overall economic trajectory. Hellwig (2001) argues that education should be included in the model to partially control for an individual's socioeconomic status. Voters with higher levels of educational attainment are more likely to find themselves in high-skilled occupations, which enjoy greater job security. In turn, these voters may instead support a candidate whose political platform aligns with their own ideology on issues other than economics (Hellwig, 2001).

In order to investigate the effects of immigration, the model contains variables measuring geographic mobility. The ACS reports the residential circumstance of individuals currently residing in each county, as compared to the previous year. Particularly, the dataset includes the survey estimates for the number of individuals moving to a county from abroad. In the average county, immigrants who have moved into the county in the previous year represent less than one percent of respondents. Immigrants who have resided in the county for longer than a year would indicate whether they live in the same household. A complete

list of respondents' choices may be found in Table A of the Appendix. Halla, Wagner, and Zweinmüller (2017) argue that community factors, such as industry structure and labor market conditions, influence the effect of immigrants on voter sentiment. Thus, in addition to unemployment, variables measuring a county's occupational landscape were introduced to the model. Healthcare played a prominent role in both the 2012 and 2016 presidential campaigns. The model includes a variable measuring the percentage of individuals between the ages of 18 and 64 lacking health insurance. This demographic largely represents the citizens responsible for obtaining their own insurance; Individuals under 26 are eligible to remain on a parent's insurance plan and citizens over 65 become eligible for Medicare. Additionally, age distribution and race variables are introduced to the model as controls. Further, the model includes a dummy variable for the 2016 election that will serve to capture any shift in the electorate between the 2012 and 2016 election across all counties. Abramowitz (1988) argues that as a party's control of the presidency surpasses two terms, the electorate becomes increasingly more likely vote against the incumbent party. The dummy variable serves to capture this sentiment as it applies to all counties. Lastly, the model contains a series of interaction terms between the year indicator variable and all other independent variables. Interaction terms allow the effect of each variable to vary between the two elections. In turn, the model will estimate how county economic and demographic conditions effected each election and whether that effect significantly differed between 2012 and 2016.

Consider the following theoretical unobserved effect model:

$$y_{it} = \beta_0 + \beta_1 X_{it} + \cdots + \beta_k X_{it} + a_i + \mu_{it}$$

Essentially, this model differs from a typical OLS model by including a single fixed effect term. In the above equation, y_{it} represents the share of the vote received by the Republican presidential nominee in county i in time period t. Additionally, a_i represents unobserved factors that influence how county i votes that are constant over time. Each county contains unobserved factors that influence the percentage of votes for Republican nominees. For example, the geographic location of each county within the United States was not included in the model and does not change from election to election. Yet, Kim, Elliott, and Wang (2002) assert that county-level voting outcomes are highly influenced by the partisan support of their region and surrounding counties. Additionally, the single fixed effect term may contain other factors that are unlikely to drastically change over the four-year period between elections. These county-level demographics include, but are not limited to, the age distribution, educational attainment, party identification, and racial diversity (Wooldridge, 2012). Thus, in order to prevent omitted variable bias, differencing each time period's unobserved effects model eliminates influential unmeasured and time constant factors, as demonstrated below:

$$(y_{i16} - y_{i12}) = (\beta_0 + \delta_0 - \beta_0) + \beta_1(X_{i16} - X_{i12}) + \cdots + \beta_k(X_{i16} - X_{i12}) + (a_i - a_i) + (\mu_{i16} - \mu_{i12})$$

$$\Delta y_i = \delta_0 + \beta_1 \Delta X_i + \cdots + \beta_k \Delta X_i + \Delta \mu_i$$

The equation above represents a first difference model.

On the whole, the first difference model used in this research contains the same variables as the OLS model excluding the interaction terms. The full model can be found in the Appendix (Model B). The dataset satisfies two out of the three strengths of first difference techniques presented by Liker, Augustyniak, and Duncan (1985). First, as previously mentioned, each county observation contains a combination of unmeasured or unchanging factors that the standard OLS regressions do not address. Second, panel data that

provides annual measurements, such as the ACS, more reliably measure changes in the variables over time than at one particular time period (Liker, Augustyniak, and Duncan 1985). Thus, this model allows for the interpretation of the effect and significance of a change in each economic and demographic variable on the change in percentage of votes received by Republican nominees, but also controls for unmeasured and time-invariant factors within each county.

The variables indicative of residents' perception of economic trajectory and immigration patterns will serve as the main explanatory variables in this model: median income, unemployment, poverty, and geographic mobility. Theoretically, voters are inclined to reward or punish incumbent parties dependent upon the condition of the economy (Lewis-Beck and Rice, 1984). Since 2012, the U.S. has seen rising median incomes, inflation, and gross domestic product as well as a decline in the unemployment rate. Given these improvements, conventional economic voting theory would predict positive outcomes in the 2016 election for the incumbent party – the Democrats.

Mayda, Peri, and Steingress (2016) argue that the effects of immigration on voter behavior are also dependent upon recent patterns. Areas recently experiencing higher levels of immigration are more likely to perceive that immigration more strongly affects their income and non-pecuniary amenities. Thus, the use of fixed effects estimation "eliminates unobserved time-invariant heterogeneity and thus focuses on the impact of the change in immigration on the change in voting outcomes" (Halla, Wagner, and Zweinmüller, 2017). The first difference model will clarify how county-level changes in economic conditions and immigration patterns influence the changes in the percentage of votes received by Republican nominees.

5. Results

5.1. Pooled Ordinary Least Squares Model Results

As seen in Table B, the OLS regression provides evidence for the relationship between the percentage of votes received by Republican nominees and county-level economic and demographic variables. However, the analysis also suggests various similarities and differences exist in the effect and significance of these variables between the two elections. Contrary to results from the previous literature, the output provides evidence that egotropic, or "pocketbook," conditions at least slightly affects voter behavior. In 2012, a ten percent increase in county median earnings predicts that the share of votes towards Republican nominees would decrease by 0.60 percentage points. In 2016, a ten percent increase in median earnings actually predicts that the share of votes towards the Republican nominee would increase by 0.40 percentage points. Both regression outputs suggest that a county's median earnings variable was significant at the fifteen percent level of significance. The low significance of county level median earnings aligns with the finds of Lau and Heldman (2009) and Hellwig (2001), which suggests that egotropic economic conditions are not voters' top consideration when determining their partisan support in open democracies. Further, the model suggests that the effect of median earnings significantly differed between the two elections. A common story surrounding the 2016 election suggests that Trump appealed to low income voters. However, the results of the OLS model suggest otherwise. Rather, it would appear that more affluent counties supported Trump more than they had the previous Republican nominee.

The sociotropic economic variables, unemployment rate and poverty rate, were significant in predicting Republican votes during both elections. In 2012, a one percent

increase in the county unemployment rate predicts that the percentage of votes received by the Republican Party would decrease by 0.92 percentage points. A five percent increase in the poverty rate shows that the Republican nominee would decrease by 1.50 percentage points. In 2016, a one percent increase in a county's unemployment rate shows that the Republican nominee would lose approximately 0.22 percentage point of the total vote. A five percent increase in the percentage of individuals living under the poverty line predicts that the share of votes towards the Republican nominee would decrease by 0.75 percentage points. Thus, there is evidence to suggest that individuals' perception of the overall economy influences election outcomes. The model suggests that the effect of a county's unemployment rate significantly differed between the two elections. As suggested by the results, the Democrat Party mustered more support from counties experiencing extreme rates of unemployment and poverty. However, the significant difference in the effect of unemployment suggests that Trump may have eroded some of the Democratic Party's support in these counties. In the average county, the unemployment rate decreased by approximately four percent. While increasing unemployment still suggests the Republican nominee would have received a lower percentage of county vote share, individuals within counties still experiencing high levels of unemployment may have been more likely to vote against the incumbent party in the 2016 election after four more years of declining or neutral sociotropic economic conditions. Again, the results provide evidence that Trump did not truly appeal to counties with a higher concentration of low-income voters. Rather, an increase in a county's poverty rate suggests that a county would have more significantly favored the Democratic nominee.

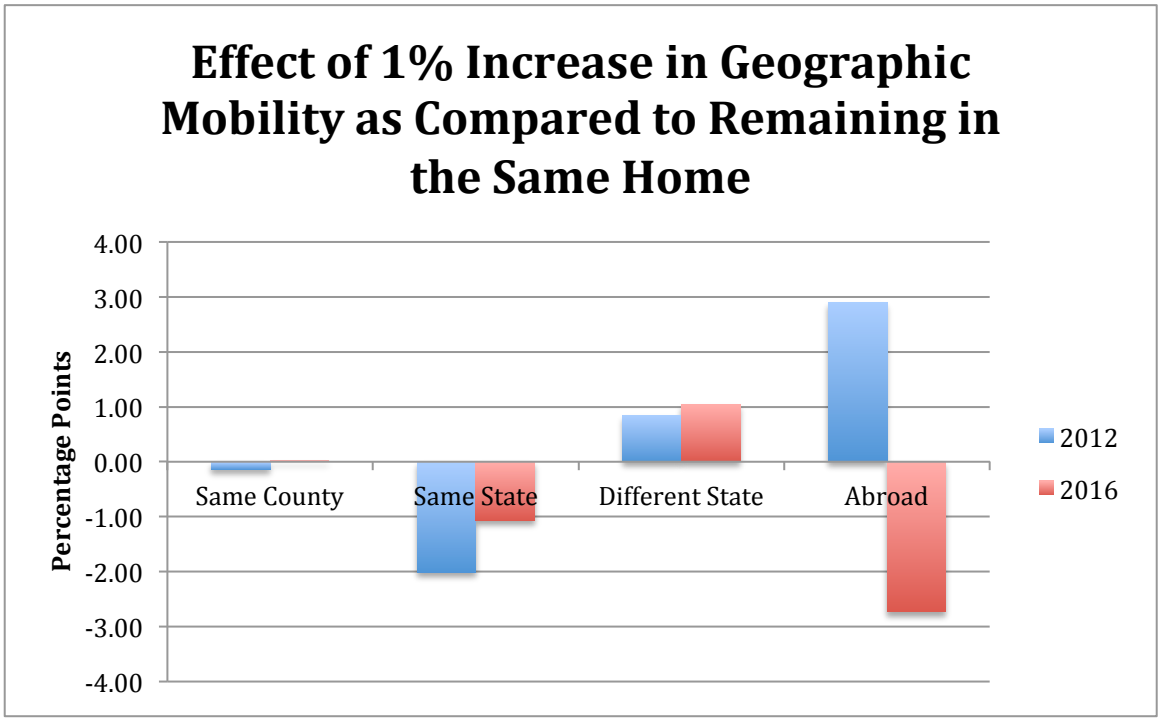
The variables measuring the geographic mobility of the population also varied quite dramatically from election to election. An increase in the percentage of individuals moving from a home to another home within the same county did not have a significant effect on the percentage of county level votes received by either Republican nominee. This result should not be surprising, as these individuals' economic and demographic perceptions would not differ very much from individuals remaining in the same home. However, as the percentage of individuals moving into a county from within the same state increased by one percent, the results show that Romney would have received nearly two percentage points fewer votes. On the other hand, as the percentage of individuals moving into a county from within the same state increased by one percent, the results show that Romney would have received 0.85 percentage points more votes. Most interestingly, as the percentage of individuals moving into a county from abroad increased by one percent, the Republican nominee gained significantly more votes, approximately 2.90 percentage points.

In 2016, Trump brought immigration to the forefront of the political discussion. Nonetheless, the effect of immigration significantly differed between the two elections. In fact, a one percent increase in the percent of individuals moving to a county from abroad, as compared to those remaining in the same home, suggests that Trump would have lost 2.73 percentage points of a county's vote. Graph A compares the effect of immigration on the percentage of county votes received by the two Republican nominees. However, it is important to note that less than one percent of respondents move from abroad into the average county. An increase of one standard deviation (0.0076 percent) in the share of the population who moved into a county from abroad would mean that Romney would receive

2.20 more percentage points of the county vote while Trump would have received 2.07 percentage points less of the total votes share.

The story told by the media suggests that Trump's stance on immigration motivated voters experiencing high levels of immigration to support the Republican. Halla, Wagner, and Zweinmüller (2017) argue that areas with high native unemployment rates, high labor market competition, highly educated native populations. However, after controlling for these factors within the model, the OLS model suggests that counties with higher ratios of immigrants to county natives were significantly more likely to support the Democratic Party in the 2016 election. This finding suggests that Trump's hard stance on immigration may have actually veered too far from the consensus of the majority and caused individuals to favor the Democratic nominee.

Graph A: The Effect of Immigration on the Percentage Points of County Votes Received by the Republican Nominees



As suggested by the literature, the perceived effects of immigration largely depend on the occupational opportunities of a county (Halla, Wagner, and Zweinmüller 2017). In both elections, as counties' occupational landscape shifted away from the service industry, the model suggests large and significant increases in the share of votes for Republican nominees. In 2012, as one percent of a county's occupations shifted from the service industry to any other type of occupation, the output suggests that the percentage of votes for Romney would increase by 1.13 to 1.61 percentage points. In 2016, as one percent of a county's occupations shifted from the service industry to any other type of occupation, the output suggest that the percentage of votes for Trump would increase by 0.61 to 0.96 percentage points. The output provides evidence that the effect of a shift in a county's occupational landscape significantly differed between the elections. Again, the story presented by the media significantly differs from the results of the analysis. Rather than mustering more support from counties with higher concentrations of manufacturing jobs than the previous Republican nominee, the OLS model suggests that manufacturing workers found Romney to be a more appealing nominee than Trump. A one percent increase in the percentage of jobs in the construction or production sector suggests that Romney would have gained nearly twice as many percentage points in a county's vote share than Trump would have from a similar increase in those occupations.

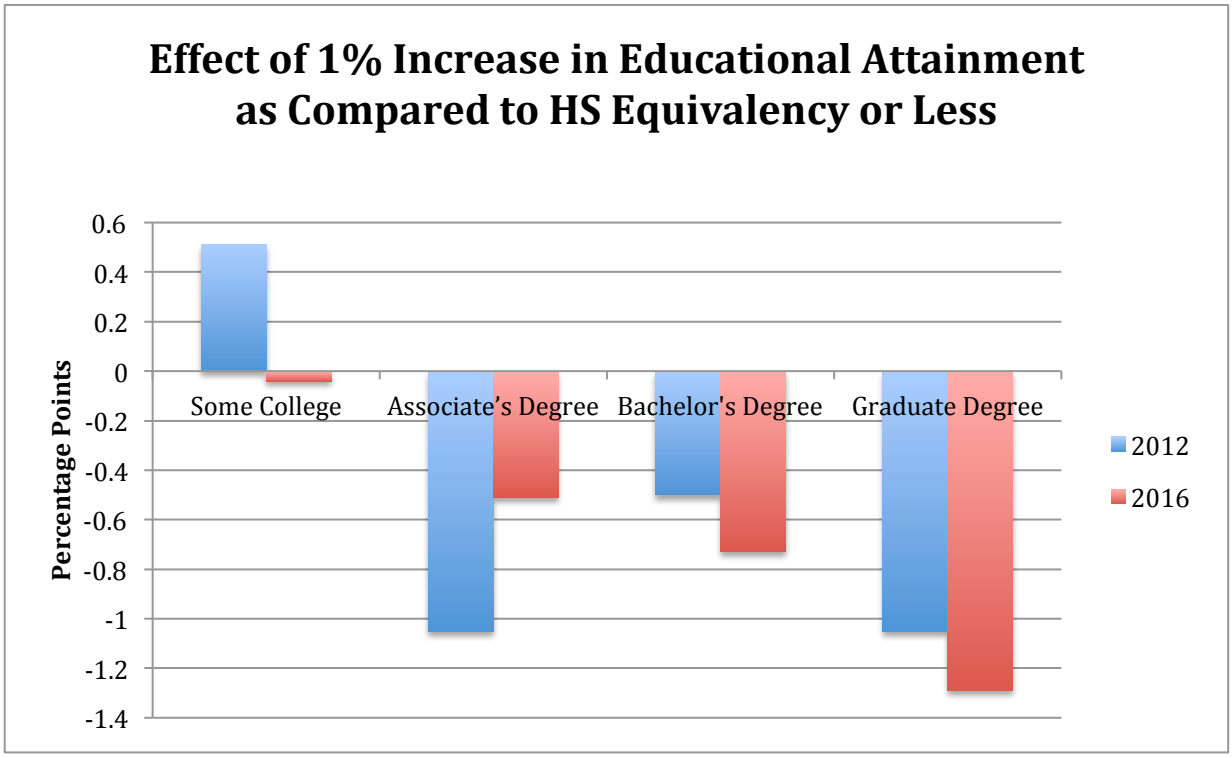
One possible explanation of these differences stems from the presidential nominees' political platforms regarding globalization. In the 2012 election, Obama entered the presidential race as an incumbent candidate. During his tenure, Obama had signed into law three free trade agreements put into motion by George W. Bush, which many considered to be the largest step towards free trade since NAFTA (Abrams, 2011). In turn, the electorate

believed that a continuation in the Obama administration would have led to more policy adhering to the globalist agenda (Nichols, 2012). On the other hand, Romney promised to "champion free trade and restore it as a critical element of our strategy, both in the Middle East and across the world" (Nichols, 2012). In turn Romney chose to adhere to the beliefs of the majority rather than to mobilize a coalition of anti-globalists by adopting a stance that promoted the defense of native workers. In the 2016 election, Hilary Clinton took a more neutral stance towards free trade by openly opposing the Transpacific Trade Agreement (Frizell, 2015). Trump's campaign pushed a protectionist agenda by vowing to put American workers first (Vladimirov, 2017). Yet, the results of the OLS model suggest that these campaign efforts actually decreased support in counties with higher concentrations of secondary sector occupations.

The estimated effect and significance of the education variables were quite different for the two nominees. In 2012, the analysis provides evidence that increases at different levels of educational attainment had varying effects on the percentage of votes received by Romney. If a county had one percent more residents complete some college, rather than simply high school equivalency or less, the share of votes towards the Republican nominee shows an increase of 0.51 percentage points. If one percent more respondents completed degrees, the model shows that Republican county vote share would decrease between 0.50 and 1.05 percentage points. However, more educated counties were gradually less likely to vote for Trump. If the percentage of individuals with a graduate degree increased by one percent compared to the percent of individuals attaining a high school equivalency or less, the Republican nominee's share of county votes would be expected to decrease by 1.48 percentage points. A similar increase in the percentage of individuals receiving an associate's

or bachelor's degree would lead to an expected decrease in Republican votes by 0.51 to 0.73 percentage points. Lastly, there does not appear to be a large or significant effect on the percentage of votes received by the Trump if more individuals in a county were to complete only some college. Thus, the model suggests that more highly educated voters, particularly those completing degrees, tended to vote more heavily against Republican nominees. The model suggests that there exists a significant difference in the effect of increasing a county's average level of educational attainment for those counties with more individuals completing some college or associate's degrees. These results align with the media's conventional narrative that Trump did poorly among educated voters.

Graph B: The Effect of Education on the Percentage of County Votes Received by the Republican Nominees

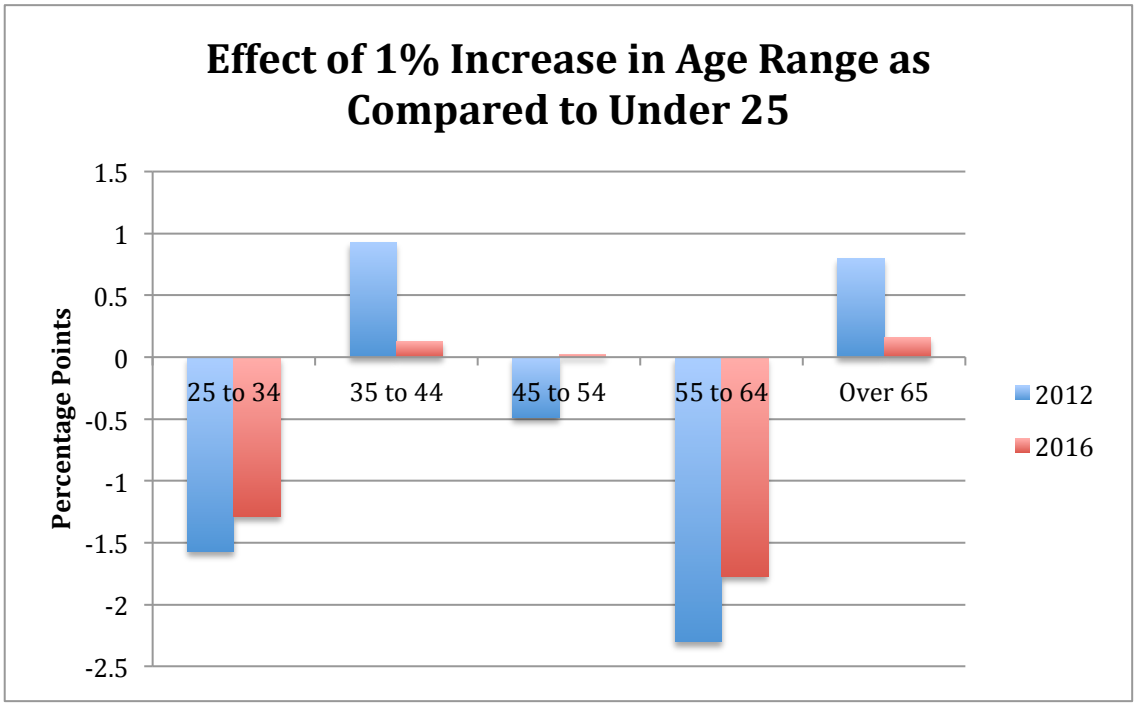


The influence of the healthcare debate dramatically changed between the 2012 and 2016 elections. In 2012, an average county contained nearly one in five people between the ages of 18 and 64 without health insurance. By 2016, the ratio of people in this age range without health insurance was a little over one in eight. While nearly one and a half times as many people within this age range were without insurance heading into the 2012 election, the model suggests that the effect of health insurance on voter behavior significantly differed between the two elections. In 2012, a five percent increase in the percent of individuals without health insurance between the ages of 18 and 64 means that Romney would receive 1.45 percentage points more of a county's votes. In 2016, an equal increase in the uninsured predicts that the number of votes towards Trump would increase by 2.35 percentage points. Between the elections, the average county experienced a six percent decrease in the percent of uninsured individuals. Thus, the analysis suggests that this overall change would have led Trump to receive 2.72 percentage points fewer of the vote share within the average county. In both the 2012 and 2016 election, the Republican nominee promised to repeal the Affordable Care Act. Thus, the percentage of uninsured individuals within the average county remains as the main difference between the two elections. According to the Henry J. Kaiser Family Foundation, approximately forty five percent of adults who remain uninsured cite the high costs of coverage for their lack of insurance (KFF.com, 2017). It has already been demonstrated that counties with a lower median income and higher rates of poverty were more likely to favor the Democratic Party. After controlling for these two measures of economic status, as the percentage of a county's adults without insurance increased, more individuals would favor the Republican nominee. These counties may contain the voters who feel as if the Affordable Care Act has been detrimental to their utility income, and in turn

have abstained from gaining coverage. Thus, voting for the Republican nominee increases the likelihood of repealing the Affordable Care Act and maximizes their expected utility income.

Controlling for age presents some similarity between the two Republican nominees. An illustration of the effect of increases in each age group on the percentage of votes received by Republican nominees can be found in Graph B. Compared to their vote share among voters under 25, Republican nominees tend to perform better among voters between the ages of 35 and 44 years old and those over the age of 65. These results remained fairly consistent between the 2012 and 2016 election. However, contrary to common belief, counties with more individuals over the age of 65 supported Trump significantly less than Romney.

Graph C: The Effect of Age on the Percentage of County Votes Received by Republican Nominees



Rather than act as a control, the results of the OLS model suggest that race played a significant role in both elections. As the percentage of individuals identifying as white increased by one percent, the model shows that Romney would receive 0.30 percentage points more of the county level vote share. Much media attention has focused on the role of white identity politics in the 2016 election. After eight years with an African American President, many claim that Trump successfully motivated white Americans to vote against another four years of Democratic control by alluding to times long since forgotten (Edsall, 2017). The results of the OLS model support these beliefs. Trump gathered significantly more support from counties with a higher percentage of white individuals than Romney. A one percent increase in the percentage of the population identifying as white means that the Republican nominee would receive 0.47 more percentage points of a county's vote share.

Finally, the dummy variable for the election year suggests that on average Trump received 0.70 fewer votes than Romney. This result conflicts with the findings of Abramowitz (1988), who suggests that voters are significantly more likely to vote against the incumbent party if their tenure in office extends beyond two terms. However, Hilary Clinton received more votes than any other losing nominee in presidential history, having outpaced Trump in the popular vote by nearly three million votes (Krieg, 2016). Thus, the negative coefficient estimate of the dummy variable should not be a surprising result since the dependent variable essentially measures county level popular vote.

The OLS models explain approximately sixty two percent of the variability in the percentage of county level votes received by the Republican nominees. The average prediction differs from the observed percentage of votes by approximately nine percentage points. Conducting Breusch-Pagan tests provides evidence of heteroscedasticity. Thus, the

models were estimated using robust standard errors. In general, the significance of the main independent variables remained unchanged. The results presented above and those found in Table B reflect these robust levels of significance. Investigation of the variance inflation factor suggests redundancy among a few of the independent variables contained in the model. While multicollinearity convolutes the interpretation of each variable's independent effect, the model remains unchanged. Multicollinearity makes it difficult to obtain small standard errors, but these models use a large enough sample size such that this does not present a problem.

Table B: OLS Regression Output

Percentage of Votes Towards Republican Nominee

Variable	**2012**		**2016**	
Log Median Earnings	-0.06	*	0.04	*
Unemployment	-0.92	***	-0.22	*
Below Poverty	-0.36	***	-0.15	**
Moved within Same County	-0.14		0.02	
Moved within Same State	-2.01	***	-1.07	***
Moved to Different State	0.85	***	1.04	***
Moved from Abroad	2.90	***	-2.73	***
Management	1.61	***	0.96	***
Sales	1.13	***	0.75	***
Construction	1.50	***	0.68	***
Production	1.18	***	0.61	***
Some College	0.51	***	-0.04	
Associate's Degree	-1.05	***	-0.51	***
Bachelor's Degree	-0.50	***	-0.73	***
Graduate Degree	-1.05	***	-1.29	***
18 to 64 Uninsured	0.29	***	0.47	***
White	0.30	***	0.47	***
Age: 25 to 34	-1.57	***	-1.29	***
Age: 35 to 44	0.93	***	0.13	
Age: 45 to 54	-0.49		0.02	
Age: 55 to 64	-2.30	***	-1.77	***

Age: Over 65	0.80	***	0.16	
Dummy 2016	0		-0.70	
Constant	0.38		-0.32	
R^2 (Adjusted)	0.5472		0.4877	
Root MSE	0.094		0.1101	

Bolded variables' effect significantly differed between the elections at the 5% level of significance; italicized variables effect significantly differed between the elections at the 15% level of significance
*** p<.05
** p< .10
* p <.15

5.2. Fixed Effects Model Results

After controlling for the time-invariant differences within counties, the fixed effect regression provides evidence for a relationship between the change in the percentage of county votes received by Republican nominees and changes in county level economic and demographic factors. The results of this model can be found in Table C. For a given county, as median earnings increased by ten percent, the percentage of votes towards the Republican nominee would increase by 0.4 percentage points. The model suggests that the effect of a county's median earnings was significant at the fifteen percent level of significance. However, a county's average median earnings are unlikely to change significantly over four years. In fact, the average county's median income grew by only two percent from 2012 to 2016. At the very least, a single county's growth in median earnings is likely highly correlated with the growth of other counties. In turn, it does not come as a surprise that the first difference regression output suggests that it was only moderately significant at explaining the variation in the percentage of county level votes received by Republican nominees. These results align with the reward punishment theory of voter behavior; as

counties' egotropic conditions declined, they were more likely to shift their support away from the incumbent party.

County level sociotropic economic conditions that affect the percentage of votes received by the Republican nominee had differing effects. After controlling for time constant factors in each county, a one percent increase in the unemployment rate of a county over time suggests that a Republican nominee would receive 0.14 percentage points less of the vote share. Unemployment was significant at the ten percent level of significance. However, a one percent increase in the percent of individuals below poverty within a county predicts the Republican nominee would gain an additional 0.18 percentage points of the vote. Changes in the county level poverty rate were significant at the five percent level of significance. This suggests that counties experiencing a higher poverty rate since the last election were more likely to favor Trump. Again, these results align with the reward punishment theory of voter behavior; as counties' poverty rate conditions increased, they were more likely to shift their support away from the incumbent party. The negative coefficient estimate of the unemployment rate may result from the fact that the average county experienced a nearly four percent decrease in unemployment since the last election.

Estimating the effect of the geographic mobility variables benefits from eliminating time invariant county level factors. Mayda, Peri, and Steingress (2016) insist that the effects of immigration largely depend on recent migrant patterns. The geographic mobility variables suggest that as a given county experienced changes in the rate of individuals moving into a county from increasingly far away, the change in the percentage of county level votes received by Republican nominees would gradually decrease. The result supports the finds of the OLS model. The model suggests that only changes in the percentage of individuals

moving within the same county, as compared to remaining within the same home, had a positive influence on the change in votes experienced by Trump. The output does not provide evidence to suggest this variable had a statistically significant effect on vote share. All of the other variables measuring geographic mobility were significant at the five percent level of significance. For a given county, as the percent of individuals moving into the county from a different county or different state varied between the elections by one percent, the percentage of votes received by Trump as compared to Romney would decrease between -0.29 and -0.41 percentage points. However, a county experiencing one percent more immigration between the two elections would be expected to reduce their support of the Republican nominee by -0.74 percentage points. Again, it is important to remember that the average county has less than one percent of the population enter from abroad in a given year. Thus, an increase of one standard deviation (0.0076) over time would cause a 0.56 percentage points decrease in the percentage of county level votes received by Trump as compared to Romney. The results of the fixed effects model support the notion that counties with more immigrants since the last election actually favored Trump less so than they had favored Romney.

Two factors that remain fairly consistent over time and may influence voters' perception of high immigration include: party identification and location. Kim, Elliottt, and Wang (2002) suggest that parties' core coalitions have become increasing more spatially concentrated over time. Individuals identifying with the Democratic Party are more supportive of pro-immigration policy. On the other hand, counties with a higher concentration of Republican identifiers are less receptive to immigration. Lastly, immigrants are more likely to enter areas that are accepting of immigration and provide greater opportunity, such as cities (Bartel, 1989). On the other hand, rural communities with a high

concentration of occupations in the primary and secondary sector may fear competition from low wage foreign labor. After controlling for these factors, the general consensus among the electorate, even those exposed to more immigrants between the elections, seemed to have opposed Trump's stance on immigration.

However, it is still important to recall that the literature suggests the effects of immigration on an individual's voting behavior are highly influenced by their occupation. After controlling for the time constant factors in each county, the results of the fixed effects model align with the findings of previous literature. Counties experiencing an increase in the percentage of occupations outside of the service sector would have favored Trump more so than they had Romney. An increase of one percent in sales and production sector jobs over time suggests that the county level share of Republican votes would have increased by 0.05 to 0.09 percentage points. The output suggests that these occupational landscape shifts were insignificant in their effect on the difference in votes received by the Republican nominees. Yet, changes in the construction sector had a statistically significant effect on the change in county level votes received by Republican nominees. For a given county, as the percentage of occupations in the construction sectors increased by one percent between the two elections, the percentage of votes towards Trump as compared to Romney would increase by 0.24 percentage points. These results provide further evidence that counties with a higher concentration of secondary sector jobs are more likely to support the Republican Party. Nevertheless, this result does not suggest that Trump appealed more so than Romney to voters working in these occupations. Rather, as suggested by the OLS model, counties with more secondary sector occupations had a significantly larger inclination to vote for Romney.

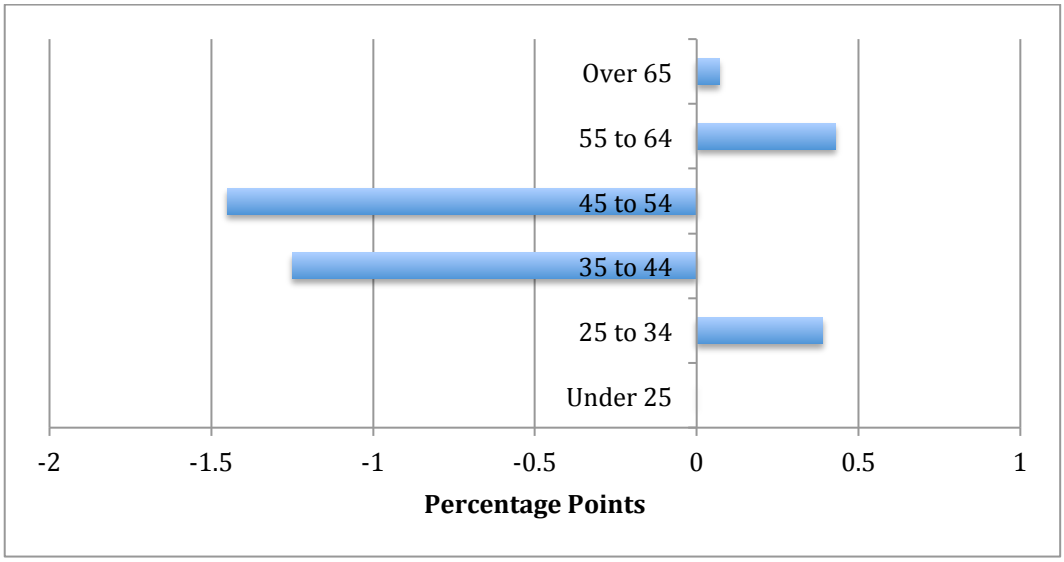
The fixed effects model suggests that changes in the educational attainment of a county influenced the election outcome. While counties that were highly educated heavily voted against Trump, counties becoming more educated since the last election did not necessarily vote against the Republican nominee as much so as they had Romney. In a given county, as the percentage of individuals going from high school to some college or receives an associate's degree between the elections increased by one percent, the percentage of votes for the Republican nominees increased by 0.31 to 0.56 percentage points. The effect of these county level changes was highly statistically significant. This result may be due to the American Community Survey's definition of associate's degrees, which includes both academic programs and occupational programs. An equal increase in the percentage of individuals with a graduate degree within a county suggests that Trump would have received 0.40 less percentage points of county vote share than Romney. Most surprisingly of all, a county experiencing a change in the percentage of individuals completing Bachelor's degrees over time had an only slightly positive and insignificant effect on the difference in county level votes received by the Republican nominees. The results of the fixed effects model and OLS model are slightly contradictory and should be subjected to further consideration.

The difference in the political climate surrounding the healthcare debate led to interesting results, even after controlling for time constant county level characteristics. However, unlike the OLS model, controlling for the time constant county factors suggests that an increase in the percentage of uninsured adults between the elections negatively impacted the percentage of county level votes received by Trump. A county with one percent more uninsured adults between the ages of 18 and 64 suggests that Trump would have received -.06 percentage points less votes than Romney. However, the percentage of

uninsured individuals between the ages of 18 and 64 within a county was only significant at the fifteen percent level. While the average county saw declines in the percentage of uninsured adults, counties experiencing an increase between the elections may no longer have favored an appeal of the Affordable Care Act.

Again, the fixed effects model suggests that racial identity played a significant role in the 2016 election. Within a given county, as the percentage of individuals identifying as white increased by one percent, Trump would be expected to have received 0.15 percentage points more votes than Romney. This result affirms Kim, Elliott, and Wang's (2002) assertion that homogenous white counties increasingly lean Republican and evidences the media claim that Trump appealed more heavily to white Americans than did Romney.

Graph D: The Effect of One Percent Increase in an Age Range on the difference in Percentage of County Votes Received by Republican Nominees



After controlling for time-invariant county factors, the introduction of the age control variables in the fixed effects model suggests the effect of an aging population to be vastly

different than the OLS model. Particularly, as the percentage of 45 to 54 year olds increased between the elections, the model suggests that Trump would have received fewer county level votes than Romney. Graph C illustrates these effects. Lastly, the dummy variable for the election year suggests that if none of the economic and Democratic conditions within a county varied between the two elections, Trump received 0.19 less votes than Romney within the average county.

While the fixed effects model presents interesting results for consideration, removing time constant county level characteristics does not come without consequence. Fixed effects has the ability to reduced the variation of the explanatory variables, which potentially leads to larger coefficient estimate standard errors. In this particular model, there are two sets of variables that Wooldridge (2012) asserts are prone to this pitfall – age, education, and race. Further, as evidenced by the average county levels presented in Table A, county level median earnings, poverty rates, and geographic mobility changed very little between the two elections. However, the use of a large cross-section and difference over a time period greater than one year combats this potential danger. Thus, heteroscedasticity remains as the other primary concern facing the use of first difference models.

A modified Wald test for group wise heteroscedasticity provides significant evidence for the existence of heteroscedasticity within the model. Again, this analysis used robust standard errors to interpret the significance of county level economic and demographic differences. The results presented in Table D reflect this assessment. Wooldridge (2012) asserts that it is fair to assume the model fulfills all other classical linear model assumptions. Thus, the estimators presented are unbiased. The output asserts that the correlation between the error and independent variables to be approximately -0.03. While not very large, the

correlation provides evidence that the time-invariant county factors correlate with the independent variables. Performing a Hausman test provides further evidence to suggest that the use of fixed effects was more appropriate than random effects. Thus, fixed effects regression allows for the elimination of any unobserved heterogeneity found in the OLS model by eliminating the county level time-invariant factors influencing Republican vote share. Ultimately, utilizing first differences estimates the effect of county level changes in county level economic and demographic measures on the difference in county level votes received by the two Republican nominees.

Table C: Fixed Effects Regression Output

Percentage of Votes Towards Republican Nominee

Variable		
Log Median Earnings	-0.04	*
Unemployment	-0.14	**
Below Poverty	0.18	***
Moved within Same County	0.08	
Moved within Same State	-0.29	***
Moved to Different State	-0.41	***
Moved from Abroad	-0.74	***
Management	0.12	
Sales	0.05	
Construction	0.24	***
Production	0.09	
Some College	0.31	***
Associates Degree	0.56	***
Bachelor's Degree	0.06	
Graduate Degree	-0.40	***
18 to 64 Uninsured	-0.06	
White	0.15	***
Age: 25 to 34	0.39	
Age: 35 to 44	-1.25	***
Age: 45 to 54	-1.45	***
Age: 55 to 64	0.43	

Age: Over 65	0.07	
Constant	-0.02	***

Bolded variables' effect significantly differed between the elections at the 5% level of significance; italicized variables effect significantly differed between the elections at the 15% level of significance

*** p<.05

** p< .10

* p <.15

6. Conclusion

The results of this paper support the findings from previous literature regarding the determinants of voting behavior and election outcomes. While the results of the 2016 election came as a surprise to the many individuals forecasting a Democratic victory, examining county level economic and demographic data explain sixty three percent of the variation in county level election results. The fixed effects model results suggest that twenty percent of the difference in county election outcomes can be explained by the same economic and demographic variables. Utilizing county level data allows for a large cross sectional sample at the smallest spatial unit that can accurately measure economic and demographic variables (Kim, Elliottt, and Wang, 2002).

The results suggest that the conventional wisdom of economic voting theory holds; sociotropic economic conditions influence voter behavior, even at the county level. While Trump appears to have cut into the Democratic Party's stronghold over counties experiencing the worst economic conditions, counties with higher levels of unemployment and poverty were still more inclined to favor the Democratic Party. Additionally, the results suggest that, contrary to the conventional media narrative, Trump did not actually outperform the Democratic nominee in impoverished counties. However, the results of the fixed effects model suggest that counties with more individuals under the poverty rate since the 2012 election were inclined to punish the incumbent party at the polls. Sociotropic economic conditions appear to be more influential than egotropic conditions on voter behavior. The effect of egotropic economic conditions was smaller and less significant during the 2016 election than the 2012 election.

This research also examined the role of globalization and immigration on the salience of economic conditions on voter behavior. Hellwig (2008) found evidence of the global constraint theory, which suggests that the electorate deemphasizes economic conditions if they believe the political elite has less influence on domestic conditions due to globalization. However, many argue that these perceptions are driven by an individual's occupation (Hellwig, 2001; Jensen, Quinn, Weymouth, 2017; Halla, Wagner, and Zweinmüller, 2017). The media commonly implies that Trump motivated voters in the manufacturing industry to support the Republican Party. However, the results of the OLS model show that counties with a higher concentration of secondary sector workers were significantly more inclined to vote for Romney than Trump.

Mughan, Bean, and McAllister (2002) argued that right wing parties often use the increasingly globalized economy and polarizing political rhetoric to create a fear of refugees and illegal migrants in affluent democracies. One could argue that Trump's tough stance on immigration and his consistent campaign promises to secure the Mexican boarder exacerbated these sentiments. The OLS model suggests that counties with higher ratios of immigrants to county natives were significantly more likely to support the Democratic Party in 2016 than in 2012. In order to understand the true effects of immigration, this analysis focused on recent trends in county level immigration (Mayda, Peri, and Steingress, 2016). The fixed effects model provides further evidence that counties with increasing levels of immigration were less likely to favor Trump. Further research into the effect of immigration should focus on how counties react to immigrants depending on their nationality.

Nonetheless, the media's explanation of the surprising election results is not always too far from the truth. Particularly, the conventional narrative that more educated voters

opposed Trump while white voters strongly supported the Republican nominee. In both elections, as the percentage of individuals continuing their education beyond high school increased the Republican Party saw decreases in support. These effects are most pronounced among those completing degrees. While white Americans supported the Republican nominees in both elections, they were significantly more likely to support Trump. These results suggest that Trump's campaign allusions to a better, almost indisputably whiter, America ("Make America Great Again") that has come and gone may have been his most effective campaign strategy.

As with any study, this research is not without its limitations. There are inherent limitations to the Census Bureau's use of statistical models to estimate the one-year American Community Survey datasets. In particular, the 2016 supplemental tables report on counties with a population threshold of 20,000 individuals while the 2012 tables only report on counties with greater than 65,000 people. These population thresholds prevent the dataset from including all of the counties in the United States. Thus, the dataset contains sample selection bias. In turn, certain values of the error term, such as having a smaller county population, may be correlated with the dependent variable. If for example, smaller counties were more likely to favor Republican candidates, then the coefficient estimates in the models would be inherently biased. Further, the inconsistency in the measurement of political and community data in Alaska prevents its use in the analysis.

There exist widespread practical implications for understanding the determinants of election outcomes, especially for an election featuring a radically atypical nominee such as Trump. It is commonly accepted that elections are the most important feature of modern democracies and that the vote remains the citizen's most powerful tool for change. At the end

of the day, the biggest weakness of elections is that they fail to present the concerns of the electorate to prospective leaders; instead they reveal only one thing – winners and losers. After an election, the discourse concerning the trajectory of our nation is beyond the control of the common American (Hershey, 1992). Having a better understanding of the economic and demographic determinants of county level election results illuminates the ways in which political campaigns appeal to portions of the electorate. Also, examining how changes in these county level factors influenced the change in partisan support demonstrates which issues are the most pertinent to the modern electorate. In an increasingly politically polarized America, this understanding could lead to effective policy implementation that might just help to mitigate the divisiveness of our nation. Where the conventional narrative of the media influences the beliefs of the general electorate, this research provides evidence that at times these assertions should be further investigated before widely accepted. If at all anything, these results may provide a framework for the Democratic Party when selecting its next presidential candidate such that they may better position themselves for a successful 2020 election. Further research into the influence of globalization and immigration on election outcomes should investigate the ways in which trade interacts with economic perceptions and an immigrant's nationality impacts natives' economic perceptions.

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II. Appendix

Model A – OLS Estimation

$$\%\ \text{Republican} = \beta_0 + D_{2016} + \beta_1 \ln(median\ earnings) + \beta_2 Some\ College +$$
$$\beta_3 Associate + \beta_4 Bachelor + \beta_5 Graduate\ Degree + \beta_6 UN + \beta_7 Not\ in\ LF +$$
$$\beta_8 Moved\ within\ County + \beta_9 Moved\ within\ State + \beta_{10} Moved\ within\ Country +$$
$$\beta_{11} Moved\ from\ Abroad + \beta_{12} Age\ 18\ to\ 64\ with\ Insurance + \beta_{13} Management +$$
$$\beta_{14} Sales + \beta_{15} Construction + \beta_{16} Production + \beta_{17} Pop.\ Under\ Poverty +$$
$$\beta_{18} Pop.\ 18\ to\ 24 + \beta_{19} Pop.\ 25\ to\ 34 + \beta_{20} Pop.\ 35\ to\ 44 + \beta_{21} Pop.\ 45\ to\ 54 +$$
$$\beta_{22} Pop.\ 55\ to\ 64 + \beta_{23} Pop.\ over\ 65 + \beta_{24} white + D_{2016} *$$
$$\beta_{25} \ln(median\ earnings) + \cdots + D_{2016} * \beta_{48} White + \mu$$

Model B – Fixed Effects Estimation

$$\Delta\%\ \text{Republican} =$$
$$\delta_0 + \beta_1 \Delta \ln(median\ earnings) + \beta_2 \Delta Some\ College + \beta_3 \Delta Associate +$$
$$\beta_4 \Delta Bachelor + \beta_5 \Delta Graduate\ Degree + \beta_6 \Delta UN + \beta_7 \Delta Not\ in\ LF +$$
$$\beta_8 \Delta Moved\ within\ County + \beta_9 \Delta Moved\ within\ State +$$
$$\beta_{10} \Delta Moved\ within\ Country + \beta_{11} \Delta Moved\ from\ Abroad +$$
$$\beta_{12} \Delta Age\ 18\ to\ 64\ with\ Insurance + \beta_{13} \Delta Management + \beta_{14} \Delta Sales +$$
$$\beta_{15} \Delta Construction + \beta_{16} \Delta Production + \beta_{17} \Delta Pop.\ Under\ Poverty +$$
$$\beta_{18} \Delta Pop.\ 18\ to\ 24 + \beta_{19} \Delta Pop.\ 25\ to\ 34 + \beta_{20} \Delta Pop.\ 35\ to\ 44 + \beta_{21} \Delta Pop.\ 45\ to\ 54 +$$
$$\beta_{22} \Delta Pop.\ 55\ to\ 64 + \beta_{23} \Delta Pop.\ over\ 65 + \beta_{24} \Delta White\ 65 + \Delta\mu$$

Table A: Table of Variable Means and Definitions by Year

Category	Definitions	Source	Variable	Means (2012)	Means (2016)
Earnings Variables	Median earnings ($) by identifying category	ACS* Supplemental Data: 1-Year Estimates (2016) ACS Standard Data: 1 Year Estimates (2012)	Total: All Males: Employed Males: All Females: Employed Females:	29107.99	29791.04 35806.75 46547.84 24459.75 36055.83
Education Variables	% of respondents in each education category	ACS* Supplemental Data: 1-Year Estimates (2016) ACS Standard Data: 1 Year Estimates (2012)	0 to 8th grade: Completed 12th: HS degree: College credit: Associates degree: Bachelor's degree Graduate degree:	 0.22 0.08 0.17 0.10	0.04 0.08 0.33 0.21 0.09 0.15 0.09
Employment Variables	% of respondents in each education category	ACS* Supplemental Data: 1-Year Estimates (2016) ACS Standard Data: 1 Year Estimates (2012)	In labor force: Employed: Unemployed: Armed forces: Not in labor force:	 0.09 0.36	0.59 0.94 0.050 0.003 0.41
Geographic Mobility Variables	% of respondents in each geographic mobility category	ACS* Supplemental Data: 1-Year Estimates (2016) ACS Standard Data: 1 Year Estimates (2012)	Same Home: Same county: Same state: New State: Immigrant:	0.84 0.09 0.04 0.01 0.004	0.86 0.08 0.04 0.02 0.004
Health Insurance Variables	% of respondents in each insurance category	ACS* Supplemental Data: 1-Year Estimates (2016) ACS Standard Data: 1 Year Estimates (2012)	Insured U18: Uninsured U18: Insured 18 to 64: Uninsured 18 to 64: Insured O65: Uninsured O65:	0.94 0.06 0.81 0.19 0.994 0.006	0.95 0.05 0.87 0.13 0.995 0.005
Occupation Variables	% of respondents in each occupation category	ACS* Supplemental Data: 1-Year Estimates (2016) ACS Standard Data: 1 Year Estimates (2012)	Management: Service: Sales: Construction: Production:	0.34 0.18 0.24 0.10 0.13	0.32 0.18 0.23 0.11 0.16
Population Variables	% of respondents in representing each age group or race	ACS* Supplemental Data: 1-Year Estimates (2016) ACS Standard Data: 1 Year Estimates (2012)	Under 18: 18 to 24: 25 to 34: 35 to 44: 45 to 54: 55 to 64: Over 65: White:	0.23 0.10 0.13 0.13 0.14 0.13 0.14 0.79	0.22 0.10 0.12 0.12 0.13 0.14 0.17 0.80
Poverty Variables	% of respondents in each poverty level	ACS* Supplemental Data: 1-Year Estimates (2016) ACS Standard Data: 1 Year Estimates (2012)	Under Poverty: Above Poverty:	0.16 0.84	0.15 0.85
Election Variables	% of votes for candidates, Winning Candidate indicator variable, Flipped County Indicator variable	Bucknell University Department of Digital Pedagogy & Scholarship	% of votes Republican: % of votes Democrat: Winning Candidate: FLIP:	0.57 0.41 0.27	0.60 0.35 0.79 0.09