

Into the Political Fray: The Effect of State Level Politics on the
Incidence of Food Deserts^{*}

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Abstract

Access to healthy and affordable foods, and what access means, is at the forefront of a plethora of policy debates throughout the United States. This paper explores the effect of state level politics on three factors that increase the likelihood of food deserts: urban geographic areas, and areas with large proportions of poor and ethnic populations. Drawing on 2010 census data and data coded from ProQuest and Ballotpedia, this study explores the period between 2000-2009, observing whether the state-level partisan imprint exacerbates or mitigates access to food for individuals living within census tracts that are classified as urban tracts, who are classified as ethnic, and who are economically disadvantaged. I find that undivided Republican control within state governments intensifies the influence that ethnicity has on exacerbating the presence of food deserts.

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Introduction

Access to healthy and affordable foods, and what access means, is at the forefront of a plethora of policy debates throughout the United States for government officials and scholars alike. Within the United States, the ability to access affordable and healthy foods has become a privilege. Meaning, many people throughout the United States are without easy and cheap access to markets that provide necessary and reasonably priced food products. The very notion that there are some not able to access what should rightfully be theirs in the “land of the free” is the antithesis of what America is and what it should be. However, as many studies suggest, the concern of who is being afforded access to certain foods is not one that should be guided solely on moral whims. Eating habits and the ability to access adequate foods have alarming economic consequences when considering the effect that poor nutrition has on the resistance to disease, on intellectual and behavioral development in children, on mortality rates among children, and the productivity of a nation’s adults (Rose, Nicholas Bodor, Swalm, C. Rice, A. Farley, & Hutchinson, 2009, p. 3).

Research conducted on/about food deserts tend to either assert that food deserts are caused by *x* (usually population density, income, and ethnicity), or contend with the legitimacy of the term. Within the literature, there lacks any real research that studies the effect/role that politics plays in determining who has easy and affordable access to food and where that access occurs. What this paper seeks to accomplish is to demonstrate the effect that state level politics has, if any at all, on relationships that we already know exist between food deserts and urban geographic areas with large proportions of poor, and ethnic peoples. The second objective of this paper is to provide information that contributes to, and aides in, “calibrat[ing] the scope and expense of public policy responses, the costs to the nation in

human and economic terms from the failure to act effectively, and the rate of progress or regression in addressing the problem” (Eisinger, 1996, p. 215).

Origins of “Food Desert”

The concern of adequate access to food within people’s neighborhoods arose in the 1960s with the utilization of technology to document the ways in which hunger ravaged the country. At this time, hunger was beginning to be viewed by Americans as “a chronic condition for a sizable, though elusive, number of their fellow citizens” (Eisinger, 1996, p. 214). In the 1970s, the United States saw a remarkable growth of programs offering food assistance, most likely as a response to national surveys conducted by the Ten State Nutrition Survey, and the first National Health and Nutrition Examination Survey which established evidence of the correlation that exists between poverty and diet/nutritional outcomes, along with other studies of a similar nature (Rose, Nicholas Bodor, Swalm, C. Rice, A. Farley, & Hutchinson, 2009; USDHEW and CDC, 1971, USDHEW and NCHS, 1974).

Low access to healthy and affordable foods have historically been viewed as a “problem related to inadequate household resources” (Rose et al., 2009, p. 3). The household resource problem has been addressed by many assistance programs such as The Supplemental Nutrition Assistance Program (SNAP). Formerly known as the Food Stamp Program, SNAP is headed by the U.S. Department of Agriculture. A program that was relatively similar amongst the states prior to the 1996 welfare reform legislation is now left in the discretion of States, who have a considerable say in deciding how exactly they direct the program. Despite the fact that “the maximum benefit levels and the benefit calculation formula are set at the Federal level, States have the option to adopt policies that may affect eligibility for benefits,

the transaction costs associated with enrolling and maintaining benefits,” etc. (Stacy, Tiehen, & Marquardt, 2018). SNAP among other programs such as the Supplemental Nutrition Program for Women, Infants, and Children (WIC) and subsidized school lunches and breakfast all work together in order to influence consumption through income.

However, financial assistance via food programs only goes so far. Prices of food differ depending on location. Discussions of food access have thus shifted from the household to “food deserts”/community environments with inadequate access to food, leading to the “geographic dimensions of food access” that we see in much of the literature today (Rose, Nicholas Bodor, Swalm, C. Rice, A. Farley, & Hutchinson, 2009, p. 3).

Identifying “Food Desert”

The United States Department of Agriculture defines low food security as the “reduced quality, variety, or desirability of diet,” where there is no clear indication that there has been a reduction in the amount of food intake of individuals. They define very low food security as there being “multiple indications of disrupted eating patterns and reduced food intake” (United States Department of Agriculture). Such geographic areas in recent literature have been classified as food deserts. In the U.S., the 2008 Farm Bill defined a food desert as “an area in the United States with limited access to affordable and nutritious food, particularly such an area composed of predominately lower-income neighborhoods and communities” (Food, Conservation, and Energy Act of 2008, p. 394). The term “food desert” is relatively young, coined in Scotland in the early 1990s and appearing first in a government publication in 1995 in a policy document drafted by the Low Income Project Team for the government’s Nutrition Task Force (Cummins & Macintyre, 2002, p. 436). The term “food desert” can vary

well be understood literally as an area in which is lacking the adequate and needed access to retail foods; however, many studies and literature more commonly consider the role in which socioeconomic status plays in determining said access to food (Beaulac, Kristjansson, & Cummins, 2009, p. 1).

Extensive research has shown that “Americans living in low-income and minority areas tend to have poor access to healthy food” (Beaulac et al., 2009, p. 4). Communities with low access to healthy and affordable foods is often associated with high poverty rates, large proportion of minority populations, and population density. As Deener (2017) explains, there are millions of people who are living in geographic areas that are without access to supermarkets, “a problem disproportionately impacting low-income communities and communities of color” (p. 1285). The author uses the case of the food desert in order to demonstrate the role in which infrastructural exclusion, a term referring to the “reorganization of spatial and material interdependence into a semi-autonomous and path-dependent force that separates resources from those reliant on them,” plays in the production of urban inequality (Deener, 2017). The argument that infrastructural exclusion is producing urban inequality seen in the existence of food deserts throughout the country relies on the premise that proper infrastructure acts as a catalyst for connecting and sustaining ties between different social groups and geographical areas. Without this connection, public access to resources such as food, water, and electricity become at-risk (Deener, 2017, p. 1286).

Supermarket vs. Convenience, Population Density and Institutional Flaws

Debates around types of stores providing food further complicate the definition of food deserts, particularly in differences between supermarkets and chain grocery stores as

compared to non-chain grocery/independent and convenience stores. Studies have shown that convenience stores have higher prices and less healthy food options than supermarkets and chain grocery stores. Further studies show that variety discount chain stores (Dollar General, Family Dollar, etc.) are more likely found in poor zip code areas, and that neighborhoods with higher proportions of socioeconomic poor people tend to have less access to supermarkets, where food prices are cheaper and fresh fruits and vegetables made more readily available (Powell, Slater, Mirtcheva, Bao, & Chaloupka, 2007; Walker, Keane, & Burke, 2010). Thomas (2010), a skeptic of the majority of food desert literature, that focuses on the construction of food deserts based on the premise of distance to and from food retailers, simultaneously recognizes that food insecure households are typically located further away from supermarkets (p. 1553).

It is also important to note that the number of chain/non-chain supermarkets within a certain city/community does not necessarily mean that everyone can access said markets. The proximity of stores is essential in accessing healthy and affordable foods for racial minorities and economically disadvantages peoples. Only “37% of African American shoppers travel one mile or less to their primary grocery store” (Powell et al., 2010, p. 193). If one is looking to address the issues that cause food deserts, or to at least enact policy that is aimed at providing food for those without access, mobility constraints of those who are economically and socially disadvantaged need to be examined. According to the U.S. Department of Transportation, those who are economically disadvantaged are more likely to lack a private means of transportation, and with grocery shopping comes the process of transporting multiple bags back to one’s home from the store; thus, “the mobility strategies for food shopping among low-income families will exacerbate the barriers to a limited number of

available local area supermarkets, in particular chain supermarkets (Powell et al., 2010, p. 193). Thus, it is accurate to deduce that because “low-income residents may have difficulty affording transportation costs to the supermarket located outside of their immediate vicinity,” their access to food options are limited substantially (Walker, Keane, & Burke, 2010, p. 878).

When considering location, which ultimately determines the size and the number of retail stores within a given area, it is important to recognize the cost factors that exist for businesses. Simultaneously, it is also important to consider the effect that population density has on demand, given the fact that “in addition to income, demand depends on population density and transportation cost” (Bellinger & Wang, 2011, p. 258). Increased competition, land cost, labor cost, etc. can all prove to be substantial challenges for large scale grocery or retail stores – especially in densely populated areas (p. 256).

However, even though such logical entrepreneurial apprehensiveness to bring food retailers into densely populated areas of need exists, Bellinger and Wang (2011) still observe that “discrimination is perhaps the most well-established social factor affecting retail location choice” (p. 256). Deener (2017) argues that this refusal to bring food retailers and other stores to areas with dense populations of Black people stems from the reorganization of both public and private infrastructures of the 1930s onward. This stage, which arguably can be defined as the origin of the modern day food desert, saw grocery chains succumbing to “infrastructural pressures” that sought to maximize profitability – which meant moving supermarkets to the suburbs and closing “down dozens of less profitable urban stores during a precarious period of change, giving rise to infrastructural exclusion as a form of deprivation in an era of advanced capitalism” (Deener, 2017, p. 1286). Discussing prejudices, specifically those held by white populations, is important to discuss in the context of food deserts for many reasons.

Primarily, as previously stated, such prejudices ultimately have an effect on the retail demand in specific areas. Though previous work from Quillian and Pager (2001) find that a positive correlation indeed exists between African American populations and crime, white communities overestimate this correlation, which often dissuades Caucasians from shopping in mixed and/or African American neighborhoods. This reluctance from the white consumer, who generally has a higher average income, to shop in mixed or black neighborhoods implies lower aggregate retail demand in black neighborhoods.

Kwate, Loh, White, and Saldana (2013) explore the racialization of day-to-day retail resources through redlining. Provisions of public or private services that aide in a healthy day-to-day lifestyle are essential in creating healthy neighborhoods; along with public or private services, the reputation of an area is extremely important in constructing healthy and functional neighborhoods (Kawate et al., 2013). The authors emphasize how reputation influences the way in which black neighborhoods are perceived by residents, planners, investors, etc. that ultimately leads to deficits in quality goods and services that can be contributed to the “poor commercial viability or deficits in resident consumerism,” meaning that black neighborhoods often have faulty reputations that inhibits those neighborhoods from attracting specific opportunities that would otherwise allow for growth and development (Kwate et al, 2013, p. 633). Alluding to past literature and data analyses, Kwate et al. (2013) find that the that proportion of Black residents within neighborhoods is “consistently inversely related to resources important for promoting and maintaining health” which offers the question why (p. 633)? They surmise that the systematic avoidance of black neighborhoods by retailers and the labeling of said places as being less rational markets creates a system of retail redlining. This “spatial discrimination whereby retailers, particularly

chain stores, fail to serve neighborhoods or target them for unfavorable treatment based on the racial composition of the customers and/or the store operators” (Kwate et al, 2013, p. 634) echoes other food desert literature that argues that institutional and systematic failures and policies are to blame for food scarcity. This redlining ultimately has a negative impact on health for those living within the redlined zones.

This racialization of institution is not some new phenomena. Lipsitz (2006) tracks the racialization of the housing sector in order to demonstrate how race is not just an individual issue, but how it is systemic and rooted in the very depths of the United State’s legal system and its institutions. When specifically looking at housing, it is important to identify the ways in which

“resistance and refusal to desegregate the private housing market helped preserve the possessive investment in whiteness... inhibiting [the] accumulation of assets, depriving [minorities] of the increased equity that comes with home ownership, and devaluing the assets that they might have passed on to their children” (Lipsitz, 2006, p. 27).

This very clear tie between poverty and assets (i.e. property) has been a fundamental tool in which to deny those living in poverty, often times people of color, from accumulating wealth and access to necessities such as food, escaping from the cyclical trend of poverty, and bettering their lives.

As research from Beaulac et al. (2009) shows, communities with large levels of low income individuals and racial minorities, more specifically blacks, are more likely to pay more money for their food and have limited options (less healthy food) given the absence of supermarkets and chain stores and the prevalence of convenience and independent stores.

Being underserved by food retailers as compared to those living in more advantaged areas is a reality faced by many low-income and African American communities (Beaulac et al., 2009, p. 3). Because these highly segregated neighborhoods lack quality grocery items that are high of cost, the result is a cyclical trend of poor nutrition and poor health behaviors (Williams & Collins, 2001, p. 410)

The existence of food deserts can be viewed as a systemic flaw in American institutions, stemming from decades of othering racial minorities while simultaneously ignoring their needs and the needs of our nations most impoverished peoples. Beaulac et al. (2009) find that the intersections of income and race have a strong correlation with disparities in food access. The institution that is housing is also important to understand when thinking of where inequality derives from: “Housing plays a crucial role in determining... health conditions...” (Lipsitz, 2006, p. 33). The reason for this being that the racialization of housing that occurred in the mid 1900s has had an everlasting effect on minority communities. Through housing, the state has demarcated spaces for minority and poor communities, thus creating de facto segregation which has an overwhelming effect on a person’s access to healthy and affordable food. It becomes clear that poverty is not the only problem in determining whether a person can easily access food. It has also been found that structural inequalities that exist within the food retail environment ultimately contribute to “a process of deprivation amplification, since structural problems related to food retail appear to further disadvantage low-income and minority Americans, who are already limited in their ability to purchase healthy food” (Beaulac et al., 2009, p. 4). This deliberate structuring of the food system is fashioned “as to negatively impact vulnerable populations” (Thomas, 2010, p.

1546). Such dangerous processes sustain and further perpetuate adversities faced by already disadvantaged communities.

When looking at the disparities in health that exist along racial lines, it is important to recognize how racial residential segregation is a major cause for such disparities (Williams & Collins, 2001). Black neighborhoods are often “misperceived with regard to market size, buying power, and market risk and stability” all while white, suburban neighborhoods are viewed as the savviest and most profitable markets (Kwate et al., 2013, p. 650). Along with tarnishing neighborhood reputations which in turn “affects asset accumulation vis-à-vis homeownership, the primary means through which Americans build wealth,” this residential segregation or retail redlining of spaces, as previously mentioned, sustains and perpetuates a system that limits access to quality and affordable foods for those with a low socioeconomic status and for minorities – particularly those within Black communities (Kwate et al., 2013, p. 650; Williams & Collins, 2001).

The existence of food deserts is a systematic issue that society has created, as the aggregate socioeconomic status of neighborhoods are clear indicators for the amount of healthy and affordable food allotted to certain communities. Bitler and Haider (2011) further this notion with their findings that “there will be more food stores with healthy food in high-income areas when compared to low-income areas, even if there were sufficient food stores with healthy food in both” (Bitler & Haider, 2011, p. 156). It is also important to discuss a major issue that this brings up. If low-income households are being denied access to chain supermarkets which have cheaper and better quality food, poor people are paying more for their food than those in any other socioeconomic level. The findings from Powell et al. (2010) support this when in their own study they find that “low-income households face

higher food prices in large part as a result of a lack of supermarket availability in their neighborhoods” (Powell et al., 2010, p. 193).

Geography and Alternative Food Networks (AFNs) – An Emerging Body of Scholarship

Recognizing that though the food desert literature does not suggest that food insecurity is solely spurred on by distance to supermarkets and other grocery stores, it is still very important to consider the burdens placed on already disadvantaged communities by being located further away from food retailers than their more advantaged counterparts. Though distance to supermarket themselves may not be enough to determine whether or not a household is food secure/insecure, it “does not mean that distance fails to influence food purchasing” (Thomas, 2010, p. 1553). Competing literature and scholars suggest that the use of the “food desert” metaphor is misleading, to say the least. Though identification of “food deserts” can prove useful in many respects, it is not the inadequacies of food or the relative access to healthy and affordable foods that is the more pressing problem. Rose et al. (2009) suggest that rather, the agglomeration of fast food restaurants and the excess amounts of unhealthy foods is the more pressing problem as it comes to low income neighborhoods. This more recent body of scholarship stresses on moving past issues of distance, without discrediting distance and its effects on food purchasing, in order to incorporate other factors that contribute in the hindrance of food access.

Theory and Hypotheses

H1: More years of undivided Republican control of state legislatures and governorships exacerbates the effect of poverty on the presence of food deserts.

H2: More years of undivided Republican control of state legislatures and governorships exacerbates the effect of high proportion of people of color within a neighborhood on the presence of food deserts.

H3: More years of undivided Republican control of state legislatures and governorships exacerbates the effect of urbanization on presence of food deserts.

H4: More years of undivided Democratic control of state legislatures and governorships mitigates the effect of poverty on the presence of food deserts.

H5: More years of undivided Democratic control of state legislatures and governorships mitigates the effect of high proportion of people of color within a neighborhood on the presence of food deserts.

H6: More years of undivided Democratic control of state legislatures and governorships mitigates the effect of urbanization on presence of food deserts.

As the aforementioned research documents, poverty, ethnicity, and population density are all contributing factors in determining food deserts. What this study is interested in uncovering is to what extent politics and policy play in mitigating and/or exacerbating the existence of food deserts. Meaning, how is access to food moderated depending upon the partisanship of state governments? The premise that partisan ideology and politics influence policy which in turn influences outcomes, guides this study. More classic studies examining state politics suggest that “the relative strengths of the Republican and Democratic parties in state politics appear to be statistically unrelated to policy directions in the states” (Erikson, Wright, & McIver, 1989, p. 730). Also, some studies even suggest that Democratic control within states, which many would assume would translate into more liberal policies, are in fact negatively correlated with

more liberal policies (Lax & Phillips, 2012). However, as Caughey, Warshaw, and Xu (2017) point out, such studies are weakened by “methodological limitations” that may exacerbate biases and that focus on single policy areas which in turn calls into question the generalizability of the studies. The reality of the matter is that extreme polarization of ideological frameworks held by Democratic and Republican political leaders in the past few decades has resulted “in larger policy effects of the partisan composition of government;” thus, “given the growth of partisan polarization, partisan effects on policy are likely to be larger now than in the past (Caughey, Warshaw, & Xu, 2017, p. 1345). In 2012 North Carolina saw Republicans complete their overhaul of the state government with the election of Governor Pat McCrory. Following his election, “Republicans took advantage of their newfound control by passing a flood of conservative legislation: cutting unemployment insurance, repealing the estate tax, ‘flattening’ the income tax,” etc. (Caughey, Warshaw, & Xu, 2017, p. 1342). Following the research of Besley and Case (2003), which finds that the partisanship variables of individual branches within states are independently insignificant, when the partisanship of the upper and lower houses and gubernatorial partisanship are of the same composition, significant correlations emerge between partisanship and policy (i.e. taxes, spending, assistance, etc.).

Given that the United States functions largely as a two party system with each party traditionally having opposing ideological underpinnings, I hypothesize that states being guided by Republican governments (bicameral legislature having a Republican majority while also having a Republican governor) will lead to the proliferation of the presence of food deserts within the United States, whereas the states under Democratic control (bicameral legislature having a Democratic majority while also having a Democratic governor) will lead

to the moderation of said food deserts. This hypothesis recognizes that the Democratic party is customarily labeled as being concerned with social welfare provisions and enacting policies aimed at redistributing wealth. It is known that “state taxation levels are positively correlated with the proportion of Democratic legislators... [and] taxes are higher” when under Democratic control (Leigh, 2007, p. 3). Whereas inflation is lower and minimum wages decrease under Republican control (Leigh, 2007, p. 3). Leigh (2007) also finds that “gubernatorial partisanship does not appear to have an impact on policy outcomes and social welfare” which is why I suggest that the presence of food deserts within certain regions is dependent upon whether or not states are fully Democratic or fully Republican. There are different theoretical approaches to how government intervenes in markets. From this belief, stems the idea that Republican and Democratic state leadership would have had, and continue to have, different approaches in addressing the issues revolving around access to food.

Data and Methodology

Drawing on 2010 census data and data coded from ProQuest and Ballotpedia, this study explores the period between 2000-2009, observing whether partisan imprint exacerbates or mitigates access to food for individuals living within census tracts that are classified as urban or rural tracts and individuals who are ethnic minorities (1 minus the proportion of tracts with Non-Hispanic white populations divided by 2010 census population), and who are economically disadvantaged (share of the tract population living with income at or below the Federal poverty thresholds for family size).

Dependent Variable: My dependent variable is whether a census tract is flagged as a food desert, by the census definition:

“*low access* to healthy food is defined as being far from a supermarket, supercenter, or large grocery store... A census tract is considered to have low access if a significant number or share of individuals in the tract is far from a supermarket” (United States Department of Agriculture Economic Research Service).

Of all the tracts, there were 9,245 out of the 72,864 tracts that were flagged as having low access to affordable and quality foods.

State-Level Partisanship: I hand coded the proportion of gubernatorial partisanship, along with the years that the state government was undivided between the years 2000 and 2009. I chose only to code the years 2000-2009 to coincide with the years in which the census data tracked. I chose not to include the year 2010, because I assume the influence of the policy process takes time to impact neighborhoods. In other words, one year, if there was a change in leadership within a state between an election in 2010 and the publication of the census data in 2011, was not a significant amount of time to see the changes that one would assume would ensue following a shift in state government. While coding the data, I created two variables: years of undivided Republican control (years all Republican), and years of undivided Democratic control (years all Democratic). For the variable years all Republican, there was a range between 0 and 10. 10 referring to 10 straight years of undivided Republican control, which accounted for 7.6% of the observations. There were 72, 864 observations with no missing values, with a mean of 2.43. So the average of undivided Republican control was approximately two and a half years. For the variable years all Democratic there was a range

again between 0 and 10. 10 referring to 10 straight years of undivided Democratic control, which accounted for 3% of the 72, 864 observations. With no missing values, the variable had a mean of 2.2, meaning that on average states saw approximately two years of undivided Democratic control.

Additional controls and variables of interest in the model include population density, income, and ethnicity. Population density within the data collected refers to the urban vs rural divide between the approximately 73,000 census tracts observed by the 2010 census data. The study assumes that if a census tract is flagged as an urban census tract (within the data, urban tracts were represented using a 1 whereas rural tracts were indicated by the use of 0), that particular tract could be presumed to be somewhat densely populated. Of all the census tracts, 75.72% of the tracts, or 55,172 tracts, were classified as urban. Income was measured within the analyses by incorporating the tract poverty rate. The tract poverty rate represents the share of the tract population living with income at or below the Federal poverty thresholds for family size. The larger the share within a given tract, the larger proportion of economically disadvantaged peoples who may or may not have easy access to healthy and affordable foods. The census data also provided hard numbers of the amount of individuals, divided into ethnic groups, for each tract within the United States. The ethnic categories provided by the 2010 census includes: tract White population, tract Black or African American population, tract Asian population, tract Native Hawaiian and Other Pacific Islander population, tract American Indian and Alaska Native population, and tract Hispanic or Latino population. For the sake of this particular study, all ethnic minority groups were grouped into one category (percentage of people of color). This was calculated by first dividing the proportion of the White population in the United States from the 2010 United States population and then

subtracting that quotient from 1 (or 100 percent). 1 represents the entire US population and the difference represents all other ethnic tracts (percentage of people of color), excluding the White census tract.

The variable within this analysis that measures whether or not a tract is urban, has a total of 72, 864 observations with a minimum of zero (rural tract) and a maximum of one (urban tract). Pulled from 2010 census tract data, the urban measure has a .76 mean with no missing variables.

The variable measuring income in this study, poverty rate, has a minimum of zero and a maximum of one hundred. The average poverty rate across the 72, 864 tracts observed was 16.57 for the time in which the census tract data was accounting for.

Food deserts are highly conditional. Because this study is concerned with an individual's access to food, and because the relationship between food deserts and population density, income, and ethnicity is prominent within the literature – this research asks the question: given relationships that we know already exist, do state level politics mitigate these relationships? One of my initial independent variables, gubernatorial partisanship, was hand coded by myself into a Microsoft Excel spreadsheet using visuals provided by Ballotpedia, a nonpartisan online political encyclopedia, cross checked with data downloaded from ProQuest portraying the number of governors in the U.S. by political party affiliation from the year 1990 to 2016 for each individual year. For each year spanning between 2000 and 2009 in which a governor within a state was Republican, that state for that year was designated as having a Republican governor with a 1. For each year in which there was a Democratic governor in office, that was coded in the Excel sheet with a 0. In order to expand my independent variables, I decided to code and add my fourth and fifth independent variables to

my dataset: the years in which state governments were divided/undivided. Meaning, the years in which a state's bicameral legislature and governor were of the same party and the years in which they were not. In my coding, these distinctions were made using the numbers -1 (negative one), 0, and 1. The use of -1 indicates a year in which there was full Democratic control within that given state: the state legislature, the state senate, and the governor were all Democratic. The use of 0 indicates a year where there was divided government. This could mean a number of things. For this study, if just one of the branches of state government differed from the other two, the state for that year was classified as divided. Lastly, the use of 1 designates years in which there was full Republican control within a state.

Given that this paper was interested in analyzing the way in which politics (partisanship of state government/years of undivided Republican/Democratic control) influences relationships that we already know exist, interaction terms were created in order to observe particular effects, if any, that partisanship had on independent variables already known to intensify the presence of food deserts. While generating interaction terms, it became apparent that out of the 72,864 observations of the 2010 census (divided between census tracts), there were 333 missing values generated, meaning that of the 72,864 census tracts, there were 333 tracts in which had populations of zero. The models employ logistic regression.

Results

As expected, this study's proxies for income (poverty rate) and population density (urban) were found to be highly significant factors in determining access to food, whereas race/ethnicity (percentage people of color) was not (see Table 1). Because of the high and

significant correlation that exists between two of my variables, percentage people of color and poverty rate, I ran a separate model isolating the percentage of people of color and years of undivided Republican control from my other variables. As suspected, when ran separately from other variables, minimizing any possible interference when analyzing the relationship between percentage people of color and food deserts, it was found that a significant positive relationship exists between percentage people of color and the incidence of food deserts (see Table 3).

In cases in which states had undivided Republican control within state governments, it became apparent that significant positive correlations exist between years in which there is undivided Republican control within a state's government and food deserts. This is true when considering the interaction that occurs between undivided Republican control, and the percentage of people of color within a state. Thus, a fully Republican state government intensifies the effects that being an ethnic minority has on generating spaces in which food deserts arise (see Table 2). There appears to be no clear indication that undivided Democratic control exacerbates/mitigates existing determining factors of food access (percentage people of color, poverty rate, and urban). Though it was found a relationship exists between undivided Republican control, percentage people of color, and food deserts, all interactions ran found no significance.

When looking at the predicted probability of there being a food desert in instances of no undivided Republican control with absolutely no people of color (nonwhite), the likelihood of an area being flagged as a food desert is approximately 11% (see Figure 1). In the predicted probability that there is undivided Republican control for ten straight years with still absolutely no people of color, the likelihood of an area being flagged as a food desert stays

the same, with approximately 11% (see Figure 2). The probability of there being a food desert in areas with no Republican control and high percentages of people of color decreases to approximately 6% (see Figure 3). However, an interesting finding, that coincides with the data displaying the significant effect that undivided Republican control has on the effects that being an ethnic minority has on exacerbating the presence of food deserts, is that the probability of there being a food desert increases to approximately 23% in the instance that there are large proportions of people of color in an area that has had 10 straight years of undivided Republican control (See Figure 4). This is a 17% increase from years in which there are large proportions of people of color, but zero years undivided Republican control.

Discussion and Conclusion

Social and economic exclusion are common threads in American institutions, and common when examining how the country functions as a whole. The polarization of the two dominant political parties in the United States has left many individuals/voters questioning the legitimacy and morality of those a part of their ideologically opposing political party. This study does not base its assumptions and hypotheses on such quarrel but on past literature and past political decisions made by members affiliated with certain political groups. A positive correlation exists between years in which there is undivided Republican control within state governments and areas flagged as food deserts by the US Census, when looking closely at the percentage of people of color within those areas. Meaning, in years that states saw undivided Republican control, the presence of food deserts – and the effect that the percentage people of color already had on food deserts, was intensified.

Further research should seek to measure the relationship that exists, if any, between policies enacted under certain political parties within states and areas flagged as food deserts. Meaning, future scholars working within this topic should incorporate data detailing actual state/local policies. Though partisanship offers a glimpse into different types of policies that may have been enacted underneath Republican/Democratic control, the incorporation of policy data would add tremendously to our understanding of the way in which politics intervenes in situations/markets that may or may not lead to the proliferation of issues, such as access to food.

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Table 1

Variables	Model 1	Model 2	Model 3
Percentage People of Color	-0.473 (0.311)	-0.455 (0.304)	-0.380 (0.279)
Poverty Rate	0.0576*** (0.00226)	0.0574*** (0.00215)	0.0565*** (0.002)
Urban	0.520*** (0.140)	0.517*** (0.140)	0.502*** (0.137)
Years of Undivided Democratic Control		-0.010 (0.034)	
Years of Undivided Republican Control			0.0459* (0.0251)
Constant	-3.343*** (0.106)	-3.320*** (0.140)	-3.459*** (0.132)
Observations	72,531	72,531	72,531

Robust standard errors in parentheses,
*** p<0.01, ** p<0.05, * p<0.1

Table 2

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Percentage People of Color	-0.464 (0.382)	-0.458 (0.302)	-0.454 (0.302)	-0.782** (0.381)	-0.379 (0.283)	-0.358 (0.276)
Poverty Rate	0.057*** (0.002)	0.056*** (0.003)	0.057*** (0.00217)	0.056*** (0.00227)	0.053*** (0.00306)	0.056*** (0.00223)
Urban	0.517*** (0.140)	0.519*** (0.141)	0.524*** (0.188)	0.522*** (0.137)	0.503*** (0.137)	0.325* (0.184)
Years of Undivided Democratic Control	-0.012 (0.0162)	-0.027 (0.0203)	-0.007 (0.0427)			
Interaction between Years of Undivided Democratic Control and Percentage People of Color	0.004 (0.107)					
Interaction between Years of Undivided Democratic Control and Poverty Rate		0.001 (0.00110)				
Interaction between Years of Undivided Democratic Control and Urban			-0.003 (0.0714)			
Years of Undivided Republican Control				-0.003 (0.0127)	0.019 (0.0205)	-0.010 (0.0258)
Interaction between Years of Undivided Republican Control and Percentage People of Color				0.154** (0.0750)		
Interaction between Years of Undivided Republican Control and Poverty Rate					0.001 (0.001)	
Interaction between Years of Undivided Republican Control and Urban						0.066* (0.038)
Constant	-3.317*** (0.110)	-3.287*** (0.121)	-3.326*** (0.135)	-3.335*** (0.114)	-3.390*** (0.122)	-3.316*** (0.138)
Observations	72,531	72,531	72,531	72,531	72,531	72,531

Robust standard errors in parentheses,
*** p<0.01, ** p<0.05, * p<0.1

Table 3

Variables	Model 1	Model 2	Model 3
Percentage People of Color	1.272*** (0.296)	1.359*** (0.261)	0.942** (0.368)
Years of Undivided Republican Control		0.0663*** (0.0257)	0.0143 (0.0151)
Interaction between Years of Undivided Republican Control and Percentage People of Color			0.163** (0.0675)
Constant	-2.323*** (0.0635)	-2.526*** (0.0966)	-2.379*** (0.0667)
Observations	72,531	72,531	72,531

Robust standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Figure 1

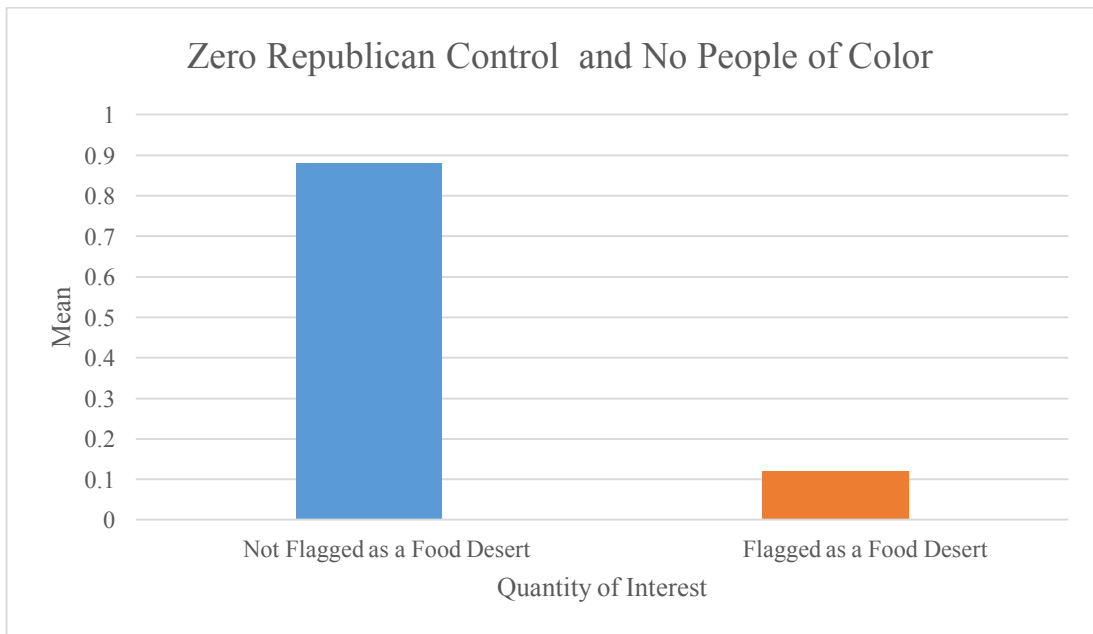


Figure 2

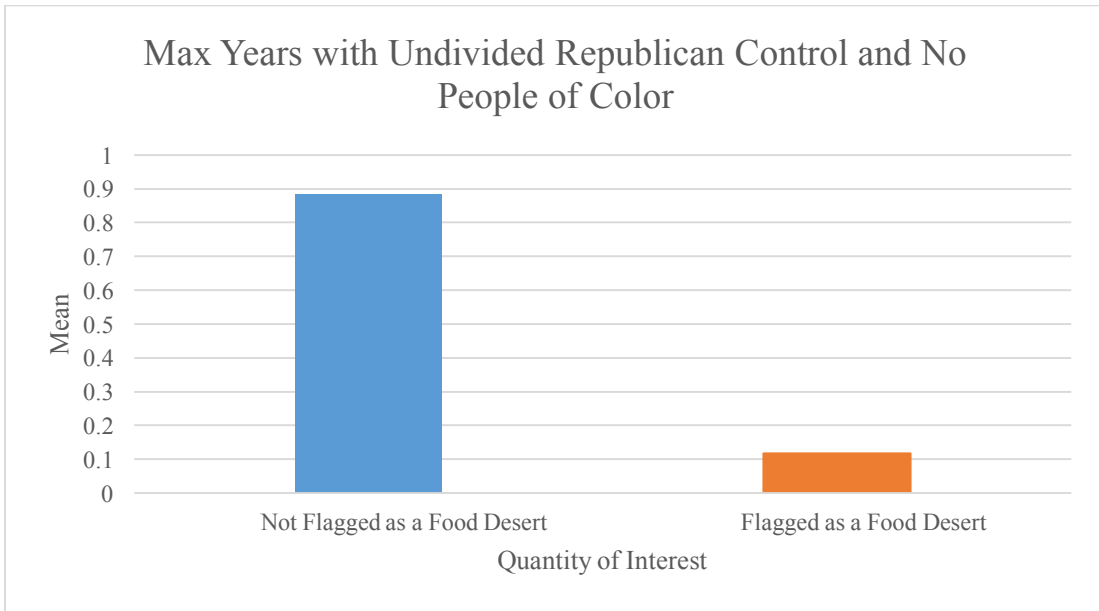


Figure 3

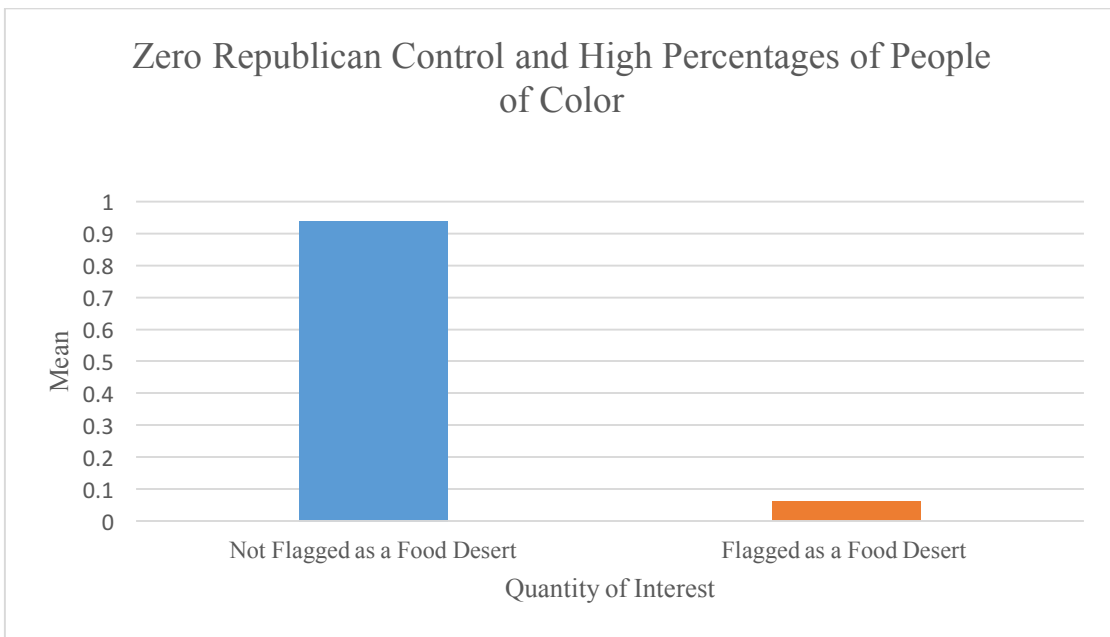


Figure 4

