
Shifting Access to Food

Food Deserts in Atlanta, 1980–2010

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In Atlanta, Georgia, some communities have very limited access to grocery stores that sell fresh fruit and vegetables. This is especially true for communities that include primarily low-income and black residents. People living in these neighborhoods may have to travel miles outside their neighborhood to find a grocery store. By contrast, residents of other neighborhoods in Atlanta have relatively easy access to grocery stores stocked with fresh fruit and vegetables and most other amenities that shoppers may seek. As in most other US cities, these neighborhoods are more likely to be white and middle or upper class. Nevertheless, some poorer communities and black communities do have access to healthy, affordable food. Over the past thirty years, adequate access to healthy, affordable food has shifted in Atlanta, and some communities that were food secure are now categorized as food deserts. Why do communities lack access to healthy, affordable food? And why do the locations of food deserts shift over time?

Inequality is central to defining which neighborhoods are food deserts, as the concept centers on income and poverty. Yet in this southern city, poverty and race are inextricably linked, and the impact of historically rooted racial segregation is clearly evident in the present day. Despite the civil rights movement of the 1950s and 1960s, the prominent role of African Americans in city politics for the past forty years, and the historical strength of the black middle class in Atlanta, this city has seen important elements of racial inequality increase over the past thirty years. Food deserts are set against the backdrop of this uneven landscape and, between 1980 and 2010, have shifted in ways that disproportionately impact poor black neighborhoods.

How can we explain these shifts? We argue that three factors are particularly important to consider. First, as with many cities in the United States during the 1980s and 1990s, Atlanta experienced a population shift as people—especially middle-class whites and blacks—left the city for the suburbs. Second, when the population shifted, poverty became more concentrated in south and southwest Atlanta. Third, a “supermarket war” occurred in the 1990s as a new chain—Publix—entered the Atlanta market and built many of its stores outside of the central city. These three factors resulted in the persistence and expansion of food deserts in predominantly African American

neighborhoods. In short, this chapter explores the patterns of food vulnerability in Atlanta from 1980 to 2010 by situating food deserts in the context of market shifts, racial segregation, and poverty.

We focus on three factors that have influenced the development of food deserts in Atlanta: population and demographic shifts, the concentration of poverty, and the retail market. Before we turn our attention to these three important factors, we first provide historical context and background for understanding the spatial patterning of race and inequality in Atlanta. We then link this context to its relationship with poverty and describe why this particular relationship is central to understanding the vulnerabilities that food deserts create. Then, we discuss the sources for our data, which come from the US Census and retail business directories. Here, we also offer a brief discussion of the Geographic Information Systems (GIS) and geospatial methods that we use to trace and analyze food deserts in Atlanta. Finally, we show how Atlanta food deserts have shifted, and we discuss the role that the market, population shifts, and racial inequality and the concentration of poverty have played in shaping access to food in the city.

Race and Poverty in Atlanta's History

Atlanta has historically been residentially segregated by race, and it remains so today. The city's segregation is the product of decisions made by groups and individuals that shaped the physical and political landscape. The city's spatial patterning of racial segregation and the concentration of the poor is the result of systemic and structural racism that has largely guided the city's development (Bayer 1996; Stone 1989). For example, in the mid-1900s, the city government and the downtown business elite formed the dominant partnership in an urban regime that was focused on remaking the city's built landscape during a period of racial segregation (Bayer 1996). The location of Atlanta's highway is one example of this coalition's success. The business elite, "having long been concerned about the proximity of blighted residential areas to the business district . . . [advocated for a] north-south expressway (Interstates 75 and 85) [that] was to curve around the edge of downtown, forming a buffer between the business district and the black neighborhoods to the east" (Stone 1989, 32). In addition, the black neighborhoods of Buttermilk Bottom and Summerhill were cleared under the Federal Housing Act of 1949 in order to develop public-use facilities like the Atlanta–Fulton County Stadium and the Boisfeuillet Jones Atlanta Civic Center (Stone 1989, 38). Such development decisions were based on racial inequality and resulted in black neighborhoods being sacrificed to white priorities. By and large, black communities could offer little political resistance when business interests trumped local concerns.

More recently, the city's political regime has continued to bolster Atlanta's development in ways that have left poor blacks behind. The political coalition governing Atlanta is held together by a shared commitment to economic growth but has done very little, if anything, to "bring the city's resources together to meet the problems of poverty, ineffective schools, and an underdeveloped workforce" (Vale 2013, 143). As a result, this has created a tale of two cities—an Atlanta that boasts a burgeoning

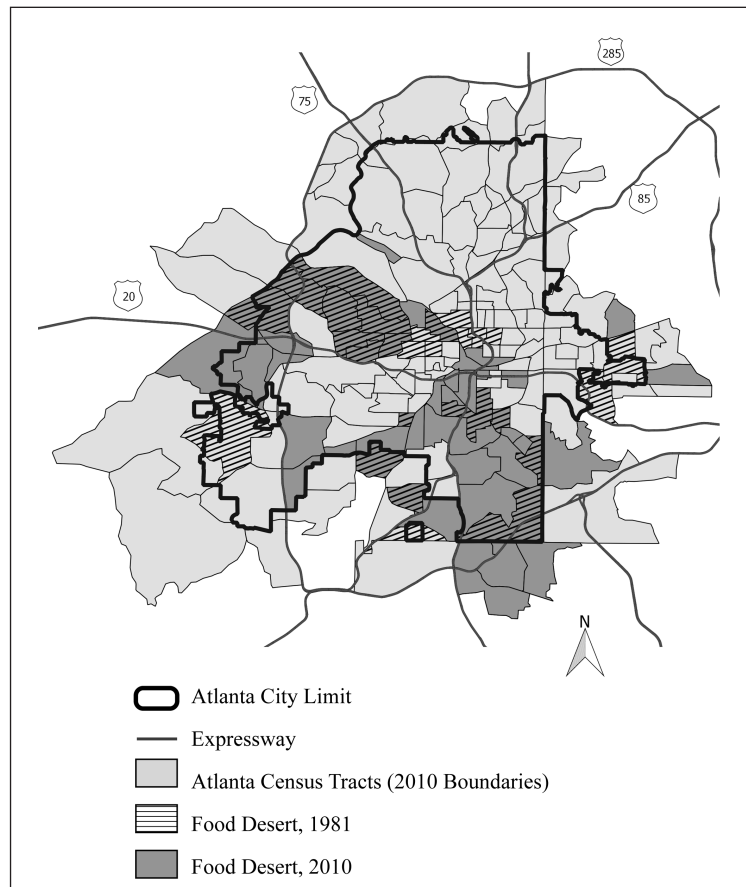


FIGURE 12.1. Atlanta's black population.

economic sector spurred by technology, finance, and the service sector, and an Atlanta that leads the nation in income inequality. Consequently, Atlanta's development—especially since 1980—has frequently neglected poor black residents.

Population shifts have also been notable in Atlanta's recent history. Although population density grew in the northern census tracts of the city from 1980 to 2010, Atlanta's black residents have remained spatially concentrated to the south and southwest areas of the city—below Interstate 20 and to the west of I-75 and I-85 (see Figure 12.1). This spatial patterning of the concentration of black residents in Atlanta has persisted and increased between 1980 and 2010. Two shifts are worth noting. First, downtown neighborhoods immediately east of where I-20 and I-75/85 intersect were 45–89 percent black (non-Hispanic) in 1980. However, in 2010, this changed, and many of the same neighborhoods lost black residents, becoming approximately 19–45 percent black. Second, neighborhoods in the far southwest corner of the city boundary had approximately 72–90 percent black residents in 1980. This racial segregation intensified in these neighborhoods throughout the preceding thirty years, and those same neighborhoods were 89–99 percent black in 2010. This illustrates a distinct

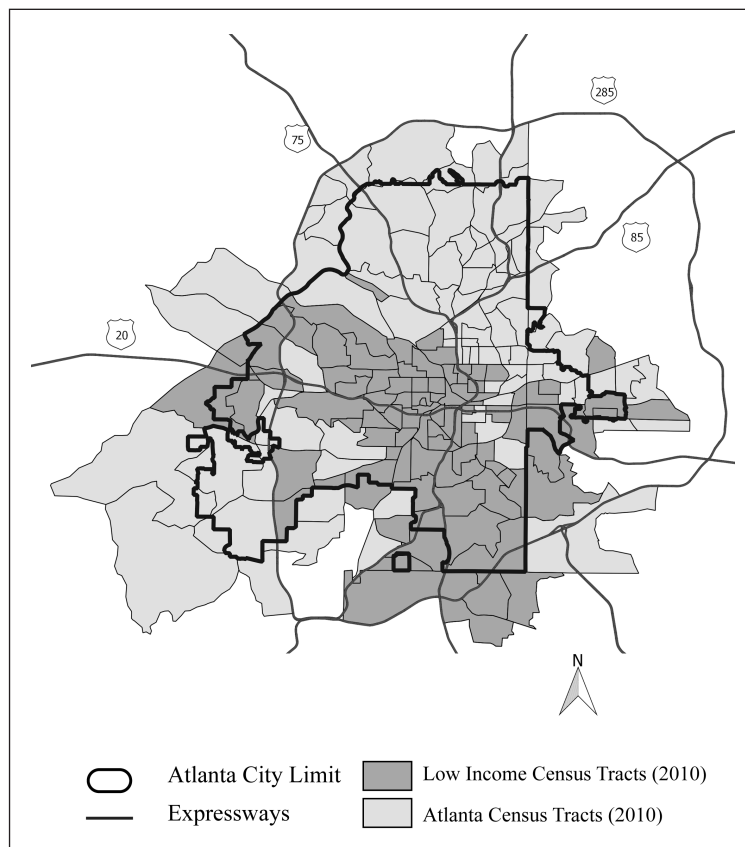


FIGURE 12.2. Atlanta's low-income population.

spatial patterning of race in Atlanta, where the majority of black residents have been concentrated to the west, south, and southwest areas of the city.

When we consider the spatial patterning of poverty of Atlanta, it maps much the same way that race does (see Figure 12.2).¹ In mapping the criteria for low-income tracts that categorize food deserts, three key points are worth highlighting. First, in 1980 and in 2010, black neighborhoods to the far west near the city boundary largely remained below a poverty rate of 20 percent and/or earned 80 percent or more of the metropolitan area's median household income. These census tracts include the middle-class black neighborhoods of Cascade Heights and South Fulton and are, by virtue of their economic status, less likely to be in a food desert. Second, the decrease in black residents east of I-75/85 in downtown corresponds to a shift in those neighborhoods' low-income status. In 1980, these downtown neighborhoods were considered low income, yet by 2010 these same neighborhoods were not low income. The decrease of black residents in these areas overlaps with the decrease in poverty and increase in median household income. Finally, poverty further intensified in areas immediately south of downtown Atlanta between 1980 and 2010. More census tracts met the criteria for low income in southwest Atlanta in 2010 than did thirty years previously. This

concentration of low-income tracts corresponds to the increase of black residents in those same tracts.

This historical legacy of development politics, racial segregation, and the concentration of poverty laid the foundation for the food deserts that exist in Atlanta today. Understanding the connections between race, poverty, politics, and food deserts is important to discerning the underlying processes shaping access to food in Atlanta.

Race, Poverty, and Food Deserts

What does racial segregation and poverty have to do with Atlanta's food deserts? Put simply, most food deserts in the city of Atlanta are in census tracts that have a high proportion of African Americans living in poverty. As we explain below, poor neighborhoods that are black have a more difficult time getting out of poverty. Additionally, when more blacks move into that neighborhood, the area's chances for getting out of poverty decrease. In Atlanta, this has meant that a poor or low-income food desert with a greater concentration of black residents will likely remain a food desert.

Massey (1990, 329) demonstrates that racial segregation ensures that poor black neighborhoods will experience a greater concentration of poverty than poor white or racially mixed neighborhoods do not. According to Massey (1990), the residential segregation patterns that lead to the accumulation of poor blacks in specific parts of the city make those communities pockets of extreme concentrated poverty. This has been facilitated, in part, by a steady rise in income inequality since the 1970s that was accompanied by a decline in family income overall and a shift away from manufacturing to service industries in urban areas across the country. Racial segregation and the concentration of poverty are positively correlated because "the imposition of racial segregation on a residential structure that is also segregated by class works to the detriment of poor blacks and to the benefit of poor whites" (Massey 1990, 336). In other words, racial residential segregation acts to concentrate poverty. And because the poverty rate for blacks is greater than it is for whites, poor black neighborhoods disproportionately experience the persistence of extreme poverty.

The concentration of poverty in poor black neighborhoods in south and southwest Atlanta is significant in determining access to fresh, healthy, and affordable food in three ways. First, this concentration of poverty takes on a specific geographic and spatial characteristic (Massey 1990). Changes in the economic status of a minority group that come about from exogenous forces (deindustrialization, suburbanization of employment, rise in low-wage service sector work, etc.) will not only increase the poverty rate for that group as a whole but it will also result in the *geographic concentration of poverty*. As Massey (1990, 337) points out, "this geographic intensification of poverty occurs because the additional poverty created by the exogenous shock is spread unevenly over the metropolitan area." Therefore, under the clearly defined spatial patterns of racial and class residential segregation that have developed in Atlanta (as seen in Figures 12.1 and 12.2), poor black neighborhoods—such as those in south and southwest Atlanta—are more susceptible and vulnerable to widespread economic shocks such as increased unemployment, major market downturns, lack of capital, and changes in the overall economic vitality of the city.

Second, the concentration of poverty in black neighborhoods not only increases vulnerability to economic crises, but it also intensifies the other social and economic conditions that accompany poverty. These conditions include, for example, “reduced buying power, increased welfare dependence, high rates of family disruption, elevated crime rates, housing deterioration, elevated infant mortality rates, and decreased educational quality” (Massey 1990, 342). Therefore, the concentration of poverty that occurs when the poverty rate for blacks increases in the city also facilitates a whole set of other changing conditions that directly impact the well-being and health of those who live in the neighborhood. For example, public services that rely on local taxes are cut or severely limited, housing stock deteriorates because homeowners do not have the expendable income to maintain and rehabilitate property, and mortality rates rise because people are less able to pay for medical services. In sum, the intensification of poverty in racially segregated poor neighborhoods in Atlanta goes beyond income and unemployment; people’s lives, health, and personal ability to cope and survive are adversely affected.

Third, the concentration of poverty in racially segregated neighborhoods, coupled with its associated intensification of other social and economic conditions that accompany poverty, directly affects people’s ability to access fresh, healthy, and affordable food. Economic shocks, including unemployment and loss of income, directly hamper the buying power of a neighborhood. In the absence of racial or class segregation, this loss of buying power would be distributed evenly throughout the city. However, in the context of entrenched racial and class segregation in poor black neighborhoods, key economic drivers like retail profits, tax revenues, and service revenues decline, and related businesses and service organizations close. Therefore, “racial segregation takes the overall loss in black income, concentrates it spatially, and focuses it on fragile neighborhoods that are the least able to absorb” economic shocks and hardship (Massey 1990, 345). As a result, supermarkets and grocery stores—where access to fresh, healthy, and affordable food is most likely—are more likely to close. In sum, increased poverty in conditions of racial and class segregation decreases the buying power of poor black neighborhoods and through a constellation of other deteriorating social and economic conditions makes it increasingly challenging for a retail business to operate successfully in those very same neighborhoods. Therefore, racial segregation and the associated concentration of poverty are vital components to Atlanta’s food desert story.

With this focus on race and poverty, our understanding of food deserts sharpens because we are able to see food access as part of larger processes. Food, although necessary for our survival, is not distributed based on need but rather on one’s ability to purchase it. Consumers use their economic position to purchase this commodity—food—that will keep them alive. While there are certainly exceptions to this description (emergency food systems and food pantries, for example), the vast majority of people in the United States purchase food from supermarkets (see Economic Research Service 2016). Consequently, supermarkets have tended toward a pattern of spatial distribution that concentrates in middle- and high-income neighborhoods while largely deserting low-income communities.

Dooling and Simon (2012) demonstrate how racism and capitalism interact to produce food deserts by exploring the question of risk and vulnerability and examining

the city (and its interrelated biophysical, economic, political, and cultural systems) through the lens of vulnerability. They understand vulnerability as a set of conditions that include, among other things, being impoverished, residing in a city that has lost its industrial base, “and lacking access to affordable, organic food that reflects culturally specific ingredients and produce” (Dooling and Simon 2012, 8). Importantly, this lens focuses on how conditions of being vulnerable (residing in a food desert, for example) are created and perpetuated by uneven levels of access to economic resources and political power. For Agyeman and Simons (2012, 86), communities who negotiate food access through political and economic asymmetries are not only vulnerable, but their vulnerability is consistently exacerbated with each interaction in the system. From this perspective, food deserts are the result of “a history of disinvestment in and neglect of mostly low-income urban and rural areas, which have not been recognized as profitable sites for supermarket and grocery store location and have therefore been left with limited and often less healthy, more expensive options for food access, such as corner stores and fast food establishments” (Agyeman and Simons 2012, 87). This understanding emphasizes where this vulnerability is concentrated: in low-income and poor neighborhoods that are also products of racial segregation. Food vulnerability and food deserts, then, are a result of capitalism and institutional racism.

These theoretical perspectives, when used to understand Atlanta’s historical development and the shaping of food vulnerabilities, demonstrate that food access is tied to entrenched histories of racism and capitalism—systems that have concentrated poverty and entrenched racial segregation. This approach moves past food desert maps as static snapshots of food access and adds a temporal dimension by tracing their development over the past thirty years. In doing so, this analysis takes into account social structures and historical legacies of disinvestment and racial oppression throughout Atlanta. We explain the persistence and expansion of food deserts in Atlanta from 1980 to 2010 through the use of geographic information analysis (GIS).

Tracking Food Deserts

Using access to supermarkets as the central measure of a food desert, we analyze how the patterns of food deserts in Atlanta overlap with racial segregation and the concentration of poverty. We use GIS and spatial analysis to analyze demographic and economic factors that have developed and shaped food access in Atlanta over a thirty-year period from 1980 to 2010.

To explain the spatial patterning of food deserts in Atlanta, we draw on data about 2010 supermarket location from the Mergent Million Dollar Database on business and industries using the standard industry code for supermarkets. We also obtained supermarket addresses from the City of Atlanta Directory and the Atlanta Yellow Pages for the years 1981, 1990, and 2000. We then geocoded the addresses using GIS software and spatially joined this data to demographic data from a longitudinal census database compiled by Logan, Xu, and Stults (2014, 412). Drawn from the US Census, the demographic data is organized by 2010 census tract boundaries and includes a variety of variables: median household income (constant 2010 dollars), percentage of housing units vacant, percentage of population that is racial or ethnic minority, percentage

unemployed, percentage below the federal poverty line, and population density (per square acre). Using this data, we produced a series of choropleth maps to illustrate the distribution of percentage black (non-Hispanic), low-income tracts, and urban food desert maps using the criteria from USDA (US Department of Agriculture) for 1980, 1990, 2000, and 2010. A “significant” share of residents was defined as at least one-third of the tract population residing more than one mile from a supermarket. A census tract was defined as low-income if it had a poverty rate of 20 percent or higher, or a median family income at or below 80 percent of the metropolitan area’s median family income. We used a buffer analysis to identify a one-mile Euclidian distance from the center of low-income census tracts to supermarket locations. We employed cluster analysis to identify statistically significant high and low concentrations of supermarkets across Atlanta in 1981, 1990, 2000, and 2010.²

Shifting Food Deserts in Atlanta

From 1980 to 2010, Atlanta’s food deserts shifted in important ways. Over this period, food desert tracts increased in the south and southwest areas of Atlanta, where the majority of the population is black and low income, from 1980 and 2010. Figure 12.3 shows that food desert tracts in 1980 were located on the northwest, southwest, and southeast tracts on the outer edge of the city. In 1980, there were thirty-three supermarkets identified. These supermarkets were located along the I-85 and I-20 highway corridors and were also distributed near downtown where the highways intersect. Consequently, neighborhoods immediately south of downtown Atlanta had access to a nearby supermarket and were not categorized as food deserts. Likewise, there were relatively few neighborhoods in southwest Atlanta with food accessibility low enough to qualify as food deserts. Finally, Atlanta food deserts in 1980 tended to be some distance from interstates and were spread throughout the city, though there was a concentration of food deserts in the northwest portion of the city.

In 1990, food desert tracts still persisted in neighborhoods near downtown Atlanta, but they also expanded to the neighborhoods immediately south, southeast, and west of downtown. Comparing 1980 and 1990, food deserts expanded along the southwest border of the city, as well as east of the city, along the I-20 corridor. Notably tracts to the north did not meet the food desert criteria, because these neighborhoods were not designated low-income or had a poverty rate of less than 20 percent and because these northern neighborhoods had a greater share of Atlanta’s supermarket locations. In 1990, there were twenty-three supermarket locations within Atlanta’s city boundaries, a decrease of about 30 percent from 1980. The locations where supermarkets closed help to account for the expansion in food deserts in certain parts of Atlanta.

By 2000, another important shift occurred: the neighborhoods immediately surrounding downtown had lost their food desert status (see Figure 12.3). Publix and Kroger, the dominant grocery chains in Atlanta, had located in neighborhoods close to downtown during the 1990s, as we discuss in more detail later. Additionally, areas that were once food deserts near the western city limits of Atlanta no longer met the criteria for food desert designation. However, food access declined in the neighborhoods west of downtown. In 2000, there were thirty-five supermarkets within the

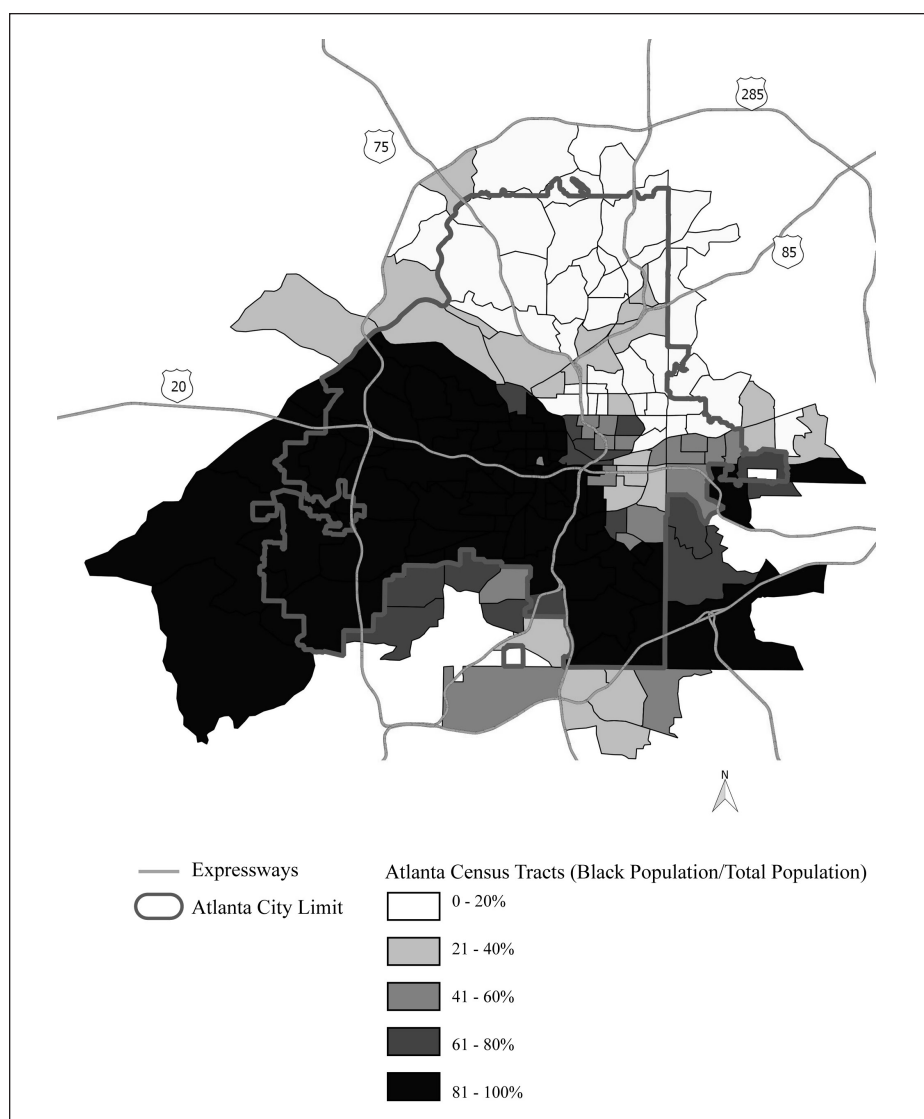


FIGURE 12.3. Atlanta's food deserts.

boundaries of the city. Thus, the number of supermarkets increased back to the level seen in 1980. Again, the placement of supermarkets shaped the city's landscape in terms of food deserts.

As Figure 12.3 shows, food deserts spread to neighborhoods south of downtown and intensified in the west and southwest neighborhoods of the city by 2010. Additionally, supermarkets that were once located south of downtown along the north-south I-75/85 highway were gone by 2010. This also led to an expansion of food deserts in southeast Atlanta. Despite the closing of grocery stores south of downtown, the density of supermarket locations to the north remained stable. In 2010 there were thirty-eight supermarkets within Atlanta, but the placement of these supermarkets demonstrate a northeastward push relative to previous years. Notably, some

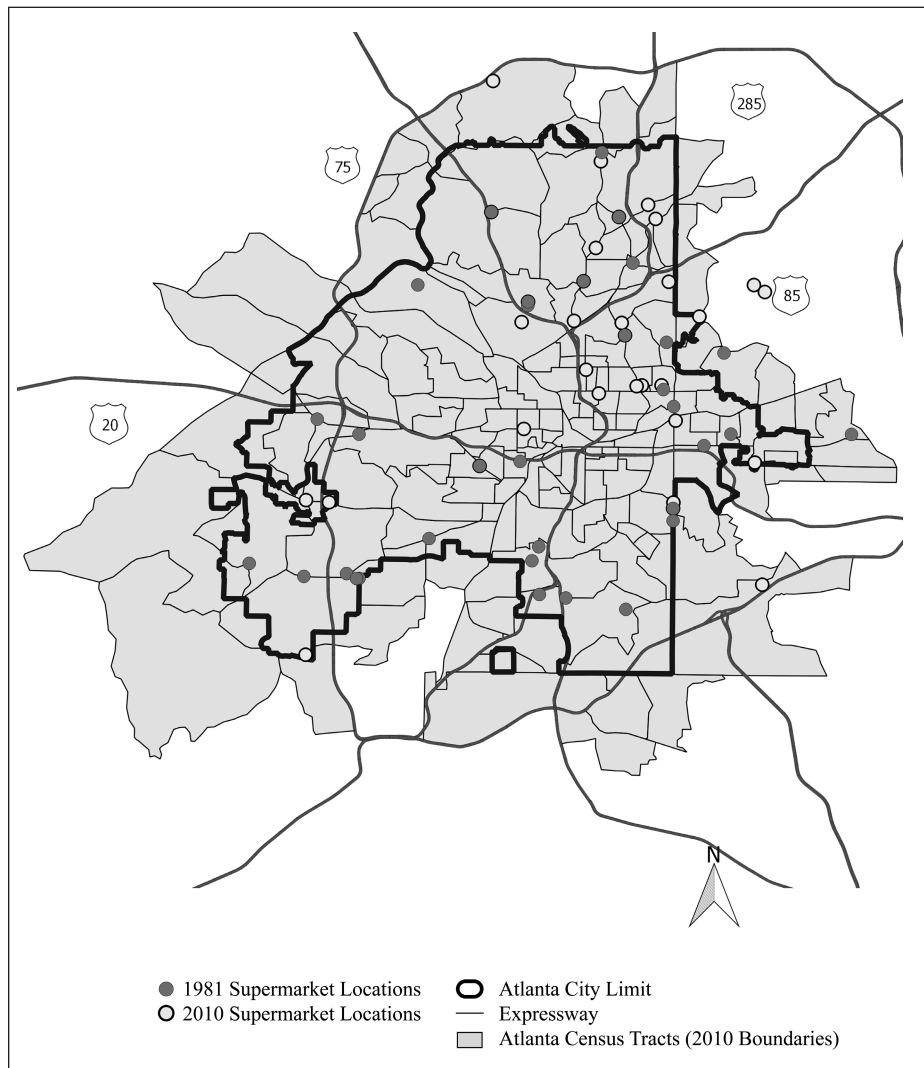


FIGURE 12.4. Supermarkets in Atlanta.

neighborhoods that experienced a decline in black residents lost their food desert status by 2010. For example, the neighborhood of the Old Fourth Ward east of downtown Atlanta, which was predominantly black in 1980, lost black residents by 2010. The poverty rate in the Old Fourth Ward had also decreased, and its median household income earnings increased by 2010 so that it was no longer designated as low-income, thus shifting its status from food desert to non-food desert.

Finally, the loss of supermarkets in south Atlanta is more clearly important. As Figure 12.4 shows, many of the supermarket locations changed between 1980 and 2010. The new supermarket locations resulted in a shift to the north of Atlanta. Between 1980 and 2010, grocery store locations were quite fluid. Furthermore, the spatial distribution of supermarkets skewed to predominantly white and higher-earning neighborhoods to the north between 1980 and 2010. Taking I-20 as a dividing line

between north and south Atlanta, fifteen supermarkets were located in south Atlanta in 1980, compared to eighteen in the north. In 1990, eight supermarkets were located in south Atlanta, and fifteen were in the north. Ten years later in 2000 the gap widened as twelve supermarkets were located in south Atlanta, while north Atlanta had twenty-three. In 2010, south Atlanta had nine supermarkets, and twenty-six were located in north Atlanta. The supermarket gap between north and south Atlanta widened between 1980 and 2010.

To bolster this analysis, we used geospatial tools to measure statistically significant high and low counts of supermarkets. A cluster analysis of supermarket locations demonstrates that high counts of supermarkets already existed in the northern areas of the city by 1980. However, by 2010, the gap widened as the high count of supermarket clusters increased in the north and brought with it a statistically significant decrease in supermarkets in the central-city area. Overall, the cluster analysis demonstrates that the northward move of supermarkets away from black neighborhoods and toward the predominantly white neighborhoods is statistically significant.

Supermarket Dynamics and Shifts in Food Deserts

How can we explain the shift in Atlanta food deserts between 1980 and 2010? Racial segregation and the persistence of poverty in Atlanta are only some of the factors giving rise to the pattern of the city's food deserts. A closer look at the supermarkets themselves reveals how market shifts within the supermarket industry are important factors contributing to the development of food deserts in Atlanta. Atlanta's grocery market increased from \$4 billion in the 1990s to \$7 billion in the mid-2000s, and supermarkets tried several strategies over the years to increase their share of it.³ Competition in the market was relatively stable throughout the 1980s, with Kroger in place as the number one grocer in the metropolitan area. However, there were notable disruptions in this stability in the 1990s and in the 2000s, including an increase in supermarket stores across Atlanta in what was referred to as the "supermarket wars" beginning in the early 1990s. Importantly, these shifts demonstrate how supermarkets used a location strategy based on considerations of class and income to build their stores, a strategy that ultimately left poor and black neighborhoods without supermarket access.

Throughout the 1980s, Atlanta's primary supermarket chains were stable and predictable, and not many new stores were built throughout the decade. At that time, the big three supermarkets in Atlanta were Kroger, A&P, and Winn-Dixie. Piggly-Wiggly was also a local favorite. By a large margin, Kroger was the dominant supermarket chain in Atlanta, boasting a total of sixty-five stores throughout metropolitan Atlanta during the 1980s.⁴ This landscape changed drastically in the early 1990s when Publix—a privately owned supermarket chain based in Lakeland, Florida—announced that it was planning on entering the Atlanta market (*Atlanta Journal and Constitution* 1992). The arrival of Publix meant that some smaller chains would likely be pushed out and that the competition for customers would intensify. This was the start of Atlanta's supermarket war that led to major losses for smaller grocers in the metropolitan area.

With the arrival of Publix, we can clearly see how supermarket companies used a geographical location strategy for their new stores that consistently bypassed low-income, poor, and black neighborhoods in south Atlanta. As Figure 12.4

illustrates, Atlanta's supermarkets in 2010 were disproportionately located in the northern areas of the city. From the outset, Publix's strategy to overtake Kroger was to locate its stores in the high-income and majority white suburbs of northern Atlanta. When the company released its first planned sites, the pattern of the stores formed a ring north of the city, "skipping the slower growth and higher real estate costs of the central city" (Holsendolph 1992, R-3). In particular, Publix planned its first four sites in the northern, predominantly white, counties of Cobb and Gwinnett (Burritt 1991a, H-1). The Publix strategy for developing its stores was unmistakably clear: build in the northern suburbs. The area's top supermarket chains were waging a war strategy that relied on bypassing black and poor neighborhoods.⁵

One important implication of this supermarket location strategy for low-income and minority neighborhoods was the closure of independent grocers and smaller chains that could no longer compete with Publix or Kroger.⁶ Four years after Publix's entered the Atlanta market, the supermarket war began to take a toll on the region's smaller supermarket chains and independent grocers. In 1995, Kroger remained the number one grocer in Atlanta with 32 percent (seventy-six stores) of the market, but Publix had jumped to number two with 15 percent of the market share (thirty-three stores) (Roush 1995, F-1). Winn-Dixie was third in Atlanta's grocery market with 13 percent, Cub Foods was fourth with about 8 percent, and A&P was fifth with 6 percent of the market (Roush 1995, F-1). The smaller chains were the very ones who operated stores in the working-class neighborhoods of Atlanta, including stores near downtown and in the southern parts of the city in areas that new Kroger and Publix development neglected. For example, the predominantly black neighborhood of Pittsburgh in south Atlanta lost all their local grocery stores, including Winn-Dixie, A&P, and Big Star Foods. Pittsburgh and similar neighborhoods in south Atlanta were hurt by population shifts between 1980 and 2010. During this period, such neighborhoods became poorer, racially segregated, and less dense in terms of population. As poverty became more concentrated, these neighborhoods were less able to financially sustain grocery stores and thus became less attractive to supermarket chains, which located new stores elsewhere.

In sum, while new supermarket chain stores opened up in Atlanta's northern suburbs, many neighborhoods in south Atlanta suffered on two fronts. First, these neighborhoods were bypassed by new supermarket development. Second, these neighborhoods saw many of the supermarkets that did exist in their neighborhoods close up shop, defeated by the supermarket wars that benefitted whiter and wealthier neighborhoods.

Why do some communities lack access to healthy affordable food, and why do the location of food deserts shift over time? In particular, racial segregation, the concentration of poverty, and market processes that influenced supermarket locations all worked to create food vulnerable neighborhoods in Atlanta between 1980 and 2010. This analysis has highlighted these three key findings.

First, racial segregation and the concentration of poverty spatially overlap with shifts in Atlanta's supermarket locations. Atlanta has a clear racial and income dividing line that splits the city into higher-income and majority white neighborhoods to the north and low-income, poor, and predominantly black neighborhoods to the south. For the most part, this dividing line has persisted and, in some areas, intensified between 1980 and 2010. From 1980 to 2010, the concentration of blacks to the southern

parts of the city increased, alongside a corresponding increase in the concentration of whites to the north. The concentration of poverty and extent of racial segregation reinforces the vulnerability experienced by low-income neighborhoods, including food vulnerability.

Second, the market shift that redistributed supermarkets to the north had two important consequences for vulnerable communities. First, throughout the 1980s and early 1990s, Atlanta's poor communities disproportionately experienced the combination of population loss and supermarket flight and were less able to absorb the shocks brought on by these changes. Poor black neighborhoods were less able to sustain what little economic vitality they did have and consequently suffered the loss of supermarkets that served as access to fresh fruit and vegetables.

Third, these demographic shifts are correlated with changes in supermarket locations. This is especially evident in the early 1990s when Publix entered Atlanta's grocery market and began to build new stores in the northern suburbs. The strategy of Publix Supermarkets, according to industry analysts, was to maximize the buying power of high-earning majority white residents. Other stores followed suit, making the same demographic and economic calculations as Publix and locating their stores in the predominantly white suburbs. This market competition persisted across metropolitan Atlanta and resulted in neighborhoods to the north of the city acquiring greater access to food.

At the same time, however, changes in the market interacted with demographic shifts in racially segregated neighborhoods in south and west Atlanta and ultimately created unfavorable market conditions for supermarkets. From 1980 to 2010, black neighborhoods in south and southwest Atlanta experienced an increase in poverty and black residents. Additionally, these neighborhoods lost population density overall. These conditions made it difficult for smaller chains and independent stores, many of which were located near downtown neighborhoods, to remain competitive, and eventually they closed their stores. As a result, by 2010 the supermarket landscape looked drastically different than the one witnessed in 1980. Whereas stores like Piggly-Wiggly, Winn-Dixie, Big Star, and A&P had populated neighborhoods in south Atlanta in 1980, by 2010 the majority of tracts in south Atlanta were food deserts. Alternatively, many of the supermarket locations in 2010 were spatially skewed to the north. The extent of racial segregation in predominantly black neighborhoods further concentrated poverty and made it difficult for neighborhood retail—along with other services—to thrive.

Of course, supermarkets are not the only means of providing access to healthy, affordable food. In Atlanta, a number of alternatives to supermarkets have emerged over the past fifteen years. First, urban agriculture has expanded in the city. For example, Truly Living Well (TLW) farms are located in the predominantly black communities of East Point and Old Fourth Ward. TLW has urban farms, community outreach, and farmers' markets that provide access to fresh fruits and vegetables. Second, a number of farmers' markets have emerged throughout the city. While most of these farmers' markets are located in middle-class and white communities, some are found within short distance of poorer, black neighborhoods. And importantly, some of these markets have been accepting food stamps and WIC for a number of years. Nonetheless, even with such important alternatives, it is difficult make up for the loss of supermarkets in poorer communities around the city.

NOTES

1. Low income is defined as a census tract with a poverty rate greater than or equal to 20 percent, or median family income less than 80 percent of the metropolitan area. For 2010 data, the median family income per census tract was \$43,671. For 1980 data, the median family income per census tract was \$12,483.91. If a census tract had less than 80 percent of 2010 median family income (\$34,936.8) or less than 80 percent of 1980 median family income (\$9,987.12), it was designated as low income.
2. Cluster analysis measures statistically significant clusters of high and low counts of supermarkets by census tracts using Z-scores to evaluate the presence of clusters and p-values to assess statistical significance.
3. Not all supermarkets that have vied for Atlanta's food dollar are competing in the same market segment. For example, Harris Teeter and Bruno's have filled Atlanta's high-end specialty grocer sector, supercenters like the once-prominent Big Star and Walmart have occupied the wholesale deep-discount grocery sector, and the now-defunct A&P, Kroger, and Publix have all historically carved out their stake in residential supermarket formats often supported by a network of regional distribution centers.
4. Nationally, Kroger Company was also capturing a large share of the grocery market. In 1989, Kroger Company had a total of 2,187 stores making nearly \$19 billion a year (Burritt 1991b, A-1). By comparison, the Great Atlantic and Pacific Tea Company had 1,208 stores nationwide with \$11 billion in sales a year, and Winn-Dixie had 1,236 stores with approximately \$9 billion in sales (Burritt 1991b, A-1).
5. Some developers tried to entice supermarkets elsewhere, however. For example, John R. Perlman, an Atlanta retail developer, secured options to buy land in southeast Atlanta in the Grant Park neighborhood, an area "long bypassed by major retailers . . . who preferred the demographics of Atlanta suburbs." Previously, retailers and developers would study Grant Park's census tracts and see a mix of people living in \$175,000 homes with those who lived in the nearby housing project. This "skewed median-income level turned off major retailers" and prevented major grocery chains from locating in the area. Perlman's reframing of the area's retail potential came at the same time that Kroger was slated to open up a store near downtown. Brad Wood, Kroger's assistant real estate manager at that time, explained the company's position: "obviously, we're a public company that answers to shareholders, so we're not going to open a store that loses money." However, as Wood noted, "we're trying to go beyond the formulas and be creative to make these in town stores work." See Murray (1992, C-1).
6. Cascade, a predominantly black middle-class neighborhood in southwest Atlanta, also experienced a "drought of grocery stores" throughout the 1980s and early 1990s. This changed in 1994 when not one, but three grocery stores—Bruno's, Publix, and Kroger—announced sites for the area that were all set to open in 1994. "After years of being ignored," wrote Parker, "residents of the predominantly African-American area generally welcome the shower of sudden attention." See Parker (1993, N-4).

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