

Leadership and Community Engagement in Supermarket Recruitment

by

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Abstract

Tens of millions of predominantly low-income, minority Americans live in food deserts – areas with poor access to healthful, affordable food. Food deserts have been associated with higher rates of diet-related diseases such as high blood pressure and obesity. These diseases carry significant morbidity and mortality and account for hundreds of billions of dollars in healthcare spending and lost productivity per year in the U.S.

Establishment of a supermarket is the most effective intervention to eliminate a food desert. However, food deserts have historically been neglected by the retail industry. Local governments are rarely involved in supermarket recruitment. Often, food deserts themselves must recruit supermarkets.

This study sought to understand how leadership and community engagement in supermarket recruitment influence its efficacy. The objective was to enable food deserts to more effectively recruit supermarkets. A case study of Argentine, a low-income, minority neighborhood in Kansas City, KS that successfully recruited a supermarket in 2013, was conducted. The heart of the case study was a series of interviews with individuals who were heavily involved in the recruitment.

This study found the results of community engagement – specifically a community food assessment – were leveraged to attract funding and financing for a supermarket development. In settings where recruitment of a supermarket is contingent upon obtainment of these dollars, community engagement may be critical.

Engagement empowers people to play an active role in shaping the future of their communities. It is a vital component of the urban planning process and government in general. Additionally, in the context of a food desert, engagement of residents can help accomplish the

lofty goal of recruiting a supermarket and improving the food landscape – and health – of the community.

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Chapter 1 - Introduction

This report presents the results of a case study that sought to answer the following question: How did leadership and community engagement in the Kansas City, KS neighborhood of Argentine help to successfully recruit a supermarket? Argentine is an urban, low-income, largely minority neighborhood in the heart of Kansas City. It was a food desert, commonly defined as an area greater than one mile from a grocery store, from 2006 through 2013, when the neighborhood successfully recruited a Save-A-Lot supermarket. The case study examined leadership and community engagement in the recruitment process and their impact on its efficacy. The purpose of the study was to gain insight into how food deserts can more effectively attract supermarkets and provide guidance to food deserts seeking to improve their food environment.

The primary data source of the case study was a series of interviews with individuals who played key roles in the recruitment of Save-A-Lot. Information from these interviews revealed that a major component of the recruitment process, an assessment of the food needs of the neighborhood, was leveraged to obtain funding and financing that was necessary for the success of the recruitment process. These findings suggest community engagement influences the ability of neighborhoods to recruit supermarkets.

The next chapter of this report, Background, provides an overview of Argentine, discusses food outlets and food deserts, and summarizes interventions that aim to increase access to healthy food. The Methods chapter explains the use of a case study as the research method, lists data sources used in the study, and details how data were collected and processed. The Findings chapter presents the results of the case study. Finally, the Discussion chapter addresses the implications of this study's findings, its limitations, and directions for future inquiry.

Chapter 2 - Background

This chapter has four sections. The first section is an overview of the Argentine neighborhood of Kansas City, KS. The second section covers types of food outlets and the advantages of supermarkets in particular. This section also details the process used to select a location for a proposed supermarket. The third section is a discussion of food deserts – how they are defined, where they are found, how common they are, and the impact they have on diet and health. The final section addresses interventions that seek to improve the health of a community.

Argentine

Geography

Argentine is a neighborhood in Kansas City, KS. Kansas City is located in Wyandotte County, which lies in northeast Kansas along the Kansas-Missouri border. Argentine is bounded by the Santa Fe Railroad to the north, US Highway 69 to the east, West 47th Street/County Line Road to the south, and Interstate 635 to the west (Unified Government of Wyandotte County and Kansas City, Kansas [UG], 2015b). It is approximately four square miles in size (Google, 2016). As shown in Figure 1, Argentine is surrounded by the neighborhoods of Turner, Santa Fe, Shawnee Heights, and Rosedale. South of Argentine lies Johnson County, KS (UG, 2015b).

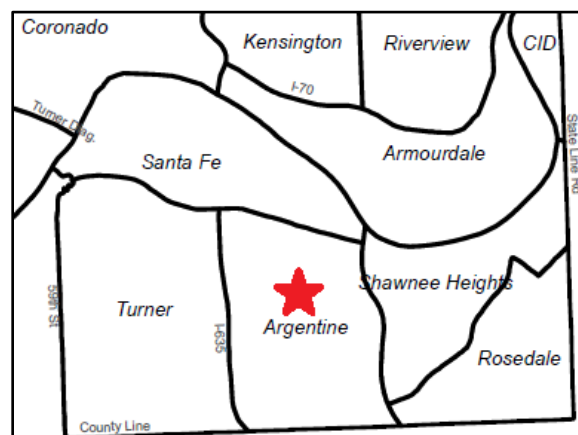


Figure 1. Neighborhoods in southeast Wyandotte County, KS (UG, 2015b)

History

Like other Kansas City neighborhoods, Argentine was originally a freestanding city. It began in the late 1870s as a settlement near a large railroad facility and a smelter. Argentine was officially founded in 1880 (Shutt, 1974). The railroad industry fueled Argentine’s early growth and attracted Mexican laborers, increasing the diversity of the young community (UG, n.d.). The railroad, livestock, and meatpacking industries spurred similar growth and diversity in nearby Armourdale as well as other communities in the Kansas City area (Evans, 2014). In 1910, Argentine was annexed by the City of Kansas City, KS (Shutt, 1974).

Population

The population of Argentine in 2014 was 10,967 people. Approximately 49% of residents are male and 51% are female. The population is young overall; 34.5% of residents are less than 18 years old and 11.1% are 65 years or older (U.S. Census Bureau, 2014).

Argentine is a racially and ethnically diverse community. Hispanic or Latino residents account for 40.3% of the total population and 48.0% of the population below the age of 18. As Table 1 demonstrates, Argentine has a significantly higher Hispanic or Latino population by percentage than surrounding areas. Black residents account for 16.0% of the total population and 18.9% of the population below the age of 18. This is a smaller proportion of the population compared to Kansas City and Wyandotte County but a larger proportion compared to the Kansas City, MO-KS Metropolitan Statistical Area (MSA; UG, 2013a; U.S. Census Bureau, 2014).

Table 1. Population and racial diversity of Argentine and surrounding geographies (U.S. Census Bureau, 2010/2014)

Geography	Population	Hispanic or Latino (%)	Black or African American (%)
Argentine	10,967	40.3	16.0
Kansas City, KS	147,598	28.2	26.3
Wyandotte County, KS	159,466	26.8	24.9
Kansas City, MO-KS MSA	2,040,869	8.5	12.5

Economy

Argentine is an impoverished neighborhood. The median annual household income is \$34,955. As shown in Table 2, this is less than that of Kansas City and Wyandotte County and over \$22,000 less than that of the Kansas City, MO-KS MSA (U.S. Census Bureau, 2014). Notably, Wyandotte County is the lowest-income county in the Kansas City metropolitan area (Mid-America Regional Council, 2010). Argentine also fares poorly compared to surrounding areas in both unemployment rate and poverty rate.

Table 2. Economic characteristics of Argentine and surrounding geographies (U.S. Census Bureau, 2014)

Geography	Median Household Income (\$)	Unemployment (%)	Poverty (%)
Argentine	34,955	16.0	29.5
Kansas City, KS	38,073	12.7	25.4
Wyandotte County, KS	39,326	12.4	24.3
Kansas City, MO-KS MSA	57,056	7.4	12.6

Residents of Argentine work in a variety of industries including education, healthcare, administration, retail trade, and manufacturing (U.S. Census Bureau, 2014). The major industries by percentage of the civilian employed population 16 years of age and older are shown in Table 3. Major employers within and near Argentine include Unified School District 500, Burlington Northern Santa Fe Railroad, Associated Wholesale Grocers, UPS Freight, U.S. Postal Service Bulk Mail Center, Liberty Fruit, and Procter & Gamble. Several of these are among the largest employers in Wyandotte County (UG, 2015a).

Table 3. Major industries in Argentine (U.S. Census Bureau, 2014)

Industry	Employment (%)
Educational services; health care, social assistance	17.2
Professional, scientific, management; administrative, waste management services	15.0
Retail trade	14.0
Manufacturing	10.5
Arts, entertainment, recreation; accommodation, food services	8.3
Transportation, warehousing; utilities	7.1
Finance, insurance; real estate, rental, leasing	6.8
Construction	5.5

Food Access

Argentine is composed of four census tracts (U.S. Census Bureau, 2010). Census tracts are “small, relatively permanent statistical subdivisions of a county or equivalent entity” (U.S. Census Bureau, 2012b, Census Tracts). When Argentine’s only grocery store closed in 2006, three of its four tracts were designated as food deserts by the U.S. Department of Agriculture (USDA; Bittel, 2014; USDA, 2016). This is shown in Figure 2. Briefly, the USDA defines a food desert as a census tract that has both low incomes and low access to healthful food (USDA, 2015b). Much of Argentine continued to have poor access to healthful food until 2013.

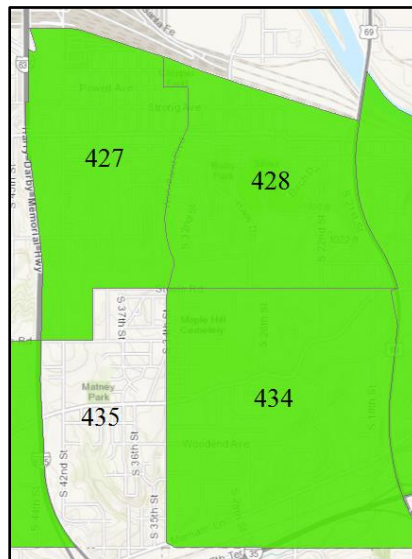


Figure 2. Census tracts in Argentine; food deserts in 2010 shown in green (U.S. Census Bureau, 2010; USDA, 2016)

The opening of two supermarkets in the past several years has improved access to healthful food in Argentine. As previously mentioned, a Save-A-Lot supermarket opened in December 2013; in September 2014, a Walmart Neighborhood Market opened (UG, 2013b/2014a). Both stores are located in the northeast corner of the neighborhood.

Some areas within Argentine continue to have poor access to healthful food. The northwest census tract (refer to Figure 2) does not contain a supermarket nor is one located nearby (Google, 2016; UG, 2016). This tract is the largest in terms of population and the most economically deprived, with a median household income of \$28,813, a poverty rate of 40.2%, and 39.3% of households utilizing Supplemental Nutrition Assistance Program (SNAP), also known as food stamps (U.S. Census Bureau, 2014).

Even prior to the opening of two supermarkets in Argentine, the southwest tract of Argentine was not designated as a food desert (refer to Figure 2). This was due to the presence of a nearby supermarket as well as high incomes (USDA, 2015a/2016). Today, the southwest tract is characterized by high incomes, a low poverty rate, and a relatively low proportion (15.5%) of the population utilizing SNAP (U.S. Census Bureau, 2014). This tract continues to have excellent access to healthful food; a Sun Fresh grocery store is located approximately one-half mile west of the tract (Google, 2016; UG, 2016).

The southeast census tract (refer to Figure 2) is characterized by relatively high incomes and a low proportion of residents (12.6%) who utilize SNAP (U.S. Census Bureau, 2014). Although there is no grocery store within this tract, a Price Chopper grocery store is located approximately one-half mile south (Google, 2016).

In addition to grocery stores, Argentine has other sources of food. There are several restaurants located within or near the neighborhood (Google, 2016). Also, the neighborhood

contains Gibbs Road Farm, where locally-grown organic fruits and vegetables as well as other food items are available via a paid membership (Kansas City Food Circle, 2014).

In summary, Argentine is a diverse and impoverished community. Historically, access to healthful food was very limited but improved when two supermarkets opened in 2013 and 2014. The following section discusses supermarkets, their advantages compared to other food outlets, and how they are located.

Food Outlets

Classification

Food outlets may be classified in a variety of ways, including by square footage, annual sales, the number of different products sold, and the presence of service departments (deli, bakery, florist, etc.). In this report, two categories of food outlets are used: supermarket and minor food retailer. Supermarket includes the following types of food outlets: supermarket (a store that offers a wide variety of food items and multiple service departments), discount supermarket (a supermarket with reduced prices, a decreased variety of items, and few or no service departments), and supercenter (a store that sells a wide variety of food items as well as non-food items). Minor food retailer encompasses all other type of food outlets, including small grocery store, warehouse club (a grocery store or supermarket that requires a paid membership), corner store, natural or gourmet food store, specialty store (bakery, butcher shop, etc.), drugstore, and convenience store (The Reinvestment Fund, 2011).

Accurate classification of food outlets is important because they are often utilized in studies of food access, particularly studies that examine a large geographic area. Several studies have demonstrated the two major commercial lists of food outlets each have significant limitations. These include poor sensitivity (percentage of known food outlets included in the list)

and concordance (agreement between the actual classification of the food outlet and the classification in the list). The accuracy of studies that utilize food outlet lists may be hampered by these limitations (Han et al., 2012; Powell et al., 2011). However, other studies suggest these lists are as accurate and complete as direct field observations and therefore have utility in food access research (Bader et al., 2009; Liese et al., 2010).

Two studies have identified differences in concordance based on neighborhood characteristics, suggesting the presence of systematic bias in the classification process. Powell and colleagues (2011) found that in one commercial list of food outlets, Dun & Bradstreet, concordance was higher in suburban areas of Chicago compared to urban and rural areas. In another study of the Chicago area, Han and colleagues (2012) found Dun & Bradstreet and another list, InfoUSA, were more likely to incorrectly classify convenience stores in predominantly black census tracts compared to white tracts. Studies that utilize such lists may overestimate access to healthful food in these neighborhoods.

Advantages of Supermarkets

In many studies of food access, the presence of a nearby supermarket is used as a proxy for adequate access to healthful food. This is because supermarkets tend to have a wider selection of foods, including healthful foods, and more affordable prices compared to minor food retailers. Sallis and colleagues (1986) examined food outlets in 24 neighborhoods in San Diego, CA. They found supermarkets offered significantly more “heart-healthy” food items (e.g., nonfat dairy, lean meat, low-sodium items) than small grocery stores, convenience stores, and health food stores (p. 217). Middle-income neighborhoods had better access to heart-healthy items than their low- or high-income counterparts. The availability of heart-healthy items was associated

with the presence of exercise amenities such as playgrounds and running tracks (Sallis et al., 1986).

Chung and Myers (1999) assessed the cost and availability of numerous items at food outlets in the Minneapolis-St. Paul, MN area. Food items included in the study were based on the USDA's Thrifty Food Plan, a "national standard for a nutritious diet at a minimal cost" (USDA, 1999, p. iii). The Thrifty Food Plan is used to calculate SNAP benefits (Sheldon et al., 2010). They found chain grocery stores offered lower prices of food items than small grocery stores and convenience stores. Overall, the Thrifty Food Plan was cheaper in chain grocery stores than in small grocery stores and convenience stores, cheaper in suburban areas than in inner city urban areas, and cheaper in zip codes with a poverty rate less than 10% (Chung & Myers, 1999).

Burns and colleagues (2004) obtained similar results in a study of chain supermarkets and independent grocery stores in Victoria, Australia. They surveyed stores to determine the availability of a "Healthy Food Access Basket" that consisted of various food items comprising a healthful diet (p. 2). Chain supermarkets were more likely to offer items in the basket than independent grocery stores. Availability of the basket was worst in communities that had a single independent grocery store (Burns et al., 2004).

Zenk and colleagues (2005a) surveyed women living in the Detroit eastside and found that of those who shopped in Detroit proper, the majority (77%) shopped at an independent grocery store. In contrast, 86% of respondents who shopped in the suburbs of Detroit patronized a supermarket. The selection and quality of food were both superior at suburban stores (Zenk et al., 2005a).

More recently, Sheldon and colleagues (2010) examined the cost of a market basket composed of food items from the Thrifty Food Plan. The study included 22 food outlets in and

near Central Falls, RI. Central Falls, like Argentine, is a community with a large Hispanic or Latino population and a high poverty rate. Only one of the outlets was a supermarket, more specifically a discount supermarket. The remaining outlets included nine small grocery stores, eight convenience stores, and four specialty stores. The authors found that just three of the outlets – the discount supermarket, one small grocery store, and one convenience store – sold the complete market basket. The affordability of the market basket was also assessed; the average cost of the market basket at food outlets in the study was 41% higher than the national average. These findings suggest small grocery stores and convenience stores are not adequate sources of healthful food.

The affordability, variety, and quality offered by supermarkets make them a critical source of food for low-income families. Low-income households spend less on food per capita but more as a share of their household income compared to high-income households. They also spend more of their food budget on at-home meals, making access to affordable groceries crucial (Kaufman et al., 1997; Nelson et al., 2002). Variety is also important because of how low-income households economize. First, they tend to purchase an alternative, cheaper set of food items primarily consisting of generic and store brands, which typically have a lower per-unit price. Second, they purchase larger packages of food items, which also typically have a lower per-unit price. Third, they opt for more affordable items within food groups – e.g., cheaper cuts of meat or less expensive fruits and vegetables (Kaufman et al., 1997; Leibtag & Kaufman, 2003).

Supermarket Location

Commercial retail development occurs in four phases: “Site Acquisition, Pre-development, Construction, [and] Occupancy” (PolicyLink, 2007, p. 13). Supermarkets are

developed in a similar fashion. The first two phases of supermarket development, shown in Table 4, are of interest.

Table 4. The first two phases of supermarket development (PolicyLink, 2007)

Site Acquisition	Pre-development
Assess project feasibility and constraints	Solicit community input and support
Identify appropriate parcel	Create development concept
Achieve site control: negotiate an option to purchase a parcel or parcels	Prepare site layout and building design
	Secure development financing
	Acquire property
	Obtain land use and building permits

Clarke (1998) identified general strategies used by retailers to locate stores. He grouped these into three historical phases, but many of the strategies are still used. The first phase occurred during the 1960s and 1970s and includes the following strategies: gut feeling, checklist, and analog. The gut feeling approach involves a company leader visiting potential sites and identifying the best one based on instinct and experience. This approach is subjective and resource intensive, as it necessitates many on-site, in-person visits. The checklist strategy involves collecting numerous data points about a potential location. These data are typically compiled and classified as either benefits of the site or drawbacks. Then, sites are compared against one another. The analog strategy estimates the performance of a proposed store by comparing it to existing stores that have similar characteristics. These characteristics may include the physical nature of the store, its location, or local economic factors (Clarke, 1998).

The second phase of location selection strategies occurred in the 1980s and 1990s. This phase involves the use of geographic information systems (GIS) and other technologies to create models. By incorporating data about a proposed store, its location, and the surrounding population, these models can estimate how many people will patronize the store and how much revenue the store will generate (Clarke, 1998).

Retail stores today typically use more complex versions of the aforementioned models; these represent the third phase of location selection strategies. The increasing complexity may be a response to increased saturation of markets, necessitating accurate and reliable selection of store sites. Additionally, retailers may develop new and more refined models to meet demand for alternative store formats such as neighborhood-scale grocery stores (Clarke, 1998).

The International Council of Shopping Centers (ICSC, 2008) surveyed 53 retailers across a variety of industries to better understand the process used to select a site for retail development. Industries included in the survey were: “financial services, big box retail, apparel and shoes, grocers, home improvement and home accents” (ICSC, 2008, p. 6). The process is as follows:

1. Determine the number of stores they want to open, the time frame for opening and in which cities.
2. Gather demographic and business data to determine where, within each city, market demand can support their business.
3. Do some groundwork to assess:
 - a. land availability in a location that makes sense (i.e., a business selling breakfast products would want a location in an area with substantial morning traffic),
 - b. the location’s visibility, access routes and the existing neighborhood customer base and
 - c. potential barriers to successful retail development.
4. All the information is then placed in proprietary models that incorporate performance data from existing stores. Retailers use these models to estimate the potential performance of a new store at the selected location.

Consequently, as retailers open new stores or branches in similar neighborhoods their predictive models become more and more accurate (ICSC, 2008, p. 9).

When the result of this process conflicts with the “intuition” of a retailer, a secondary process is initiated (ICSC, 2008, p. 10). This is more common with inner-city sites. The secondary process involves additional data collection including fieldwork to review the site in person and research into “incentives that could potentially decrease the cost of opening stores” (ICSC, 2008, p. 10).

In addition to models and processes, retailers may rely on input by residents. If a site does not perform well in a model, an organized and persistent effort by residents can persuade the retailer to reconsider the site. One of the businesses surveyed reported this approach influenced the construction of a new store (ICSC, 2008).

The specific factors that influence a company’s decision to open a store are numerous and vary from company to company. However, two critical factors have been identified – median household income and number of people or households. These are shown in Table 4 alongside other factors that play lesser roles. Grocers typically collect this data at the neighborhood or census block group scale (ICSC, 2008). A block group is a “statistical division of census tracts” where 600 to 3,000 people reside (U.S. Census, 2012a, Block Groups). The grocers in the survey reported the following minimum requirements for a new store location: population size of 50,000, median household income of \$30,000, and a one- to two-mile radius trade area (ICSC, 2008).

Table 5. Site-selection indicators (ICSC, 2008)

Prosperity	Characteristics	Population	Neighborhood
Average income	Educational attainment	Average household size	Competition (presence, type, location)
Homeownership	Ethnic composition	Daytime population	Crime
Home sale values		Population change	Major employers in the area
Median income		Population size	Neighborhood orientation
Income change		Number of households	Pedestrian traffic
			Visibility

Grocers in the ICSC (2008) survey reported several unique considerations that influence the store site selection process. First, formulas and models are designed to estimate household expenditures in the area around the proposed site. The models can then predict how the physical environment (e.g., the presence of nearby competitors) and the social environment (e.g., a potential customer’s view of the neighborhood) will influence household expenditures. Second, grocers value data from a wide time period in order to identify trends and predict changes. They want to know how a neighborhood will evolve and what it will look like in the future. Third, supermarkets exist in their own class of competition. When a grocer is considering building a supermarket, minor food retailers are not considered significant competitors. Also, the success of existing supermarkets in the neighborhood is used as a gauge of how well a new supermarket will perform (ICSC, 2008; Organization for Economic Co-operation and Development, 2015).

Overall, supermarkets offer superior affordability, variety, and quality compared to other types of food outlets. Supermarket chains use sophisticated models that incorporate data such as household income and population size to identify suitable sites for new stores. Public input also plays a role in this process. The next section discusses the problems created by lack of a supermarket.

Food Deserts

Definition

Food deserts can be defined in a variety of ways. Most definitions contain a parameter of limited or no access to healthful food; access to a supermarket typically serves as a proxy for access to healthful food. Some definitions contain a second parameter of low income or no automobile ownership. The 2008 Farm Bill defined a food desert as an area “with limited access to affordable and nutritious food, particularly such an area composed of predominantly lower-income neighborhoods and communities” (U.S. Senate, 2008, p. 2039).

The U.S. Department of Agriculture is the primary entity that designates areas as food deserts. This designation is important because it enables communities to access certain funding sources in order to recruit a supermarket. The USDA’s definition of a food desert is a census tract that has both low access and low income. Low access is defined as a tract where “at least 500 people or 33 percent of the population [live] more than 1 mile (urban areas) or more than 10 miles (rural areas) from the nearest supermarket, supercenter, or large grocery store” (USDA, 2015a, Definitions of indicators in mapping tool). Low income is defined in three ways:

- The tract’s poverty rate is 20 percent or greater; or
- The tract’s median family income is less than or equal to 80 percent of the State-wide median family income; or
- The tract is in a metropolitan area and has a median family income less than or equal to 80 percent of the metropolitan area’s median family income (USDA, 2015a, Low-income neighborhoods).

Food deserts can be identified using a variety of methods. The USDA generates a list of all supermarkets, supercenters, and large grocery stores in the U.S. by combining a list of all

stores that accept SNAP with a commercially available list of stores (Nielsen, 2010). The location of each store is plotted using GIS and the distance from census tracts to stores is calculated. Finally, demographic information from the U.S. Census Bureau is overlaid (USDA, 2015b).

Many studies of food access utilize methods similar to the USDA's. Alternative approaches include calculating the total number of supermarkets within one mile of the study area or calculating the average distance to the nearest three supermarkets. Access is typically calculated at the census tract level. There are several approaches to measuring distance. These include Euclidian distance (straight-line distance), Manhattan block distance (distance in city blocks), and network distance (distance travelled while utilizing a transportation network such as a street or subway system).

The presence of a food desert is one factor that can lead to decreased food security. Food security has four levels. High food security is a lack of challenges in accessing healthful food. Marginal food security is the presence of one or two challenges in accessing healthful food with either minimal or no impact on diet. Low food security is a change in diet with preserved calorie intake. For instance, a household may purchase less expensive cuts of meat, more generic brands, or eliminate certain food items from the household's diet altogether. Very low food security involves significant changes to diet, including decreased food intake. The latter two levels are often referred to as food insecurity (USDA, 2015a).

An estimated 14% of households (over 17 million households) faced food insecurity at some point in 2014. This proportion decreased from 14.9% in 2011. Of these households, approximately 7 million faced very low food security. Among households with children, 9.4% faced food insecurity in 2014 (USDA, 2015c).

Origin

The origin of food deserts – how they come into existence – is poorly understood. It is known that supermarkets in impoverished neighborhoods tend to be smaller and older than supermarkets in more affluent neighborhoods. Independent ownership of these stores is more common. Additionally, supermarkets in low-income neighborhoods typically offer fewer services and amenities such as self-checkout registers, and they have shorter hours of operation (King et al., 2004). These factors in conjunction with less affluent customers may make stores in impoverished neighborhoods less profitable and therefore more prone to closure, potentially creating food deserts.

The high operating costs that urban grocery stores face may also contribute to their closure. These costs include “security, shrinkage, workers compensation, general liability insurance, and real estate taxes” (Porter et al., 2002, p. 10). For example, lower-income shoppers tend to make smaller, more frequent supermarket trips; urban supermarkets therefore must employ more cashiers to process these transactions (Porter et al., 2002).

Existing food deserts often persist for years. Several issues may contribute to this phenomenon. First, urban neighborhoods, particularly low-income and/or minority neighborhoods, are sometimes perceived as being incapable of supporting a profitable supermarket (ICSC, 2008). In some cases, this holds true even when a city has conducted a market feasibility study indicating a food desert can support a supermarket (Pothukuchi, 2005). The undercounting of minority residents of urban neighborhoods – thereby leading to underestimation of demand – may also contribute to the view of these areas as unprofitable (Porter et al., 2002). Because of the misperception of urban neighborhoods, 25-30% of retail demand in inner-city neighborhoods is unmet (The Initiative for a Competitive Inner City, 1998).

Second, development in urban areas is expensive. Supermarkets are large structures and require ancillary facilities such as parking lots and loading bays. With relatively few large sites available, a supermarket chain may be forced to assemble several small parcels of land; such a process could take years and potentially require government assistance. Once a site is chosen, it then needs to be prepared for development; this is an additional expense. Overall, developing an urban supermarket is more expensive than developing a suburban supermarket (Porter et al., 2002).

Third, a systemic bias against inner-city neighborhoods may exist. Eisenhauer (2001) noted there was a movement of chain supermarkets from urban to suburban areas during the 1970s and 1980s. This was driven by “supermarket redlining,” a process wherein supermarket chains’ investment decisions were based on “stereotypes of gross income, race, and reputation” (Eisenhauer, 2001, p. 128). The findings of Pothukuchi (2005) suggest this bias still exists.

Prevalence and Risk Factors

An estimated 23.5 million people in the U.S. live in a food desert (USDA, 2009). Certain demographic characteristics, particularly a significant minority population or low-income population, are associated with food deserts. Other populations are at an increased risk of food insecurity irrespective of where they live.

Low-income neighborhoods are more likely to be food deserts. Chung and Myers (1999) examined the locations of over 500 grocery stores and convenience stores in the Minneapolis-St. Paul, MN area. The majority (89%) of chain grocery stores were in zip codes with a poverty rate less than 10%. Similar results were obtained by Morland and colleagues (2002b), who analyzed the distribution of food outlets in over 200 census tracts in several U.S. cities. They found supermarkets were more prevalent in more affluent neighborhoods (Morland et al., 2002b).

In a study of the Detroit, MI metropolitan area, Zenk and colleagues (2005b) found that census tracts in the lowest third of income had worse access to supercenters and full-service grocery stores. Similar findings were obtained by Burns and Inglis (2007) in a study of Casey, South East Melbourne, Australia; less affluent neighborhoods in the study area were on average closer to fast food restaurants, while more affluent neighborhoods were closer to supermarkets. Recently, Battersby and Peyton (2014) examined the distribution of supermarkets in Cape Town, South Africa. Very affluent neighborhoods – those in the highest 20% of income – had significantly more supermarkets than did other neighborhoods (Battersby & Peyton, 2014).

A neighborhood with a large minority population is more likely to be a food desert. This is particularly true for minority neighborhoods that are also low income. Morland and colleagues (2002b) found white neighborhoods had four times as many supermarkets as black neighborhoods as well as fewer small grocery stores and convenience stores. Zenk and colleagues (2005b) concluded highly impoverished black neighborhoods were on average 1.1 miles farther from a supercenter or full-service grocery store than poor white neighborhoods.

In some areas, an individual may have no access to any type of food outlet. In a study of over 200 census tracts in Maryland, Minnesota, Mississippi, and North Carolina, Morland and colleagues (2002a) found that less than 10% of the black population resided in a census tract with a supermarket. Similarly, Galvez and colleagues (2007) examined food access in East Harlem, New York City and found that no predominantly black census blocks had a supermarket. Notably, 76% of black census blocks contained no food outlet of any type. Among predominantly Latino and racially heterogeneous census blocks, 15% and 40%, respectively, had no food store (Galvez et al., 2007).

Certain populations are more likely to be food insecure regardless of where they live. Hill and colleagues (2011) found farmworkers in Georgia were much more likely to be food insecure than the general population. Those without H-2A classification were three times as likely to be food insecure as those with H-2A classification. The H-2A system is a path for foreigners to obtain U.S. agriculture jobs on a temporary basis (Hill et al., 2011; U.S. Citizenship and Immigration Services, 2015).

Several studies have suggested food deserts do not exist. Apparicio and colleagues (2007) sought to identify food deserts in Montreal, Canada. They found access to supermarkets was best in urban neighborhoods and worst in suburban neighborhoods. Even neighborhoods most at risk, i.e., those that were socioeconomically deprived and farthest from supermarkets, were on average ten minutes' walking distance from a supermarket (Apparicio et al., 2007). Other studies have achieved similar results. Although urban cores in select cities may have a higher concentration of supermarkets, most food desert literature suggests these areas have poor access to healthful food.

Impacts

A growing body of research suggests shows an association between poor access to a supermarket and a less healthful diet. Poor access is also associated with diet-related diseases such as obesity, diabetes, and heart disease (World Health Organization, 2016a). Morland and colleagues (2002a) found black Americans who lived in a census tract with a supermarket were more likely to consume the recommended daily serving of fruits and vegetables. For each additional supermarket in the neighborhood, 32% more servings of fruits and vegetables were consumed (Morland et al., 2002a).

Morland and colleagues (2006) found a positive association between the number of supermarkets in a census tract and lower rates of diet-related health problems including high blood pressure and obesity. In contrast, grocery stores and convenience stores were associated with higher rates of high blood pressure, diabetes, and obesity (Morland et al., 2006). Poor access to healthful foods has also been associated with worse diets and/or a higher prevalence of diet-related diseases in pregnant women (Laraia et al., 2004), children (Skidmore et al., 2011), and adolescents (Chaloupka & Powell, 2009).

In summary, food deserts exist, they disproportionately affect different populations in the U.S., and they are associated with less healthful diets and poorer health. They therefore pose a significant public health problem. The following section discusses ways to ameliorate food deserts.

Interventions

This section discusses interventions that aim to increase food access and food security and ultimately improve health. These interventions reflect a growing understanding of the determinants of health – physical environment, socioeconomic environment, and personal characteristics and choices (World Health Organization, 2016b). This framework is shown in Figure 3 (Hutch et al., 2011).

Some interventions are broad and policy oriented. In 2011, the Built Environment Workgroup, a division of the Federal Collaboration on Health Disparities Research, identified actions that may improve health and reduce the disparities in health seen among different racial, ethnic, and socioeconomic groups in the U.S. These included:

- Integration of health into urban planning
- Collaboration between government and community organizations

- Evaluation of proposed developments with health impact assessments
- Investment in transportation and walkability (Hutch et al., 2011)

More focused interventions address psychosocial factors, behavioral factors, or the physical environment. The process by which these interventions are implemented, potential funding sources, and their efficacy are discussed below.

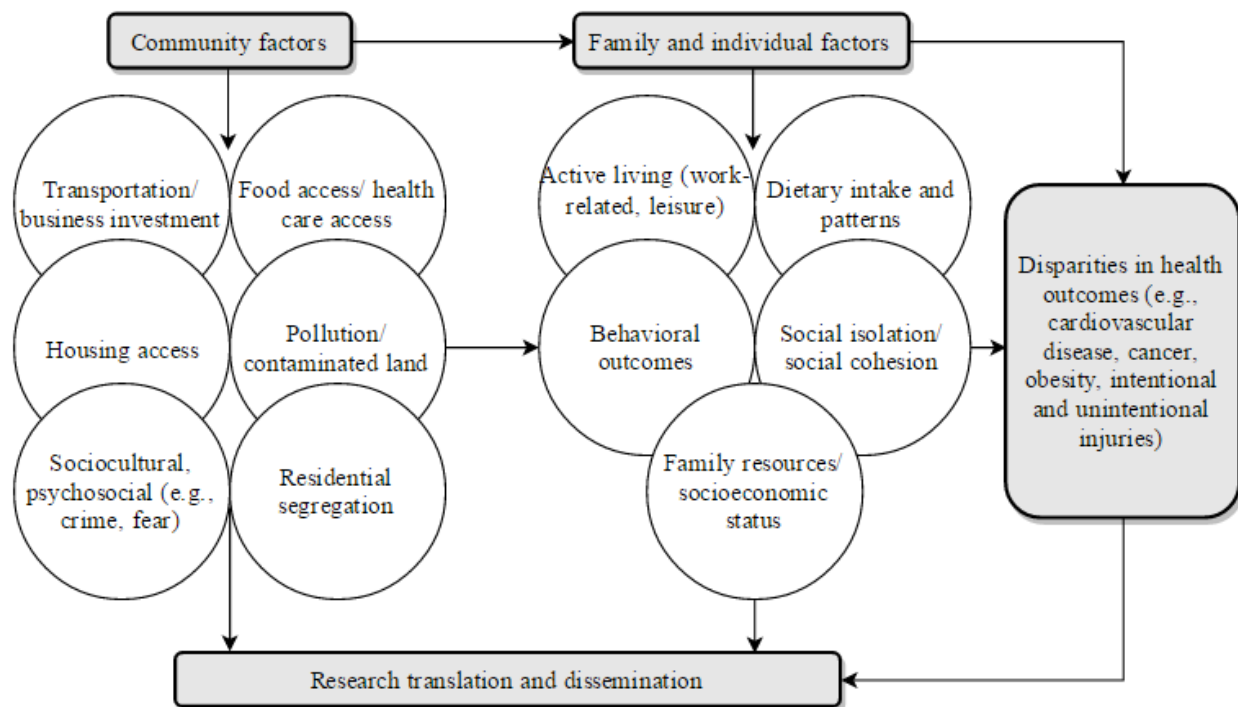


Figure 3. Model of interaction between environment and individuals (Hutch et al., 2011)

Psychosocial and Behavioral Interventions

Several federal and state programs provide income supplementation or financial assistance with purchasing food. In Kansas, the Temporary Assistance for Needy Families program provides cash assistance to families that meet certain requirements (Kansas Department for Children and Families, 2015c). The Food Assistance Program, Kansas’s implementation of SNAP, provides benefits to purchase food. It also provides educational information about healthful eating and living (Kansas Department for Children and Families, 2015a). Individuals

and households must meet various work, disability, and/or income requirements to be eligible for benefits (Kansas Department for Children and Families, 2015b). Low-income women who are pregnant or have young children may qualify for the Supplemental Nutrition Program for Women, Infants, and Children (UG, 2014d). This program provides benefits to purchase healthful food as well as services that promote healthful eating, breastfeeding, primary healthcare, and immunizations (UG, 2014c).

Several cities have implemented programs that enable individuals to use SNAP benefits at farmers' markets and provide an incentive for doing so. New York City's Health Bucks program awards individuals \$2 to spend on fruits and vegetables for every \$5 they spend at a farmers' market (New York City Health, 2016a). In Kansas City, the Double Up Food Bucks program doubles the value of SNAP benefits spent at farmers' markets, e.g., \$10 of produce can be purchased with \$5 of benefits (Cultivate Kansas City, 2016).

Gittelsohn and colleagues (2010a) evaluated the efficacy of stocking supermarkets with healthier versions of four groups of foods: beverages, kids' snacks, condiments, and meals. Educational materials, including visual displays, posters, and product labels, were placed in stores. Adults who shopped at supermarkets where these changes were implemented were more likely than adults in the control group to view healthful food as convenient. Children in the intervention group ate more grains and drank more water than those in the control group (Gittelsohn et al., 2010a).

Psychosocial and behavioral interventions can also be implemented in healthcare settings. The Study of Technology to Accelerate Research Trial sought to reduce childhood obesity by providing healthful-living newsletters and magazines, support from health coaches, and input from healthcare providers to families with obese children. These measures led to a greater

decrease in BMI z -score in the intervention group compared to children in the control group. Proximity to a supermarket was found to be an effect modifier, i.e., children in the intervention group had a greater decrease in their BMI z -score if they lived closer to a supermarket. Likewise, children had a greater increase in fruit and vegetable consumption if they lived closer to a supermarket; residing one mile closer to a supermarket resulted in an additional 0.29 servings of fruits and vegetables consumed per day (Fiechtner et al., 2016). These findings suggest psychosocial and behavioral interventions may be more effective when implemented alongside efforts to improve access to healthful food.

Improving Access

Access to healthful food can be improved in numerous ways. One method is to encourage small food retailers, particularly convenience stores, to sell healthier food items. Gittelsohn and colleagues (2010b) evaluated the efficacy of a Baltimore program that provided convenience stores in food deserts with healthful food items such as fresh fruit and whole-wheat bread. The program was associated with higher sales of healthful food offerings and healthier food preparation methods used by neighborhood residents (Gittelsohn et al., 2010b). Similar programs have been implemented in other major U.S. cities.

Other venues can provide access to healthful food. These include farmers' markets, bodegas, parks, neighborhood gardens, food carts, and mobile grocery stores. Ruelas and colleagues (2012) found the customer base of two large farmers' markets in Los Angeles was lower income than the surrounding area and had a higher proportion of Hispanic customers. The majority of shoppers endorsed food insecurity; many reported the markets enabled them to eat healthier foods at affordable prices (Ruelas et al., 2012). The Green Carts program in New York City features food carts stocked with fresh fruits and vegetables. These operate in designated

areas that have poor access to healthful food (New York City Health, 2016b). Rollin' Grocer, a full-service mobile grocery store, sells numerous dairy, bakery, meat, and snack products, as well as over 25 types of fruits and vegetables, in low-access neighborhoods in Kansas City (The Kansas City Star, 2016; Rollin' Grocer, 2015).

With affordable prices and a variety of products, supermarkets are presumably the most effective way to improve access to healthful food. A small number of studies have examined the impact of a supermarket opening in a food desert. Dubowitz and colleagues (2015) found that the opening of a supermarket in a Pittsburgh, PA food desert was associated with a decrease in daily energy consumption by approximately 220 kilocalories and a decrease in added sugar consumption. Both neighborhood satisfaction and the perception of access to healthful food increased in the intervention neighborhood compared to the control neighborhood. However, fruit and vegetable consumption, average BMI, and the rates of overweight and obese did not change (Dubowitz et al., 2015).

The process of recruiting a supermarket into a food desert is not fully understood. However, some aspects of the process have been described. Pothukuchi (2005) surveyed urban planners in 32 cities to determine whether and how supermarkets are recruited. She found most cities did not proactively recruit supermarkets. Similarly, most cities did not have programs that aimed to improve food access in food deserts. In several cities, community development corporations spearheaded efforts to recruit supermarkets. A minority of cities helped assemble and clean sites or offered incentives such as financing, expedited project approval, or fee waivers (Pothukuchi, 2005).

Three cities in the survey conducted by Pothukuchi (2005) aggressively and successfully recruited supermarkets. Common attributes among these communities were: "political leadership

at the highest level; strong grassroots advocacy; and skilled public agency participation” (Pothukuchi, 2005, p. 238). These are similar to the three factors identified by the Initiative for a Competitive Inner City (1998) as being critical for urban retail success: “commitment/leadership,” “tailoring to local consumers,” and “operational excellence” (Initiative for a Competitive Inner City, 1998, p. 13).

Community development corporations and other stakeholders may assist local governments in supermarket recruitment efforts. PolicyLink (2007), a research institute that focuses on social equality, outlined key aspects of “coordinated strategies that bring together the resources and leadership of local government and local community-based organizations” (PolicyLink, 2007, p. 6; PolicyLink, 2016). These included:

- Identify and organize stakeholders
- Raise awareness of the problem
- Identify potential development sites
- Research and offer incentives
- Secure community support and corporate accountability (PolicyLink, 2007, pp. 7-8)

Potential stakeholders include: community development corporations, neighborhood and homeowners’ associations, religious groups, public health professionals, business and economic promotion groups, and planning agencies. These entities should collaborate with each other and with local governments (PolicyLink, 2007). However, as discussed, local governments typically are not involved in supermarket recruitment. Additionally, leadership of the supermarket recruitment process – which entity or entities coordinate the efforts of stakeholders – is not fully understood. These are potential barriers to successful recruitment.

Data about the function of local resident involvement in the supermarket recruitment process, particularly in the context of a food desert, is limited. A community food assessment can shed light on residents' perception of the local food environment and its deficiencies (Centers for Disease Control and Prevention, 2012; PolicyLink, 2007). Other strategies include surveys and meetings "to better understand local priorities" (PolicyLink, 2007, p. 40). Additional research is needed to identify strategies to effectively engage community members in the supermarket recruitment process and the impact of doing so.

As previously discussed, obstacles to building urban supermarkets include the perception of urban neighborhoods as unprofitable, a more expensive and more complicated development process in urban areas, and systemic bias. Even when offered bundles of incentives and provided a favorable market feasibility study, supermarkets may be reluctant to build in low-income, minority neighborhoods (Pothukuchi, 2005). Operating costs are higher in urban areas. There may be fewer available sites in urban neighborhoods, and the character of sites (e.g., industrial) may not be acceptable (ICSC, 2008; Pothukuchi, 2005).

Funding

Significant resources are needed to develop and build a supermarket. Typically, most of the financing is provided by a private institution in the form of either a loan or equity in the project (PolicyLink, 2007). However, financing options are limited in some urban areas (Lang et al., 2013). In these settings, a blend of private financing, public financing, and tax credits may be more feasible. These resources can also be used to fund supermarket recruitment or cover operating costs of developments. For instance, a community development corporation may build and operate a retail building and lease space to a supermarket (Pothukuchi, 2005).

Private financing options include private banks, community development financial institutions, equity funds, and foundations. Private banks lend money to developments that are solid financial prospects. They are incentivized by the Community Reinvestment Act to lend to the areas in which they are located (Federal Financial Institutions Examination Council, 2016; PolicyLink, 2007). Community development financial institutions (CDFIs) are banks, credit unions, and other financial entities that are committed to revitalizing communities and promoting equitable economic growth. These institutions are supported in part by the federal CDFI Fund (CDFI Fund, n.d.). Equity funds obtain partial ownership of the development, and like private banks, seek out safe investments. Foundations offer grants and loans, typically in smaller amounts, to projects that are consistent with the mission of the foundation (PolicyLink, 2007).

Public financing options include two Department of Housing and Urban Development (HUD) programs, the Healthy Food Financing Initiative (HFFI), and tax increment financing. The Community Development Block Grant Program, managed by HUD, provides funds to eligible communities – typically large cities and counties – for various aspects of community development including property purchase, demolition, renovation of existing structures, and infrastructure capital improvements. This program also provides funding to states who then distribute dollars to smaller communities (HUD Exchange, 2014a). HUD also administers the Section 108 Loan Guarantee Program, which provides flexible, federally-backed loans for larger economic development projects (HUD Exchange, 2014b).

The HFFI is a federal program that was created in 2010. It is a collaborative effort by the Department of the Treasury, Department of Health and Human Services, and USDA that provides financing to improve access to healthful food. Supermarkets and other type of food outlets are eligible for funds (Let's Move, n.d.). This partnership is shown in Figure 4. The

Treasury manages the aforementioned CDFI Fund, which distributes HFFI dollars to CDFIs who finance food outlets. CDFIs are also eligible for tax credits via the New Markets Tax Credit Program (CDFI Fund, 2016). The Department of Health and Human Services, through their Community Economic Development program, provides HFFI grants to community development corporations to finance food outlets. The USDA funds a variety of programs and initiatives that aim to improve access to healthful, affordable food (Office of Community Services, 2016). The federal government has invested more than a half-billion dollars in food access projects, including bringing supermarkets to food deserts, since 2011 (Dubowitz et al., 2015).

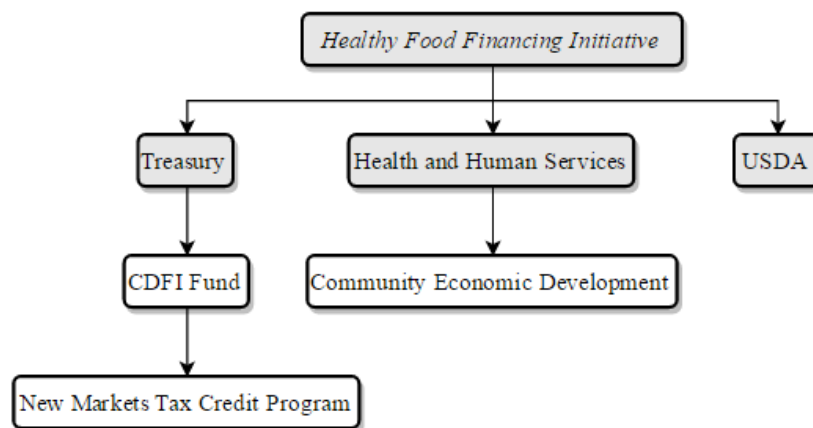


Figure 4. The Healthy Food Financing Initiative (Office of Community Services, 2016)

This section summarized interventions that seek to improve food access, diet, and health. Psychosocial and behavioral interventions provide financial, social, and educational resources to individuals living in food deserts. Improving physical access by recruiting a supermarket is a difficult process, but based on limited data is efficacious. Numerous programs fund food access projects, but dollars are limited and often awarded on a competitive basis. The impact of leadership and community engagement in the supermarket recruitment process are unclear.

Chapter 3 - Methods

A case study of Argentine, Kansas City, KS was conducted to answer the following question: How did leadership and community engagement in the Kansas City, KS neighborhood of Argentine help to successfully recruit a supermarket? The decision to use a case study as the method of inquiry was guided by the three conditions laid out by Yin (2014). First, the study attempted to answer a “how” question. Such questions often “deal with operational links needing to be traced over time, rather than mere frequencies or incidence” (Yin, 2014, p. 10). Case studies can characterize complex and dynamic relationships between people, organizations, values, and places. Numerous entities were involved in the recruitment of Save-A-Lot, each with a different set of values and priorities, and the effort spanned five years, making a case study an appropriate method.

The second condition laid out by Yin is the extent to which the behaviors of involved parties can be controlled. In a setting such as Argentine where the behavior of residents, leaders, and other parties clearly cannot be controlled, a case study is a useful method. In contrast, in a setting where behaviors can be controlled, an experiment would be a more fitting approach (Yin, 2014).

Yin’s third condition is the temporal focus of the research question. When contemporary events are being investigated, use of a case study is preferred over a history. The recruitment of a supermarket to Argentine occurred from 2008 to 2013 and therefore is a relatively contemporary event (Yin, 2014).

The work done in Argentine to improve access to healthful food was heavily influenced by the history, people, and values of the neighborhood. As a result, it was a unique process that needed to be examined in the context of the neighborhood. Case studies are effective tools to

examine an event in its context, particularly when the two are closely linked (Yin, 2014). This is another reason a case study was chosen as the research method.

Argentina was chosen as the case for three reasons. First, it is an urban, racially and ethnically diverse, low-income community; as previously discussed, these are risk factors for poor access to healthful food. Second, the neighborhood recruited Save-A-Lot relatively recently (2013). Because of these two factors, the findings of this study may be applicable to many current food deserts. Third, the author previously resided in a food desert near Argentine and was familiar with the general details of the recruitment effort.

Case studies integrate data from multiple sources. In this way, information can be triangulated, i.e., corroborated to ensure its accuracy. This report uses data sources such as peer-reviewed literature, government reports, informational materials from non-profit organizations, and supermarket industry reports. Additional data was obtained via focused interviews with individuals involved in the supermarket recruitment process in Argentine.

A focused interview follows a guide that lists pertinent topics and solicits interviewees' perspectives on the case (Frankfort-Nachmias et al., 2015). This type of interview is structured yet provides respondents with flexibility in their responses. A series of interview questions was constructed; the objective was to identify what party or parties led the recruitment of Save-A-Lot, how residents were engaged in the recruitment process, and the impact these had on the efficacy of the recruitment effort. Interviews contained the following questions:

- Describe your role in the project in which Argentine recruited Save-A-Lot.
- When and how did you become involved in this project?
- Did you lead the project?
 - If yes:

- How did you become the leader?
 - How did you collaborate with other individuals and organizations?
 - What were leadership challenges you encountered?
- If no:
 - Were you aware of an individual or organization that led the project?
 - How did the leader collaborate with you?
- Were you involved in engaging neighborhood residents?
 - If yes:
 - What methods were used to engage residents, and how were they chosen?
 - Which methods most effectively engaged residents? Which methods were less successful?
 - What was the value/significance of community engagement?
- Describe the impact community engagement had on Save-A-Lot's decision to build a store in Argentine

A review of news articles covering the story of Argentine and Save-A-Lot was conducted. Individuals and organizations who were mentioned in multiple articles or who, based on the text of the article, had played a prominent role in the recruitment of Save-A-Lot were identified as potential interviewees. When an organization was deemed a potential interviewee, the organization was contacted by phone and the contact information of the person most familiar with the case of Argentine and Save-A-Lot was requested. This process led to the identification of six potential interviewees:

- Ann Murguia, local elected official and community development corporation leader
- Bob Ferratto, Senior Real Estate Manager, Save-A-Lot
- Kim Kimminau and Natabhona Mabachi, local public researchers
- Marlon Goff, staffer, UG Department of Economic Development
- Hall Family Foundation, major financial backer of the recruitment effort

Potential interviewees were contacted by phone. If initial calls were unsuccessful, an email requesting to schedule a phone call was sent. At first contact, verbal informed consent was obtained, a phone interview was scheduled, and a list of the interview questions was sent by email to the interviewees. Finally, the phone interview was conducted. Responses to the interview questions were recorded by hand. At the conclusion of the interview, each participant was given a debriefing form that included the contact information of the author and the principal investigator, recommended reading pertinent to the research question, and instructions on how to obtain a copy of the completed research if so desired. The debriefing form also included the contact information of the Kansas State University Institutional Review Board in the event an interviewee had a question or concern. This process occurred in October and November 2016.

Four of the six individuals identified as potential interviewees agreed to participate in the study. Bob Ferratto was eager to speak about the store in Argentine but for confidentiality reasons would not speak on the record and would not participate in the survey. His participation likely would have provided invaluable information about the priorities and decision-making process of Save-A-Lot. The Hall Family Foundation employee most familiar with the Save-A-Lot project was no longer with the Foundation and phone calls to her superior were not returned. The Foundation was identified as a potential interviewee because it was a major financial backer

of the supermarket recruitment and development project. Its participation may have shed light on the impact that portions of the project had on the ability to generate capital for the project. This is discussed in the following chapter.

The absence of these two key voices from the study posed a challenge, as the research question became difficult to answer directly. Additionally, it reduced the sample size. This in turn decreased the reliability of the findings as fewer data streams could be triangulated.

As previously discussed, Argentine possesses characteristics – urban, low-income, predominantly minority – that are associated with food deserts. One motivation behind its selection as the case was the generation of findings that could be generalized to other food deserts. However, the study revealed Argentine possesses several unique community assets. These include a strong community identity and two community development corporations that focus on neighborhood revitalization. For these reasons, the findings of this study may not be generalizable to other food deserts.

Chapter 4 - Findings

In 2007, Ann Murguia was elected as Commissioner of the 3rd District of Wyandotte County and Kansas City, KS (UG, 2014b). The 3rd District encompasses most of Argentine as well as the neighborhoods of Shawnee Heights and Rosedale (UG, 2015b). Early in her first term as commissioner, she began planning a neighborhood survey to better understand the needs of her constituents. The survey was administered in 2008 by ETC Institute (Olathe, KS). Nearly 70% of the respondents identified a grocery store as the top priority for the area (A. Murguia, personal communication, November 10, 2016). Argentine's lone grocery store had closed in 2006 (Bittel, 2014). In response to the results of the 2008 survey, Murguia initiated two distinct projects, the Argentine Healthy Foods Initiative and the direct recruitment of a supermarket.

Argentine Healthy Foods Initiative

Murguia, who also served as Executive Director of the Argentine Neighborhood Development Association (ANDA), a community development corporation she had created in 2007, wanted to address the issue of poor food access in Argentine. The first step was to better understand the extent of the problem and identify ways to rectify it. ANDA lacked the personnel and experience to do this, so in 2009 Murguia contacted two researchers from the nearby University of Kansas Medical Center, Kim Kimminau and Natabhona Mabachi, to request assistance with the project. Murguia and Kimminau had previously established a relationship while working on neighborhood improvement projects in Argentine (K. Kimminau, personal communication, November 10, 2016).

ANDA and the researchers conceived the Argentine Healthy Foods Initiative (AHFI), a multi-faceted project that included a community food assessment, meetings with community members and organizations, consultation of organizations that had expertise in improving access

to healthful food, and the identification of interventions to improve food access in Argentine. To obtain funding for the AHFI, Kimminau and Mabachi applied for a grant from the Health Care Foundation of Greater Kansas City (HCFGKC), a nonprofit organization that seeks to advance the health of marginalized populations in the Kansas City area (Health Care Foundation of Greater Kansas City, 2016). The grant application was successful, and in 2009 the HCFGKC awarded funds for the AHFI (N. Mabachi, personal communication, November 10, 2016).

The AHFI began with fieldwork to better understand Argentine. Kimminau and Mabachi established a presence at community events and spent time walking around the neighborhood and meeting residents. This allowed them to see firsthand the problem of food access in Argentine and speak directly with those affected by it. Town hall-style meetings held over the course of the AHFI offered additional opportunities for residents to voice their thoughts and concerns (N. Mabachi, personal communication, November 10, 2016).

The major component of the AHFI was a community food assessment. This was a survey that assessed the grocery shopping habits of the neighborhood – the types of stores where residents shopped, for whom they shopped, the foods they purchased, how much money they spent on groceries per week, and whether they used WIC benefits. A community food assessment that had previously been used in San Francisco was adapted for use in Argentine (N. Mabachi, personal communication, November 10, 2016).

While the community food assessment was largely designed by the research team, it was administered by residents of Argentine. Kimminau and Mabachi developed a community-friendly institutional review board (IRB) training process that provided appropriate education and awareness about research and its harms and benefits without being cumbersome to trainees. Argentina is composed of 13 smaller-scale neighborhoods that range from individual apartment

buildings to multi-block areas; these neighborhoods roughly correlate with the racial and ethnic spatial distribution of Argentine. Each neighborhood has a neighborhood association; the leader of each neighborhood association completed the IRB training. After receiving additional training specific to the community food assessment, each neighborhood leader administered the survey to a 10% convenience sample of residents in her neighborhood (K. Kimminau, personal communication, November 10, 2016). Residents who participated in the survey were compensated with gift cards. Additionally, in exchange for their assistance with administering the survey, neighborhood associations received funds on a per-participant basis. Compensation was made possible by the HCFGKC grant. All 13 neighborhood associations participated in the AHFI (N. Mabachi, personal communication, November 10, 2016).

After the community food assessment was complete and the results were processed, a town hall-style meeting was held in the neighborhood to present the findings. Chief among the findings was the overwhelming preference among residents for a supermarket versus another type of food outlet. The meeting was an opportunity for residents to share their thoughts on the findings and on the broader issue of food access in Argentine. One resident commented that while she knew McDonald's food was unhealthy, it helped her stretch her limited budget further (N. Mabachi, personal communication, November 10, 2016).

Leadership

ANDA and the research team of Kimminau and Mabachi co-led the AHFI. Each party brought knowledge and abilities that complemented the other. ANDA lent a local perspective on the issue and provided invaluable information about the social and demographic structure of the neighborhood, including the subdivision of Argentine into smaller-scale neighborhoods. This information was used by the research team during preparation of the HCFGKC grant application

as well as during planning of the AHFI. When the grant was approved and the AHFI began in earnest, ANDA leveraged its social capital to facilitate the initial meetings between the research team and neighborhood residents and generate interest in the AHFI. In doing so, ANDA served as a bridge between the community and the academic outsiders. Mabachi commented on the importance of ANDA's involvement: "We as researchers don't have that kind of clout" (N. Mabachi, personal communication, November 10, 2016).

At the same time, the research team brought to the table a skillset that ANDA did not possess. Kimminau and Mabachi utilized their grant writing experience to apply for and receive the HCFGKC grant. They also designed the community food assessment component of the AHFI and processed the results. Another impact of the research team's leadership was the minimization of ANDA's influence on the results of the AHFI. The team feared ANDA, given its status as a successful developer in the neighborhood, would dominate the conversation regarding food access. In contrast, the team held a neutral role within the community. Kimminau and Mabachi met with each of the neighborhood associations to solicit their input. Likewise, the team empowered each association to administer the community food assessment. These design choices were made to allow the perspective of each of the neighborhoods within Argentine to be heard (N. Mabachi, personal communication, November 10, 2016).

Community Engagement

Decisions made during the design of the AHFI were guided by the principles of community-based participatory research (CBPR). Jagosh and colleagues (2015) defined CBPR as "an approach to research in which researchers and community stakeholders (both individuals and organizations) form equitable partnerships and co-construct research for the mutual and complementary goals of community health improvement and knowledge production" (p. 1).

Community participation can range from minimal to (in theory) full control of the research and often varies over the course of a research project (Wallerstein & Duran, 2006).

Throughout the AHFI, conversations with residents, meetings with neighborhood associations, and neighborhood-wide town hall-style meetings provided opportunities for residents to share their thoughts on food access in Argentine. Notably, information gathered from these sessions influenced the design of the community food assessment and the analysis of its results (N. Mabachi, personal communication, November 10, 2016). The most significant way the community was engaged in the AHFI was administration of the community food assessment, an effort led by residents themselves.

Argentine is a diverse neighborhood, and efforts were made to engage its different populations. The neighborhoods within Argentine correspond with the distribution of different socioeconomic, racial, and ethnic groups; the organization of the community food assessment at the neighborhood scale was done both for practicality and to ensure all voices within the neighborhood were heard. Given Argentine's sizable Hispanic population, all materials – posters, brochures, surveys – were printed in English and Spanish. In those neighborhoods with a large Hispanic population, the resident who administered the community food assessment spoke Spanish (N. Mabachi, personal communication, November 10, 2016).

Despite these efforts, not all populations within Argentine were equally engaged in the AHFI. Mabachi noted that engagement of black residents was inadequate. She partially attributed this to existing “trust issues” among the black population that may stem from predominantly black neighborhoods being perceived as the source of crime in Argentine (N. Mabachi, personal communication, November 10, 2016).

Impact

The results of the AHFI quantified the demand for healthy food in Argentine and elucidated the preferences of residents regarding interventions – the majority desired a supermarket in the neighborhood. However, by the time the major component of the AHFI – the community food assessment – had been completed, a supermarket chain had already been identified and was actively being recruited. This project is discussed below. Thus, the AHFI played no role in the early stages of the recruitment of a supermarket to Argentine.

However, the results of the AHFI played a key role later in the supermarket recruitment process. The AHFI generated data that strengthened ANDA’s advocacy position as it sought to make the supermarket development project financially viable. The AHFI had two major impacts in this regard. First, ANDA leveraged data from the AHFI to obtain private financing for the project as well as funding from charitable entities such as the Kansas City, MO-based Hall Family Foundation (A. Murguia, personal communication, November 10, 2016). The supermarket chain that was recruited, Save-A-Lot, typically leases existing retail space (Save-A-Lot, n.d.a). ANDA and other parties thus had to raise the capital needed to purchase land and erect a building that would then be leased to Save-A-Lot. Without this capital, the project would not have come to fruition. The results of the AHFI contributed to this effort, although it is unclear to what extent. Second, ANDA used the results of the AHFI, which quantified the demand for healthful food in Argentine, to negotiate a 50% higher lease rate with Save-A-Lot (A. Murguia, personal communication, November 10, 2016).

The leadership structure of the AHFI highlighted the strengths of both parties – ANDA’s local clout and the research team’s experience in grant writing and research design. This structure may have impacted the success of the AHFI. In particular, without ANDA’s

involvement, attendance at community meetings and participation in the community food assessment would likely have been lower. In this situation, less robust data perhaps would have been less compelling to potential funders and financiers. However, this is speculative. It is unclear whether a direct relationship exists between the leadership structure of the AHFI and the ability of Argentine to recruit a supermarket.

Argentine residents were engaged in the AHFI in several ways. The community food assessment, because it influenced the obtainment of capital needed for the supermarket project, was critical. Had the black community within Argentine been equitably engaged, the AHFI data would have been more reflective of the neighborhood and potentially more effective in raising capital. The impact of other methods of engaging residents – informal conversations, neighborhood-wide meetings, the administration of the community food assessment by residents – on the supermarket recruitment project is unclear. Participation in the community food assessment likely would have been lower if it had been administered by Kimminau and Mabachi or by a third party instead of by Argentine residents, but this is speculative.

Recruitment of Save-A-Lot

While the AHFI was being planned and executed, Murguia began researching supermarkets chains that could be recruited to Argentine. She obtained a list of the top 50 grocers in the U.S. and began systematically contacting each one. There was generally little interest in Argentine, but Murguia convinced Bob Ferratto, Senior Real Estate Manager for Save-A-Lot, to consider Argentine as a potential location for a new store. He agreed to visit Argentine, and Murguia hosted him in Kansas City and pitched the neighborhood to him. Ferratto initially had reservations about Argentine – the crime rate was too high, the population

density was too low – but Murguia encouraged him to see the neighborhood for himself (A. Murguia, personal communication, November 10, 2016).

Murguia enlisted developer Ferguson Properties (Liberty, MO) and the law firm Polsinelli (Kansas City, MO) to assist with the project. The involvement of these entities was not known until Murguia was interviewed, so they were not included in the study. Their participation in the survey would likely have provided useful technical details about the development.

In late 2011, with a development team in place and a potential operator (Save-A-Lot) identified, the UG Department of Economic Development became involved. Its role is to “administer a toolkit of incentives” to bring public projects to fruition; the department typically becomes involved in a project when there is mutual interest between the UG and a retailer (M. Goff, personal communication, November 17, 2016). Several Department of Economic Development staff were involved in the Save-A-Lot project, which was complex and included tax increment financing and a community improvement district. Additionally, the project was atypical because the UG, as a rule of thumb, does not recruit retailers. A Department of Economic Development staffer, Marlon Goff, noted the department occasionally assists retailers by identifying potential development sites within Kansas City and Wyandotte County, but it does not routinely recruit retailers (M. Goff, personal communication, November 17, 2016).

All parties involved in the project – Murguia and other ANDA staff, Ferguson Properties, Polsinelli, Kimminau and Mabachi, and the Department of Economic Development – regularly met in person. These meetings were the primary form of communication between the parties. At each meeting, parties updated each other regarding recent progress and challenges, and new tasks were divided among the parties. The team thus “whittled away” at the project (A. Murguia, personal communication, November 10, 2016).

Ultimately, Save-A-Lot agreed to lease a 16,000-square-foot retail space from ANDA. In 2012, ANDA left the project and was replaced by the Argentine Betterment Corporation, another community development corporation committed to improving the neighborhood. Construction of the supermarket began in mid-2013, and Save-A-Lot opened in December 2013 (A. Murguia, personal communication, November 10, 2016).

Leadership

Initially, Murguia was the sole actor in the supermarket recruitment process. She unilaterally identified Save-A-Lot as a potential chain and began recruiting it to the neighborhood. As such, she was the leader early in the recruitment process. Later, as additional parties became involved in the development project, there was no clear leader. Each party was responsible for the tasks that fell within its scope.

Community Engagement

Beyond the 2008 survey of Argentine that served as the impetus for Murguia's efforts, the community was not engaged in the initial recruitment of Save-A-Lot. As previously discussed, the AHFI was still underway at this time. However, residents were given the opportunity to participate in later steps of the development process. Statutory requirements called for resident awareness of certain phases of the development process and dictated who needed to be notified of meetings and hearings and when and how they had to be notified. Goff commented that "community involvement" was a more accurate description of this process than community engagement (M. Goff, personal communication, November 17, 2016). While the motivation – compliance with the law – was different than, for instance, the motivation behind Kimminau's and Mabachi's efforts to engage residents in the AHFI, the result was similar: residents were

provided an opportunity to influence a development that was being planned in their neighborhood.

Impact

Murguia's leadership of the recruitment of Save-A-Lot was clearly effective, but it is unclear why. Politician involvement in supermarket recruitment is uncommon; it is possible her role as a politician heightened her ability to connect with Ferratto, bring him to Argentina, and ultimately secure a Save-A-Lot supermarket. Murguia attributed her success to her perseverance as well as her status as an elected official of the UG. She surmised if she had only been the director of ANDA and not a commissioner, her attempt to attract Save-A-Lot would have been unsuccessful (A. Murguia, personal communication, November 10, 2016). Without the perspective of Save-A-Lot, whether Murguia's leadership contributed to Save-A-Lot's decision to come to Argentina – and if so, in what way(s) – remains unclear.

Summary of the Findings

A community development corporation and a team of academic researchers co-lead an initiative to assess the extent and impact of poor access to healthful food in Argentina. The community development corporation brought local knowledge and clout. The researchers used their knowledge and experience to obtain funding and design the cornerstone of the effort, a community food assessment. Residents were trained to administer the assessment. The results were used to generate capital for the supermarket development project and negotiate more favorable terms on a lease between the community development corporation and the supermarket chain. It is unclear whether the specific leadership structure of this process or the specific methods by which residents were engaged impacted its efficacy.

A separate project, the recruitment of a supermarket chain, unfolded in parallel. This project was spearheaded by a newly-elected local politician. Her status as an elected official may have played a role in her ability to successfully recruit a supermarket to the neighborhood, but this cannot be known without the input of the supermarket chain.

Chapter 5 - Discussion

Tens of millions of Americans live in food deserts – areas that lack access to healthful, affordable food. Food deserts have been associated with decreased diet quality and increased prevalence of diet-related diseases such as obesity and high blood pressure. These diseases can have significant consequences including diminished quality of life and even death. Additionally, diet-related diseases take a large economic toll. For instance, in 2012, the cost of treating diabetes in the U.S. as well as productivity lost because of the disease amounted to \$245 billion (American Diabetes Association, 2013). The burden of poor food access and diet-related diseases is disproportionately borne by low-income, minority Americans.

There are numerous ways to increase access to healthful food and eliminate a food desert. Although data regarding efficacy is currently limited, the most promising intervention is a supermarket. Previous work by Porter and colleagues (2002) and the International Council of Shopping Centers (2008) found that food deserts are often perceived by supermarket chains as being incapable of supporting a profitable store. Underestimation of retail demand in these areas contributes to this problem. Pothukuchi's 2005 study revealed that local governments as a rule of thumb do not recruit supermarkets. Thus, to rectify a food desert, recruitment often must be led by non-governmental organizations. Pothukuchi found that community development corporations sometimes lead supermarket recruitment. However, the impact that leadership by community development corporations or other entities has on the efficacy of supermarket recruitment had not been described. This study sought to address that issue.

In Argentina, leadership of the supermarket recruitment process varied over time and depended on the task at hand. Involvement of a local politician may have played a role in the neighborhood's ability to recruit a supermarket. Meanwhile, a community development

corporation and a team of local researchers gathered data to quantify the food access problem in the neighborhood. While this data played no role in the initial recruitment of the supermarket chain, it was used to attract funding and financing for the project. These were necessary for the project to come to fruition. The supermarket recruitment process was successful, but it is unclear if its leadership structure directly influenced its success.

Politician involvement in supermarket recruitment is uncommon. Pothukuchi's survey of 32 major U.S. cities identified three cities that successfully recruited supermarkets; politician involvement was noted in one city but was limited to a reelection campaign promise. This study could not conclude whether Murguia's status as a politician influenced Save-A-Lot's decision to build a store in Argentina. Certainly, she was successful in her efforts. Additional studies are needed to better understand the role of politicians in supermarket recruitment.

Lang and colleagues (2013) warned of the dangers of politicizing food access. They commented that elected officials should be made aware of efforts to improve access to healthy food, but perhaps should not be directly involved in order to "protect the work from being influenced by political concerns" (p. 13). In the case of Argentina, several of Murguia's fellow commissioners as well as the mayor voiced concerns about her involvement in ANDA. This issue escalated to the point that an ethics complaint was filed against Murguia. In 2012, ANDA relinquished its role in the supermarket development project. At that time, the project, including the funding that had been secured to date, was turned over to the Argentine Betterment Corporation. Murguia described the ethics complaint as "political flak" that stemmed from jealousy of her success in bringing a supermarket to the neighborhood she represented (A. Murguia, personal communication, November 10, 2016). This incident highlights the downside of involving politicians in efforts to remedy a food desert.

PolicyLink (2007) identified methods to engage citizens in the supermarket recruitment process. These included surveys, meetings, and community food assessments. Community food assessments are useful tools that can shed light on residents' views of the local food environment and its deficiencies (Centers for Disease Control and Prevention, 2012; PolicyLink, 2007). The impact of community engagement on the effectiveness of supermarket recruitment had not been explored. This study sought to address this issue.

This study found that data generated from community engagement, specifically a community food assessment, contributed to efforts to fundraise and secure financing for a supermarket development project and improved the terms of a lease between a community development corporation and a supermarket. No conclusions regarding the influence of specific community engagement methods such as community-based participatory research on the efficacy of the recruitment effort could be drawn,

The Development

The Save-A-Lot supermarket development project was planned in a zone of the neighborhood the UG had slated for redevelopment. This zone lies in the northeast corner of Argentine directly west of South 18th Street Expressway/US Highway 69. This area is displayed in Figure 5.

The redevelopment zone contains two areas; these are shown in Figure 6. The retail development that included Save-A-Lot was planned for the smaller east area. A total of 24,000 square feet of new office and retail space was proposed on the 4.6-acre site. Save-A-Lot would occupy 15,000 to 16,000 square feet of retail space and an outlot would provide an additional 9,000 square feet. A Dollar General store already on the site would remain there (UG, 2012). When the Save-A-Lot project was being planned, the larger west area of the redevelopment zone

(“Redevelopment Project 2” in Figure 6) was vacant. Today it contains a Walmart Neighborhood Market that opened in 2014 (UG, 2014a).



Figure 5. Census tracts in Argentine; food deserts in 2010 shown in green, redevelopment area shown in red (UG, 2012; U.S. Census Bureau, 2010)



Figure 6. Save-A-Lot development site, shown as "Redevelopment Project 1" (UG, 2012)

The proposed site layout and a current aerial image of the site are shown in Figure 7. This figure does not contain the outlot that lies directly west of the Save-A-Lot supermarket. It is currently vacant land. A view of the front of the Save-A-Lot supermarket is shown in Figure 8.



Figure 7. Aerial site plan and current view of the development (UG, 2012; Google, 2016)



Figure 8. View of Argentine's Save-A-Lot supermarket facing north (Google, 2016)

The recruitment of Save-A-Lot was likely influenced by the favorable characteristics of the site and the inclusion of other retailers in the development plan. Save-A-Lot had an established presence in the Kansas City metropolitan area – there are currently 10 Save-A-Lot stores in the area, including three in Wyandotte County – so the infrastructure to support a new store in Argentine was likely in place (Save-A-Lot, n.d.b). The site is located along the eastern border of Argentine near the neighborhood of Rosedale, a community of approximately 14,000 residents. This geographic position increased the trade area of the store. The site is on

Metropolitan Avenue, an arterial road that connect the neighborhoods of Rosedale, Argentine, and Turner as it runs east to west. Additionally, the site is just west of South 18th Street Expressway/US Highway 69. These two roads likely provided robust traffic counts. The site is highly visible from both roads, an attribute Save-A-Lot prefers (Save-A-Lot, n.d.a).

At the left of Figure 8, a blue bus stop may be seen. The 104 Argentine bus route provides service to this part of the neighborhood (Kansas City Area Transportation Authority, 2016). The availability of public transportation near the site may have influenced Save-A-Lot's decision to build a store. A second bus route, the 105 Rosedale, began service in 2014 and connects the northeast tip of Argentine to the heart of Rosedale.

The presence of an existing Dollar General store on the site may have influenced Save-A-Lot's decision as it would attract customers to the area. The Dollar General store remains there today. The outlot that was planned for the development also may have played a role. The lot remains vacant, but the potential to add another retailer to the area exists.

The development of Save-A-Lot and the subsequent addition of a Walmart Neighborhood Market improved food access in Argentine. However, as Figure 5 demonstrates, both stores serve the northeast corner of the neighborhood. The two southern census tracts have relatively higher incomes so food access is less of a concern. Unfortunately, the northwest census tract in Argentine – the area with the lowest household incomes, highest poverty rate, and highest rates of SNAP usage – continues to be a food desert. Much of this census tract lies more than a mile from Save-A-Lot. Additional interventions are needed to ensure all residents of Argentine have access to healthful, affordable food.

Limitations

This study has several limitations. First, as described in the Methods chapter, the perspectives of Save-A-Lot and the Hall Family Foundation were solicited but could not be obtained. Their participation in the survey likely would have clarified the impact that leadership and community engagement had on the recruitment of Save-A-Lot.

Second, Argentine, a community of approximately 11,000 people, contains two community development corporations that are dedicated to revitalizing the neighborhood. Their existence is a reflection of Argentine's strong community identity. The findings of this study may not be applicable to areas lacking these assets.

Third, as described above, Save-A-Lot assuredly considered a variety of factors when deciding whether to come to Argentine. Save-A-Lot lists ostensibly the most important site factors – site visibility, an existing retail space, trade area, and others – on their website, but it is impossible to know which, if any, of them influenced Save-A-Lot's decision to come to Argentine. It is conceivable that leadership and community engagement influenced Save-A-Lot's decision but to a lesser extent than other factors.

Fourth, Argentine's Save-A-Lot opened in late 2013. The recruitment of Save-A-Lot was successful, but the true mark of success will be the long-term viability of the store. It remains to be seen whether Save-A-Lot will continue to provide healthful, affordable food for Argentine over the long term.

Future Research

The findings of this study shed light on leadership and community engagement in supermarket recruitment. They also raise additional questions that should be answered in future research endeavors. Politician involvement in supermarket recruitment is uncommon but

occurred in Argentine. Commissioner Murguia unilaterally recruited Save-A-Lot, yet her involvement led to a political controversy that caused a major organizational shift in the project. Additional research should seek to understand the harms and benefits of politician involvement in supermarket recruitment.

The impact of specific forms of community engagement – neighborhood meetings, surveys, community-based participatory research – on the efficacy of supermarket recruitment remains unclear. More robust engagement may increase the effectiveness of recruitment or increase the long-term financial viability of supermarkets once they are constructed. This issue merits additional investigation.

The black community of Argentine was not equitably engaged in the Argentine Healthy Foods Initiative. It is important that all communities be given the opportunity to have their voices heard and play an active role in shaping the future of their neighborhood. Future research needs to identify methods to better engage black residents in supermarket recruitment and other community endeavors.

The International Council of Shopping Centers (2008) found that grocers prioritize population size, median household income, and size of trade area when considering a new store location. However, it is unclear what factors are most important to supermarket chains that tend to locate in underserved communities. Better understanding the priorities of such companies would enable neighborhoods to more effectively recruit supermarkets such as Save-A-Lot.

Finally, the long-term viability of supermarkets in former food deserts is unclear. Food deserts are more common in low-income areas where customers have less money to spend on food. Also, food deserts are primarily found in urban areas which tend to have higher operating

costs. Investigation of the long-term success of supermarkets in former food deserts would reveal whether they can overcome the barriers imposed by their location.

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